



SONOMA COUNTY REGIONAL PARKS

Petaluma Sebastopol Trail Feasibility Study



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February 9, 2018



Petaluma Sebastopol Trail Feasibility Study

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In Association with:

Sonoma Ecology Center
Parisi Transportation Consulting

**February 9, 2018,
(minor revisions February 27, 2018)**



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County of Sonoma
State of California

THE WITHIN INSTRUMENT IS A
CORRECT COPY OF THE ORIGINAL
ON FILE IN THIS OFFICE.

ATTEST: FEB 13 2018

SHERYL BRATTON, Clerk/Secretary
BY Ch Woodson
DEPUTY CLERK/ASST. SECRETARY

Date: February 13, 2018

Item Number: 7

Resolution Number: 18-0057



4/5 Vote Required

**Resolution Of The Board Of Supervisors Of The County Of Sonoma, State Of California,
Accepting The Findings and Recommendations As Contained In The Petaluma Sebastopol Trail
Feasibility Study**

Whereas, the adopted 2010 Sonoma County Bicycle and Pedestrian Plan identified the Petaluma Sebastopol Trail as a multi-use Class I Bikeway for the exclusive use by pedestrians, bicyclists, and other non-motorized modes; and

Whereas, the Petaluma Sebastopol Trail project limits are broadly described in the 2010 Sonoma County Bicycle and Pedestrian Plan; and

Whereas, in August 2015, the County of Sonoma entered into a funding agreement with Caltrans to prepare a feasibility study for the Petaluma Sebastopol Trail that is necessary to define the project limits, solicit public input, and evaluate existing site conditions for opportunities and constraints; and

Whereas, in January 2018, the draft feasibility study was completed and available for public review. Based on many variables such as existing site conditions and land ownership, the draft feasibility study identified a preferred trail alignment and alternatives; and

Whereas, comments on the draft feasibility study were received from the public, stakeholders, and partner agencies. Comments have been incorporated into the final Petaluma Sebastopol Trail Feasibility Study; and

Whereas, the Petaluma Sebastopol Trail Feasibility Study provides broad guidance and recommends pursuing opportunities that will assist in the implementation of the Petaluma Sebastopol Trail and alternatives, a planned recreational and non-motorized transportation corridor that, when complete, will provide a 13-mile long trail connecting Sebastopol to Petaluma and provide connections to other existing and planned pedestrian and bicycle networks; and

Whereas, the Petaluma Sebastopol Trail Feasibility Study will serve as an informational document to assist responsible agencies in future processes involving planning, environmental analysis, design, and construction of trail segments; and

Now, Therefore, Be It Resolved that the Sonoma County Board of Supervisors hereby accept the findings and recommendations for the preferred trail alignment and alternatives within the County as contained in the Petaluma Sebastopol Trail Feasibility Study; and

Be It Further Resolved that the Sonoma County Regional Parks Director may make minor technical adjustments to the Petaluma Sebastopol Trail Feasibility Study before publishing and distributing the Study as appropriate.

Be It Further Resolved that the Sonoma County Regional Parks Director be directed to coordinate with responsible agencies on implementation strategies including but not limited to pursuing grant opportunities and other means of funding to develop the proposed trail improvements recommended in the Petaluma Sebastopol Trail Feasibility Study as deemed appropriate.

Supervisors/Directors:

Gorin: Aye Rabbitt: Aye Zane: Aye Hopkins: Aye Gore: Aye

Ayes: 5 Noes: 0 Absent: 0 Abstain: 0

So Ordered.



EXECUTIVE SUMMARY

The Petaluma Sebastopol Trail Feasibility Study (Study) is a long range planning study to evaluate options for a Class I multi-use trail to connect Sebastopol and Petaluma. A Class I path (trail), whether parallel to a road or distant from adjacent roads, is separated from an adjacent travel lane by a minimum of five feet. In addition, physical barriers, buffers or other elements may be included in the Class I trail final design to provide physical separation and safety from the road. The future Petaluma Sebastopol Trail is identified as a project in the adopted 2010 County Bicycle and Pedestrian Plan.

In addition to determining a preferred trail alignment, the Study identifies potential connections to existing and planned bicycle and pedestrian networks and other destinations; provides a design toolkit to address safety concerns about walking and bicycling on rural roads; and identifies bicycling, walking, recreational and equestrian opportunities in the area. Study elements include:

- Mapping and evaluating existing site conditions and opportunities and constraints within the Study Area to determine the most feasible trail route;
- Stakeholder and public outreach to help inform decision making regarding trail alignment and design;
- Cost analysis to help establish a project budget for design and engineering, construction, environmental mitigation, and property acquisition; and
- Identification of priority segments for budgeting, design and implementation in the future.

The Study evaluates options in this area for the safest and most feasible route for a separated, paved trail (Class I bike path) to accommodate bicyclists and pedestrians (and equestrians where feasible) traveling between Petaluma and Sebastopol. The Study also evaluates existing site conditions, challenges, constraints, opportunities, health and environmental benefits, alternatives, and identifies trail alignment recommendations.

Two possible trail alignments were identified for much of the Study area: a commute-oriented rapid alignment, and a low-speed recreational alignment.

The Study should be considered a flexible, living document, and as such, its recommendations are subject to further analysis and possible revision as new information becomes available and conditions change, including property ownership and community consensus.

Study Partners

The Study was funded by a Caltrans Sustainable Transportation Planning Grant in response to community interest in trails connecting communities and to address safety concerns about walking and bicycling in the unincorporated area between Petaluma and Sebastopol. The Study was completed with local match funds from the County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club.

Caltrans is responsible for operation of the state's highway network, which includes SR 116 in the Study Area. Although Caltrans has traditionally focused on the provision of transportation facilities for motor vehicles, in recent years there has been an increased interest in multimodal facilities to serve the needs



of bicyclists, pedestrians and other modes of travel within the highway network. As a Study sponsor, Caltrans will likely participate in aspects of project implementation, such as a Class I Trail adjacent to SR 116. Implementation will likely be a partnership of multiple stakeholders, including Caltrans, Sonoma County Transportation and Public Works Department, and/or Sonoma County Transportation Authority (SCTA). Roadway improvement projects within Caltrans facilities are required to incorporate active transportation facilities, and this Study provides recommendations for how that can be accomplished.

Study Area and Land Ownership

The Study Area includes approximately one mile from Sebastopol city limits to the Joe Rodota Trail and one mile into Petaluma city limits to connect with the existing City bicycle network. The Study Area is located within the unincorporated areas of Sonoma County in Supervisorial Districts 2 and 5, as well as portions of the cities of Sebastopol and Petaluma.

Public lands within in the Study Area generally consist of State and County public roads, the Sonoma County Landfill (leased to a private operator), parcels owned by the cities of Sebastopol, Santa Rosa and Petaluma, and lands owned by Sonoma Marin Area Rail Transit (SMART) and Sonoma County Water Agency.

There are also approximately seventy five former Petaluma and Sebastopol Railroad parcels that bisect the Study Area. These parcels collectively form a relatively level and narrow corridor that partially connects the two cities, and is separate from adjacent local roads in the areas of Hessel, Cunningham and Roblar. This eleven mile long corridor includes three miles of (discontinuous) publicly owned land, and eight miles that is in private ownership.

The Petaluma and Sebastopol Railroad operated along this corridor in the early to mid-1900s, and railroad use was discontinued in the mid 1980's. At that time, Sonoma County acquired some parcels outside the Study Area that later became portions of the Joe Rodota and West County Trails.

Although identified as a potential alignment early on in the Study, much of this corridor was eliminated from further consideration due to property ownership issues, railroad ownership research complexity, potential acquisition costs and the County's policy to limit use of eminent domain for trails where possible. During the Study, the team received comments from approximately one dozen railroad parcel owners who expressed strong opposition to use of their land for a trail.

Although this Study determined that use of the former rail parcels for a trail was not currently feasible given the current ownership, costs and acquisition challenges, it was noted that such a trail is not precluded as a result of the recommendations contained in this Study, and could be integrated into the trail network should circumstances change in the future.

Community Engagement

A key element of the Study was outreach. Input from Study participants provided valuable input regarding trail features, locations, traffic and environmental issues, points of interest, and sensitive areas. The Study documents the concerns and ideas of the community, expressed during nine meetings and workshops, individual discussions, a website portal, and a survey. Attendance at the three Community Workshops averaged over 50 participants. The survey had 432 responses, with over 90% support for a safe place to walk, bicycle, or ride a horse and connect to other trails.



Environmental and Engineering Constraints

The Study provides information on environmental and engineering constraints that affect trail location and design and construction costs, and that will require mitigation measures. These include trail segments that cross near or through seasonal wetlands, creeks, and habitat for endangered species, including steelhead salmon, California red-legged frog, and California tier salamander, as well as a number of rare plant species. All of these sensitive biological resources will require additional detailed biological studies to more fully document their locations and habitat areas, and to develop avoidance, minimization, and mitigation measures as part of CEQA-required technical analysis and regulatory permitting.

Engineering constraints that will need to be further investigated and accounted for during follow-up and more precise trail alignment planning and design include floodplain and flooding issues at creek crossings, especially crossing Blucher Creek and in the Petaluma River area, drainage ditches alongside roads that may require undergrounding in pipe culverts, and hilly roadside areas that will require cut slopes and retaining walls, especially along SR 116 between Stony Point Road and Llano Road.

Preferred Trail Alignment

The overall concept is to provide a rapid/commute route for cyclists and others, as a primarily transit oriented trail along and near SR 116 and Stony Point Road, and a relaxed/recreational route to provide opportunities for slower paced bicycle, pedestrian and equestrian use along the Laguna Connector Trail, Old Gravenstein Highway, and near Stony Point Road. When implemented, the trail network could include both active transportation improvements for bicyclists and pedestrians associated with the transportation network along SR 116, Stony Point Road, and local roads, as well as recreational trail improvements that are off-street and afford opportunities for low-speed bicycle, pedestrian and equestrian use. The preferred trail alignment is based on variables such as current site conditions and land ownership which can change over time. There may be opportunities in the future to acquire more public land and trail easements through land dedication and purchases that can improve the trail alignment.

The recreational alignment includes almost six miles of trail that is well-separated from adjacent roads, as well as almost sixteen miles that provide a commuter-oriented, separated Class I path that is adjacent to, but separate from, adjacent roads. It is anticipated that this network of trails and paths, combined with bicycle and pedestrian improvements to local roads that serve residents, schools and destinations, will provide opportunities for many different types of trail users. This network of trails, some overlapping, meets three active transportation objectives, including: 1) rapid trail use, such as bicycle commuting; 2) recreational opportunities for low-speed use, hiking and equestrians; and 3) facilities to better delineate areas for pedestrians and bicyclists on local low-volume roads.

When implemented, the trail network will provide bicycling, walking, jogging, and horseback riding non-Class I (where appropriate) and other recreational and commuting opportunities for residents of Petaluma, Sebastopol and unincorporated areas such as Hessel and Cunningham, as well as potential connections to other local and regional trails.

As well as helping Sonoma County achieve its environmental goals to reduce VMT (vehicle miles traveled) and associated greenhouse gas emissions, trails provide additional benefits, such as places for physical fitness and healthy lifestyles, they help improve safety for pedestrians and cyclists, and also



help strengthen local economies. Transportation legislation, funding mechanisms, and land-use and transportation policy have evolved substantially in the past two decades to support walking and bicycling as viable transportation modes, important community features, and healthy recreation activities.

Trail Design

The Study goal is the identification of a safe and continuous Class I path to connect Sebastopol with Petaluma. By definition, Class I bikeways (bike paths) are facilities with exclusive ROW by bicycles and pedestrians, with cross flows by vehicles minimized.

Class I facilities are required to have a minimum 8-foot paved or durable surface width (10-foot preferred), with a minimum 2-foot (3-foot preferred) shoulder (16 feet total), as well as 5-foot separation from a travel way (road or street). The maximum elevation/grade for Class I facilities is 5%. Within a structure such as a bridge, the minimum clear width is ten feet.

In addition to a continuous Class I path, other improvements such as bike lanes (Class II) and Cycle Tracks (Class IV) are proposed to improve connectivity to the trail, such as bicycle facilities on Bloomfield Road, Lone Pine Road, Llano Road, and Petaluma Blvd. North, and Cycle Track on portions of SR 116 and Stony Point Roads near developed areas with significant pedestrian activity.

Other trail improvements would include pedestrian safety features at intersections such as extended curbs, pedestrian signals, refuge medians and decorative pavement to delineate the trail and provide a visual cue to safely guide trail users, as well as trailhead staging areas along the trail. Potential staging area improvements could include parking, benches, waste disposal, drinking fountain, and interpretive elements.

Preliminary Costs

Planning level construction cost estimates were developed for each of the trail segments, including the 15.9 miles of Class I/Class IV facilities that would be constructed adjacent to local roads (Rapid Route), 5.6 miles of separated Class I facilities (Relaxed Route), and 6.5 miles of improvements to local roads (Class II/III facilities). Not all of these facilities would need to be constructed to make a continuous route, and some improvements overlap. Therefore, funding and implementation might be done by different entities, or combined with other types of projects, such as roadway improvements, development, habitat restoration and flood improvement projects. Up to 28 miles of trails could be built. After detailed planning, environmental analysis, engineering design and construction support costs are added in, total costs may average \$1.1-1.3 million per mile. If every segment identified in the Study were implemented (including those that overlap), costs would be approximately \$33.5 million, including design, environmental review, and construction administration.

Implementation Priorities

Trail implementation will be a multi-step process, completed as a number of individual phases that link constructed segments together over time. Projects may be led by the Cities, County, Caltrans or others as a separate project, or associated with other projects, such as transportation, flood control, habitat restoration, or development. Trail segments involving private lands are typically completed as a condition of development approval, easement acquisition, licensing or use agreement, or other cooperative agreement with the property owner.



Implementation priorities would focus first on segments nearest urban areas, areas with specific safety hazards, or where trail gaps occur, with a goal to initiate construction of some segments within five to seven years. Complete construction of the trail may take 15 to 20 years. Implementation would include a mix of recreational and commuter oriented improvements.

Priorities for implementation include Segment 2A, from Cooper Road to Bloomfield Road, immediately south of the City of Sebastopol, and Segments 6A and 6C, from the vicinity of Old Redwood Highway and along Stony Point Road to north of Rainsville Road in northern Petaluma. Estimated design, environmental and construction costs for Segment 2A are \$0.98 million and for Segments 6A and 6C, total \$1.77 million.

In addition to the project segments identified in this Study, it is conceivable that another entity, such as a nonprofit group, charitable trust or other organization may acquire right of way or easements along former railroad lands or other property that could be incorporated into the trail network. This Study is not intended to preclude such discussions or future implementation. As noted earlier, as a living document, such opportunities would be revisited should these lands become available for public use in the future.



1. INTRODUCTION



The ***Petaluma Sebastopol Trail Feasibility Study*** (Study) evaluates the feasibility of developing an approximately 15-mile paved trail connecting the cities of Petaluma and Sebastopol. The Study area included approximately 13 miles of trail in the unincorporated area of Sonoma County, 1 mile in the City of Sebastopol, and 1 mile in the City of Petaluma. The primary objective of the feasibility study is to determine the safest and most feasible route for a separated paved trail (Class I bike path) to accommodate bicyclists and pedestrians (and equestrians where feasible) traveling between Petaluma and Sebastopol. The Study evaluates existing site conditions, challenges, constraints, opportunities, health and environmental benefits, alternatives, and identifies a recommended or preferred trail alignment to connect Sebastopol to Petaluma.

The trail is envisioned as a network of trails, some overlapping, that meets three active transportation objectives:

- Facilities to serve *rapid* trail use, such as bicycle commuting and pedestrian connections to local destinations
- Facilities to provide recreational opportunities for *relaxed* bicycling, walking, and equestrian use
- Improvements to local, low-volume roads to better delineate areas for pedestrians and bicyclists and to serve local destinations such as schools.

When implemented, the trail network will provide bicycling, walking, jogging, and horseback riding where appropriate and other recreational and commuting opportunities for residents of Petaluma, Sebastopol and unincorporated areas such as Hessel, Dunbar and Cunningham, as well as potential connections to other local and regional trails.

Trails connecting cities promote healthy communities, provide access to schools and businesses, and help support reduction of traffic and greenhouse gases. The future Petaluma Sebastopol Trail is identified as a project in the adopted 2010 County Bicycle and Pedestrian Plan <http://www.sonoma-county.org/prmd/docs/misc/bikeplandraft.pdf>



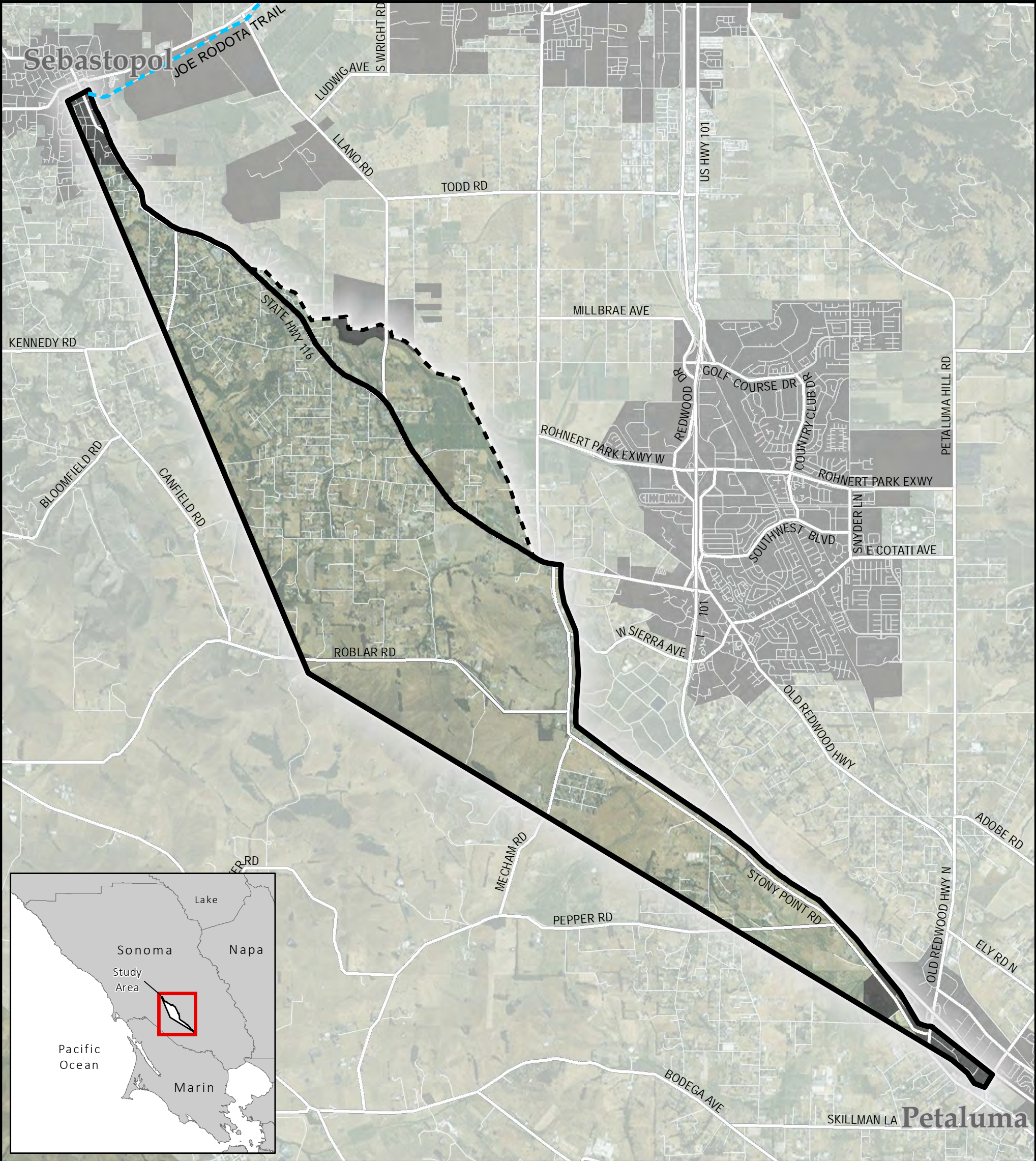
The Study was funded by a Caltrans Sustainable Transportation Planning Grant in response to community interest in trails connecting communities and to address safety concerns about walking and bicycling in the unincorporated area between Petaluma and Sebastopol. The study evaluates a potential alignment along the route of the former Petaluma Sebastopol Railroad. However, since much of the railroad right-of-way is privately owned and developed for other purposes such as houses and other structures, the study evaluates other options for a route that connects Petaluma and Sebastopol.

Goals of the study include:

- Mapping and evaluating existing site conditions and opportunities and constraints within the Study Area to determine the most feasible and safest trail route;
- Stakeholder Public outreach to help inform decision making regarding trail alignment and design;
- Identify costs to help establish a project budget for design and engineering, construction, environmental mitigation, and property acquisition
- Identify priority segments for construction in near term and long term.

The Study Area (**Figure 1**) includes approximately one mile from Sebastopol city limits to the Joe Rodota Trail and one mile into Petaluma city limits to connect with its existing bicycle network. The Study Area is located within the unincorporated areas of Sonoma County in Supervisorial Districts 2 and 5, as well as portions of the cities of Sebastopol and Petaluma.

Petaluma - Sebastopol Trail Feasibility Study



Sonoma County GIS, Sonoma Ecology Center. Map Date: January 12, 2018

- Study Boundary
- Laguna Connection Study Area
- Incorporated City Boundaries
- Existing Trail

THIS MAP IS NOT A TRAIL GUIDE

This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.

0 0.5 1 Miles

0 0.5 1 Kilometers





2. COMMUNITY ENGAGEMENT

Working with project stakeholders, including agencies, advisory groups, property owners and members of the public, is a key component of the Study. The Study is a blueprint for future project implementation that reflects community concerns, yet provides opportunities for a continuous trail, with safe and enjoyable public access. A stakeholder list was developed that includes advisory groups, agency representatives, members of the community and individual stakeholders (**Appendix A**).



Input from study participants is valuable, since trail users, agency representatives, landowners and others act as local resources that can supply knowledge regarding trail features, locations, traffic and environmental problem areas, points of interest, sensitive areas, etc. Engagement continued through meetings and workshops, participant surveys, website portal and individual outreach. This allowed participants to express views and provide input in a variety of different ways, and allowed documentation and acknowledgement of the concerns and ideas of the community, potential facility users, agency managers, regulatory authorities, and others. These ideas and concerns form the vision for defining and implementing the Study, and each person's contribution were recorded and used to develop the Study.

2.1 COMMUNITY SURVEY

A survey was prepared to solicit input on trail users, issues, and other trail features. The survey was distributed at meetings and workshops, and available online. A total of 432 responses were received. A summary of results from the survey include:

- Primary interest in the trail is for recreational use, and to improve safety for pedestrians, bicyclists and motorists
- The majority of respondents live in Sebastopol, followed by Hessel/Cunningham, Stony Point Road/State Route (SR) 116, and Petaluma, with approximately 50 visitors from outside the study area.



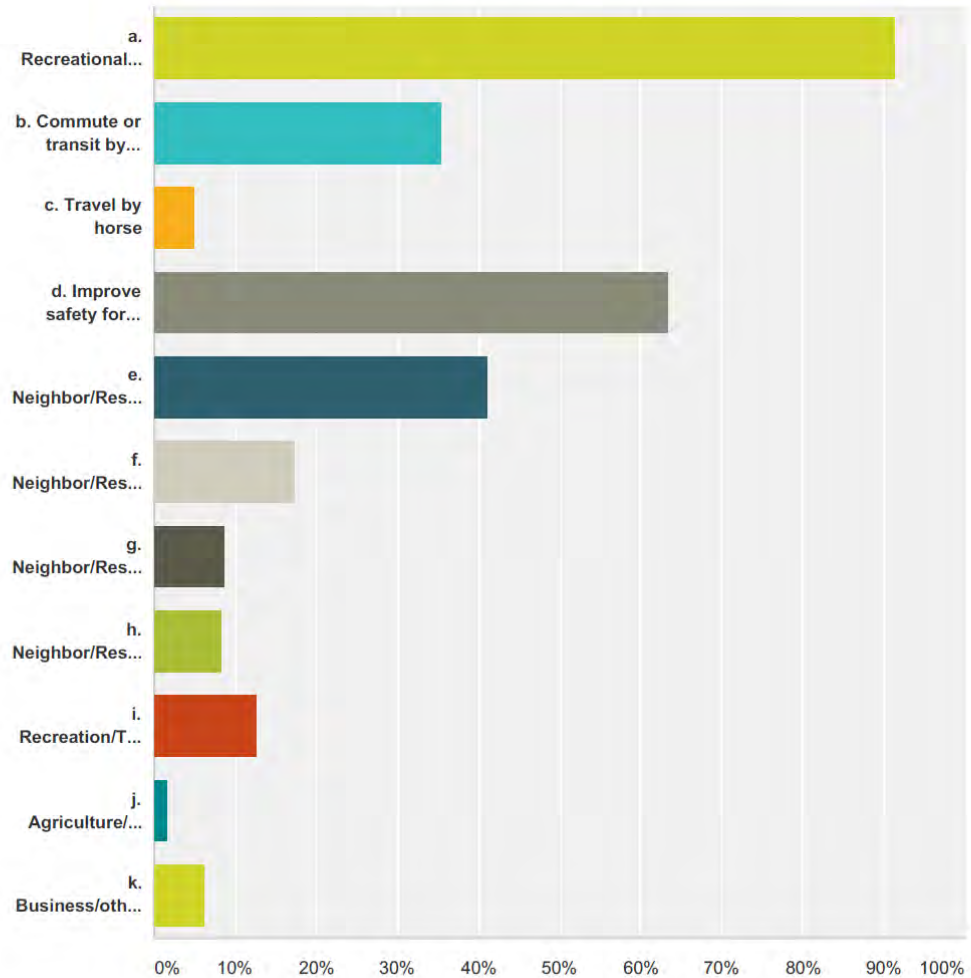
- Over 80% of respondents do not currently use SR 116 or Stony Point Road for pedestrian travel, and 60% do not bicycle along this route. Four respondents ride a horse along this route.
- 60% do not live along or near Stony Point Road or SR 116.
- For a route along SR 116, 60% had no preference regarding which side of the road for a trail.
- Overwhelming concern is bicycle /pedestrian user safety due to high speed roads and potential vehicle conflicts.
- Over 90% want a safe place to walk, jog, bicycle, or ride a horse, and 86% want connections to other trail systems such as Laguna de Santa Rosa and Rodota trails.
- Less than 25% of respondents have children in local schools.
- Users would like connections to destinations such as the two cities, the Sonoma Marin Area Rail Transit (SMART) station, other trails, and local schools.
- Almost half would use the trail once or twice a week, or once a month; some would use weekdays or weekends, primarily in the morning.
- The roads currently used most for bicycling or walking are Bloomfield and Roblar Roads.
- Respondents overwhelmingly support the opportunity for a new trail that connects destinations and provides a safe place for bicycle and pedestrian travel.

Detailed survey information is contained in **Appendix A**.



**Q1 What is your primary interest in the multi-use Petaluma Sebastopol Trail?
Check all that apply.**

Answered: 432 Skipped: 0

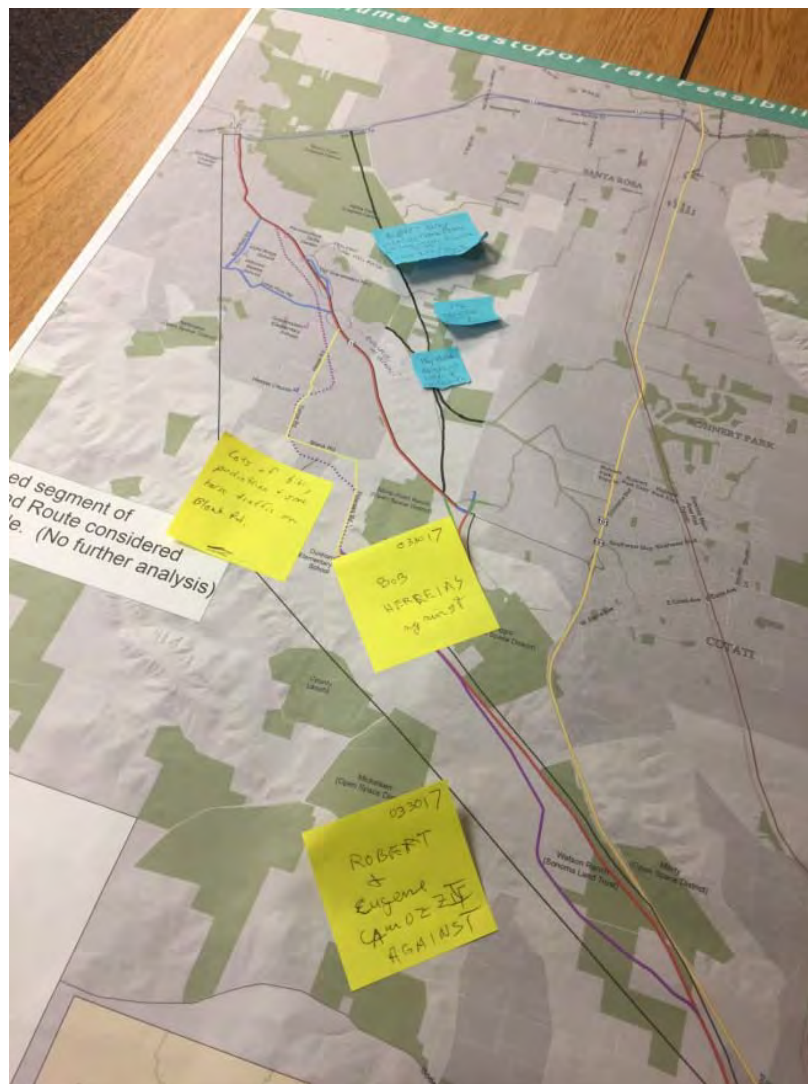




2.2 MEETINGS AND WORKSHOPS

Two stakeholder “Listening Sessions” were held, as well as two community workshops in spring 2017 to gather input. The meetings included a presentation by the project team, a Question/Answer session, and table maps that participants were encouraged to mark up with notes and comments. This information was transcribed and is contained in Appendix A.

Stakeholder Listening Session 1 was attended primarily by representatives of the Railroad Property Owners Partnership, “RPrOP”, who expressed opposition to use of their privately-owned former rail land for a public trail, and indicated that SR 116 is dangerous. RPrOP was created in early 2017 by property owners that either lived adjacent to or owned the former railroad parcels within the study area. According to RPrOP, the group represented the property owners of the former rail land.



Stakeholder Listening Session 2 was attended by representatives of local agencies and representatives of city and county Pedestrian and Bicycle Advisory Committees as well as the Sonoma County Bicycle Coalition and Sonoma County Transportation Authority. Issues identified included:



- Need for a continuous trail that closes a gap south of Sebastopol in the vicinity of Elphick Road
- Potential lack of right of way if SR116 is widened for vehicle use
- Connections to local schools and other trails in the area is important
- Determine if property owners in the flea market and Bloomfield Road area are willing to allow a trail on their property.

Community Workshop 1 was held in Sebastopol (April 5, 2017), with approximately 60 participants, and Workshop 2 was held in Petaluma (April 15, 2017) with approximately 36 participants. Participants both supported the need for safe ways to bicycle and walk in the area, and opposed use of private land on or near their own property for a trail. The study team also met with the Petaluma Bicycle and Pedestrian Advisory Committee on January 3, 2018, and hosted a third community workshop in Sebastopol on February 1, 2018. The study team will also present the draft Study to the Sebastopol City Council on February 6, 2018 and Sonoma County Board of Supervisors on February 6 and 13, 2018. Information and meeting notes are included in the Appendix.



2.3 DEMOGRAPHICS, STAKEHOLDERS, AND INTEREST GROUPS

Demographic information and commute statistics were reviewed and analyzed in order to understand population characteristics and the level of walking and bicycling in the Petaluma to Sebastopol Trail Plan study area. A variety of data was utilized including 2016 California Department of Finance Population Estimates, 2010 Decennial US Census Data, Journey-to-Work (JTW) Data from the American Community Survey (2006-2010), 5-year estimates (2007-2011) from the American Community Survey, and findings from recently completed transportation and community planning efforts in the study area. Key findings from the analysis are summarized in the following sections.

Population by Area

The California Department of Finance (DOF) prepares annual population estimates for communities in California; they are generally considered to be the most current and accurate source available. Current population estimates from the California DOF, including change from 2015 to 2016, for Sonoma County, the cities of Petaluma and Sebastopol, and the unincorporated lands of Sonoma County are provided in **Table 2-3.1**.

Table 2-3.1: Sonoma County Population Estimates			
County/City	Total Population		Perc ent
	1/1/2015	1/1/2016	Chan ge
Sonoma County	499,352	501,959	+0.5
City of Petaluma	59,934	60,375	+0.7
City of Sebastopol	7,502	7,527	+0.3
Balance of County	150,247	150,814	+0.4
Source: California Department of Finance 2016 Population Estimates			

Supervisory Districts

The project study area includes two Supervisorial Districts, the 2nd and the 5th. The 2nd Supervisorial District includes all of the cities of Petaluma and Cotati and a portion of Rohnert Park, as well as the unincorporated communities of Penngrove, Two Rock, Bloomfield, and a portion of the unincorporated community south of Sebastopol. The 5th Supervisorial District encompasses the west county including the entire Sonoma County coast, the lower Russian River area, Sebastopol and the west and southwest Santa Rosa areas extending in to Highway 101.

Demographic Profile

The geographic areas covered in the analysis include Sonoma County, the cities of Sebastopol and Petaluma, and the unincorporated County lands that both comprise and surround the project study area. The project study area is covered by two Census County Divisions (CCD); the Petaluma CCD and Sebastopol CCD¹. The two CCD's abut each other, fully encompass the geographic study area and its

¹ A Census County Division (CCD) is a subdivision of a county used by the United States Census Bureau for the purpose of presenting statistical data. A CCD is a relatively permanent statistical area delineated cooperatively by the Census Bureau and state and local government authorities. CCD boundaries typically follow visible features, such as roads, railroads, streams, power transmission lines, or mountain ridges, and coincide with the boundaries of census tracts.



transportation resources, incorporate the major population centers of Petaluma and Sebastopol, and capture a larger picture of the project service area.

To gain further insight into the demographic characteristics of the unincorporated lands that surround the old Petaluma and Santa Rosa Railroad Line, the following census tracts located between south Sebastopol and Petaluma were also reviewed: 1534.03, 1535.01, 1535.04, 1510, 1511, and 16560. It is important to note that minor discrepancies occur when comparing Decennial Census and American Community Survey data due to survey samples, survey topics, and data collection periods. However, it is common to utilize and cross reference both data sets in order to cover a broad range of topics including general population characteristics, age, race, economics, and commute statistics. The Petaluma CCD covers a large portion of southern Sonoma County, an area of 182.7 square miles. The Petaluma CCD includes the City of Petaluma and portions of Cotati, Rohnert Park, and Penngrrove. It covers the west slope of Sonoma Mountain, and stretches from San Pablo Bay near Sears Point to the western hills of Petaluma and Two Rock. The Sebastopol CCD covers an area of 71.4 miles of western Sonoma County. The Sebastopol CCD includes the city of Sebastopol and the communities of Graton, Bloomfield, and Valley Ford. The Sebastopol CCD covers a significant portion of the northern project study area including Hessel and the rolling hills south of Sebastopol, as well as the SR 116 and Stony Point Road corridors.

Profile of General Demographic Characteristics

Table 2-3.2 provides a general summary of population, housing, and ethnicity characteristics in the Petaluma and Sebastopol CCD's, the data is derived from the 2010 US Census. **Table 2-3.3** provides selected economic and journey-to-work characteristics for the Petaluma and Sebastopol CCD's, the data is derived from the American Community Survey (2006-2010).

Table 2-3.2: Demographic Profile of the Petaluma and Sebastopol CCDs		
	Petaluma CCD	Sebastopol CCD
Total Population	125,304	27,312
Median Age	37.7 years	48.2 years
Ages 5-19	25,137	3,855
Male	61,214	13,171
Female	64,090	14,141
Total Households	47,071	11,552
Average Household Size	2.58 persons	2.34 persons
Households with individuals under 18 years	13,909	2,614
Households with individuals 65 and over	10,882	3,361
Average Family Size*	3.10	2.84
Total Housing Units	49,516	12,589
Population by Ethnicity by Percent		
Caucasian	79.9%	83.3%
Hispanic or Latino	20.3%	11.3%
Asian	4.3%	1.6%
Black	0.1%	0.1%
Multi-Racial	3.1%	2.3%
Other	2.2%	1.4%
Source: 2010 US Census – Summary File 1		
* "Family Households" consist of a householder and none or more other people related to the householder by birth, mirage, or adoption.		



Table 2-3.3: Demographic, Economic, and Transportation Profile of the Petaluma and Sebastopol CCD's		
	Petaluma CCD	Sebastopol CCD
Population		
Population 16 years and over	99,557	23,600
In labor force	69,907	15,222
Employed	64,415	14,200
Commuting to Work		
Workers 16 years and over	62,559	13,639
Drove alone – car, truck, or van	46,646	10,255
Carpooled – car, truck, or van	7,386	865
Public transportation (excluding taxicab)	1,813	116
Walked	1,955	588
Other means (includes bicycle)	1,566	143
Worked at home	3,193	1,672
Travel Time to Work		
Mean travel time to work (minutes)	27.9	24.8
Household Income		
Median household income (dollars)	67,094	74,339
Mean household income (dollars)	84,548	89,696
Source: 2006 – 2010 American Community Survey		

Table 2-3.4 provides a summary of population, housing, and ethnicity characteristics for the individual census tracts (1534.03, 1534.04, 1535.01, 1510, and 1511) that comprise the unincorporated lands of Sonoma County that make up the project study area between the incorporated cities of Petaluma and Sebastopol.



Table 2-3.4:
Demographic Profile of Census Tracts in the Unincorporated County Lands Surrounding the
Petaluma and Santa Rosa Rail Line (Tracts 1534.03, 1534.04, 1535.01, 1510, 1511)

	Tract 1534.03 (SR 116 corridor south of Sebastopol)	Tract 1534.04 (Southwest Sebastopol – Bloomfield Rd. area)	Tract 1535.01 (South of SR 116 – Hessel area)	Tract 1510 (Northwest Petaluma Area – Skillman Lane/Rainville)	Tract 1511 (West of Stony Point Road – Mecham/Pepper Rd. area)
Total Population	3,840	4,011	4,319	3,483	5,151
Median Age	48.5	48.3	49.3	46.2	38.9
Ages 5-19	590	732	661	636	1,059
Male	1,806	1,875	2,142	1,731	2,674
Female	2,034	2,136	2,177	1,752	2,477
Total Households	1,619	1,720	1,789	1,385	1,810
Average Household Size	2.28	2.33	2.40	2.49	2.61
Households with individuals under 18 years	396	447	412	359	586
Households with individuals 65 and over	447	570	554	395	457
Average Family Size*	2.80	2.90	2.84	2.94	3.05
Total Housing Units	1,739	1,873	1,950	1,481	1,952
Population by Ethnicity by Percent					
Caucasian	85.1%	84.5%	83.3%	79.5%	79.8%
Hispanic or Latino	8.9%	9.5%	10.9%	14.8%	14.5%
Asian	1.7%	1.7%	1.7%	1.9%	1.2%
Black	0.7%	0.8%	0.8%	0.3%	1.2%
Multi-Racial	2.6%	2.6%	2.5%	2.4%	2.7%
Other	1%	0.9%	0.8%	1.1%	1.8%
Source: 2010 US Census – Summary File 1					
* "Family Households" consist of a householder and none or more other people related to the householder by birth, mirage, or adoption.					

Overview of Bicycle and Pedestrian Commute Statistics

Commute data or "Journey to Work" Census statistics have been evaluated for jurisdictions in Sonoma County by the Sonoma County Transportation Authority (SCTA) as a part of the *2014 Countywide Bicycle and Pedestrian Master Plan*. The data was analyzed to identify 'mode share' and to evaluate travel time to work. The term mode share refers to the percentage of workers using a particular mode of transportation to get to work (i.e. walking, bicycling, taking a bus, driving, carpooling, etc.). The purpose of analyzing commute statistics is to establish base data on the existing number of bicycle and pedestrian commuters, and to gain insight into the potential number of bicycle and pedestrian commuters in a plan area. This information can then be used by staff and officials to develop improvement plans and set priorities, with the objective of increasing the percentage of people who choose to walk or bicycle rather than commute by car.



While ‘Journey-to-Work’ (JTW) data historically has been a component of the Decennial Census, it is now included in the American Community Survey (ACS). The JTW data set questions include “How did you usually get to work last week?” Respondents who use more than one method of transportation are instructed to mark the mode used for “most of the distance”. Additional questions include “How many people, including this person, usually rode to work in the car, truck or van last week?” and “How many minutes did it usually take this person to get from home to work last week?” While JTW data from the ACS is available at the county level each year, only the 5-year data set shows the data for all Sonoma County jurisdictions. Thus the JTW data analyzed for the *Sonoma County Bicycle and Pedestrian Master Plan* and presented below is from the most recent 5-year American Community Survey Data Set (2007-2011).

While JTW data is considered the most reliable source of transportation mode share information available, it only provides a glimpse of how residents travel to work, and merely a partial understanding of a community’s travel characteristics since it does not assess non-work trips such as those made to schools, for shopping, recreation, or myriad other utilitarian purposes. In fact, in Sonoma County work trips constitute only 15% of all trips. Further, many work trips involve more than one mode of travel, such as walking or bicycling to transit or a carpool, and the survey does not account for these activities. Nor does it count commuters who walk or bike to work occasionally, even though it is becoming more common for workers to commute by bike or foot once or twice per week or month as opposed to doing so on a daily basis. Despite these shortcomings and any changes to patterns in this area since 2011, the JTW data set is currently the most comprehensive and accurate set of travel statistics available. An overview of countywide bicycle and pedestrian mode share data is presented in **Table 2-3.5**.

Table 2-3.5: Sonoma County Bicycle & Pedestrian Mode Share					
Jurisdiction	Population (2010)	Employed Persons 16 years of age +	Drove Alone	Bike	Walk
Cloverdale	8,618	3,732	78%	0.0%	5.3%
Cotati	7,265	3,929	80%	2.5%	0.6%
Healdsburg	11,254	5,312	72%	2.4%	7.3%
Petaluma	57,941	28,539	72%	1.6%	2.9%
Rohnert Park	40,971	20,502	77%	2.0%	2.9%
Santa Rosa	167,815	75,477	76%	1.3%	2.9%
Sebastopol	7,379	3,920	76%	0.5%	7.4%
Sonoma	10,648	4,658	72%	2.3%	6.2%
Windsor	26,801	12,761	82%	0.1%	0.9%
County (unincorporated)	145,186	71,171	69%	1.0%	2.95 %
Countywide	483,878	226,280	75%	1.2%	3.1%
California	37,253,956	16,251,032	73%	0.8%	2.8%
United States	308,745,538	139,488,206	76%	0.6%	2.8%
Source: American Community Survey, 2007-2011, 5-year Estimates					



3. RELATED PLANS AND POLICIES

Implementing a Class 1 (off street) multi-use path connecting the cities of Petaluma and Sebastopol has been a goal and priority identified in a variety of transportation and community plans that govern land use in Sonoma County and the cities of Petaluma and Sebastopol. This section discusses several of these plans and policies contained in the documents that will guide trail implementation. This includes:

Table 3.1: Trail Planning Documents	
Plan	Agency
State Route 116 Transportation Concept Report (2016)	Caltrans
Toward an Active California, the State Bicycle and Pedestrian Plan (2017)	Caltrans
Senate Bill 1: The Road Repair and Accountability Act of 2017	Caltrans
Complete Streets	Caltrans
SCTA Comprehensive Transportation Plan – Moving Forward 2040 (2016) SCTA Countywide Bicycle and Pedestrian Master Plan (2014)	Sonoma County Transportation Authority Sonoma County Transportation Authority
Economic Impacts of Walking & Bicycling in Sonoma County (2013)	Sonoma County Transportation Authority
Measure M, Traffic Relief Act for Sonoma County	Sonoma County
Sonoma County Bicycle and Pedestrian Plan (2010)	Sonoma County
Sonoma County General Plan 2020	Sonoma County
Draft Sonoma County Integrated Parks Plan (2015) Petaluma General Plan 2025	Sonoma County Regional Parks City of Petaluma
Petaluma Bicycle and Pedestrian Plan (2008)	City of Petaluma
City of Sebastopol General Plan (2016)	City of Sebastopol
City of Sebastopol Bicycle and Pedestrian Master Plan (2011)	City of Sebastopol

3.1 CALTRANS

Caltrans is responsible for operation of the state’s highway network, which includes SR 116 in the Study Area. Although Caltrans has traditionally focused on the provision of transportation facilities for motor vehicles, in recent years there has been an increased interest in multimodal facilities to serve the needs of bicyclists, pedestrians and other modes of travel within the highway network.

Due to resource, cost, and/or right of way (ROW) issues, it is likely that some portions of the trail will need to be located in or cross Caltrans ROW. In addition, depending on the funding source, bicycle and pedestrian improvement projects may need to comply with Caltrans standards and regulations.



State Route 116 Transportation Concept Report (2016)

SR 116 within the study area is owned and managed by Caltrans. Transportation Concept Reports (TCR) are prepared by the California Department of Transportation (Caltrans). The purpose of a TCR is to evaluate current and projected conditions along California's State Highways and to develop and communicate the vision for the route over a 20-25 year planning horizon. TCR's are developed with the goals of "increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements and travel demand management components of the corridor".

The *State Route 116 Transportation Concept Report (2016)* was a cooperative planning effort that was developed by Caltrans in consultation with the Sonoma County Transportation Authority, the city of Sebastopol, Sonoma County, and the Sonoma County Regional Parks Department. State Route (Highway) 116 is approximately 46-miles long and is contained entirely within Sonoma County. It extends from SR 1 on the Sonoma Coast near Jenner to SR 121 near the City of Sonoma. The route is primarily rural. The route is segmented into four sections which are defined as follows: Segment A – SR 1 near Jenner to Sebastopol; Segment A-MP – Sebastopol; Segment B – Sebastopol to US 101 in Cotati; and Segment C – US 101 in Petaluma to SR 121.

Segment B – Sebastopol to US 101 in Cotati. The Petaluma to Sebastopol Trail Study primarily focuses on areas within Segment B – Sebastopol to US 101 in Cotati. Within the segment, SR 116 is a two-lane rural highway with varying shoulder widths, except for a four-lane segment between Gilchrist and Stony Point Roads, where there are no shoulders. This segment is not identified as a critical part of the State Highway System (SHS). Peak traffic conditions generally occur on weekends during summer, and during commute hours.

The TCR characterizes land uses along the corridor as a mix of commercial uses, large lot residential, and small scale agriculture. Numerous private driveways and country road intersections line the segment. Many businesses are served by ad hoc parking and there are few sidewalks along the segment, even when the walking distance between commercial uses is short. Sonoma Transit runs limited weekday service in the corridor, but does not provide direct service between Sebastopol and Petaluma. No weekend service is provided. No dedicated bicycle facilities are provided, and the four-lane section between Gilchrist and Stony Point Roads where no shoulders are provided is especially difficult for bicyclists to navigate.

The TCR classifies this roadway segment as a minor arterial, rural road eligible for designation as a State Scenic Highway (only the segment of SR 116 north of Sebastopol is classified as a Scenic Highway).

Average Annual Daily Traffic (2012) is approximately 16,500, classified as a low traffic level, with low potential growth, based on Caltrans 2035 traffic model. Of this, 900-2400 is truck traffic, 6-12% of total traffic.

Within this segment, there are two pre-1955 historic bridges, one west of Stony Point Road at Gossage Creek, and one at Blucher Creek. The segment bisects areas with wildlife species of concern and Priority Conservation Areas, discussed further in **Section 5.3**.



This highway segment is a candidate for relinquishment by Caltrans, as it is considered a low volume route with more direct options (River Road) to connect into the state highway network. Specific recommendations for SR 116 within the study area are:

- Retain rural highway aesthetic
- Provide more parking and sidewalks in local commercial areas
- Encourage development in Cotati around its Priority Development Area (PDA) and SMART station
- Develop aesthetic and non-motorized improvements to East Cotati Ave
- Consider segment relinquishment

Recommended pedestrian improvements are:

- Provide sidewalks for local businesses along the highway where desired
- Enhance the connectivity in Cotati to maximize pedestrian access to/from SMART
- Improve aesthetic and non-motorized treatment to East Cotati Avenue such as landscaping and lighting

http://www.dot.ca.gov/dist4/systemplanning/ctsp_documents.htm

Toward an Active California, the State Bicycle and Pedestrian Plan

California's first statewide active transportation plan contains policies and actions intended to achieve Caltrans statewide goals to double walking and triple bicycling trips by 2020. Adopted in June 2017, the Plan supports the goals and objectives of the California Transportation Plan with four objectives: Safety, Mobility, Preservation and Social Equity, and associated policies and implementation strategies to create and maintain an integrated and connected active transportation network throughout California.

Senate Bill 1: The Road Repair and Accountability Act of 2017

Senate Bill 1 (SB1), adopted in July 2017, is a funding program to provide funding for transportation infrastructure, expand existing programs, and created new transportation funding programs for implementation. In the Study Area, SR 116 is slated to receive funding in two separate grants - one for improvements within the City of Sebastopol, and the other for road resurfacing in the unincorporated sections between Sebastopol and Cotati.

Improvements within Sebastopol are in the planning stages and will include the completion of bicycle lanes and related pedestrian improvements in addition to pavement improvements. The City of Sebastopol is in communication with Caltrans to coordinate improvements within the city limits, which are planned to include Class II bicycle lanes and pedestrian facilities.

According to Caltrans staff², the portion of SR 116 work outside the City limits of Sebastopol will be limited to only resurfacing existing pavement, with no additional striping, surfacing, signage or bicycle/pedestrian improvements, despite funding intent. According to Caltrans, this work is scheduled to commence during fall 2017.

² Personal Communication, Sergio Ruiz, Lilian Acorda, Vijith Thilakaratne, Caltrans



Complete Streets

Caltrans has, at a policy level, endorsed the concept of providing for a network of multimodal facilities, including bicycle and pedestrian facilities, as part of a complete roadway network, or “Complete Streets”. Since 2003, Complete Streets has evolved as a policy, planning and design process that enables roads to be planned, designed, constructed, operated, and maintained to provide safe access for all users, regardless of age, ability, or mode of transportation. At a federal, state and local level, policies and funding for transportation projects now include consideration of facilities to make the roadway network better and safer for drivers, transit users, pedestrians, and bicyclists.

In 2008 California legislature adopted Assembly Bill 1358, the Complete Streets Act of 2008, which is complimentary to Caltrans policy. This required cities and counties, when modifying their General Plan Circulation Elements, “modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and Highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan”. It also required the Office of Planning and Research create new guidelines for the Circulation Element. These guidelines were published in January 2010.

Caltrans Deputy Directive-64-R1 (Complete Streets – Integrating the Transportation System) was the foundation for the Complete Streets Implementation Action Plan in 2010. This plan outlined the process by which Complete Streets is implemented through various documents and departments, and resulted in Deputy Directive-64-R2, which is the basis for design guidance for bicycle facilities in Caltrans’ Highway Design Manual.

In 2014 Caltrans endorsed the National Association of Transportation Professionals (NACTO) design guidelines, supporting flexibility in design of multimodal facilities. In addition, Caltrans’ issuance of a memorandum (previously discussed) endorsing flexibility in the provision of multimodal facilities within the state’s roadway network may help facilitate funding and implementation of portions of the Petaluma Sebastopol Trail.



3.2 SONOMA COUNTY

Sonoma County Bicycle and Pedestrian Plan (2010)

The *Sonoma County Bicycle and Pedestrian Plan* was updated by the County of Sonoma in 2010. The plan falls under the “umbrella” of the Sonoma County Transportation Authority’s (SCTA) *Countywide Bicycle and Pedestrian Master Plan*. It establishes goals, objectives, policies, design guidelines, and priorities for bicycle and pedestrian transportation networks and physical and programmatic improvement projects in the unincorporated areas of Sonoma County, outside of the cities of Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, and the Town of Windsor.

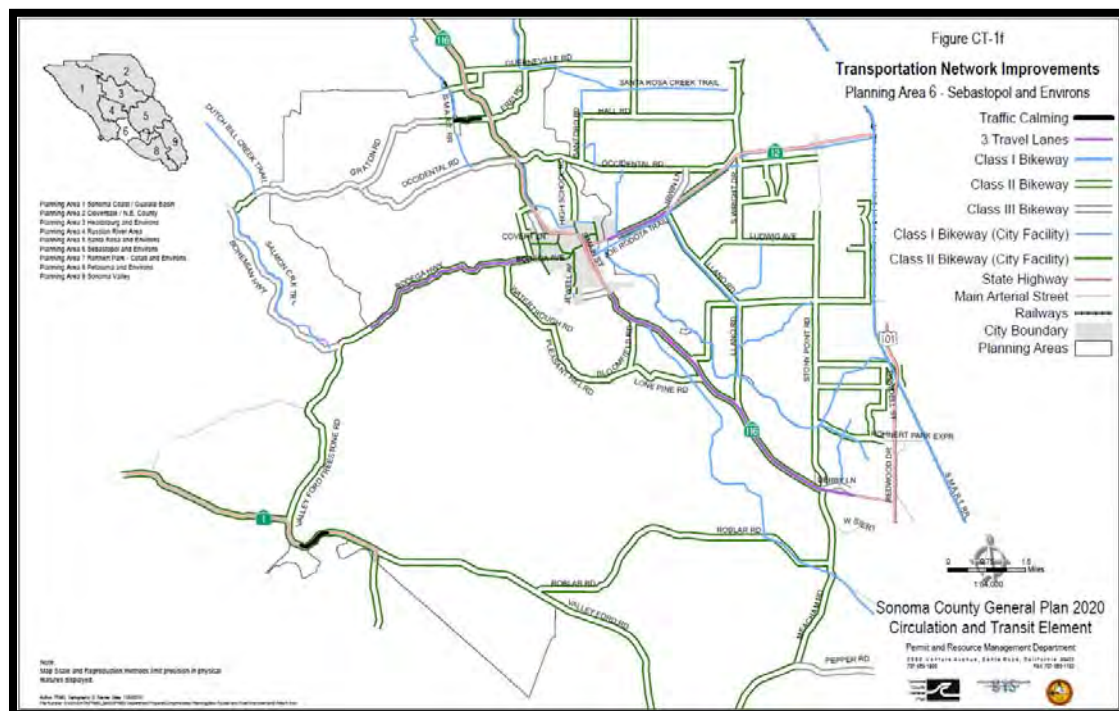
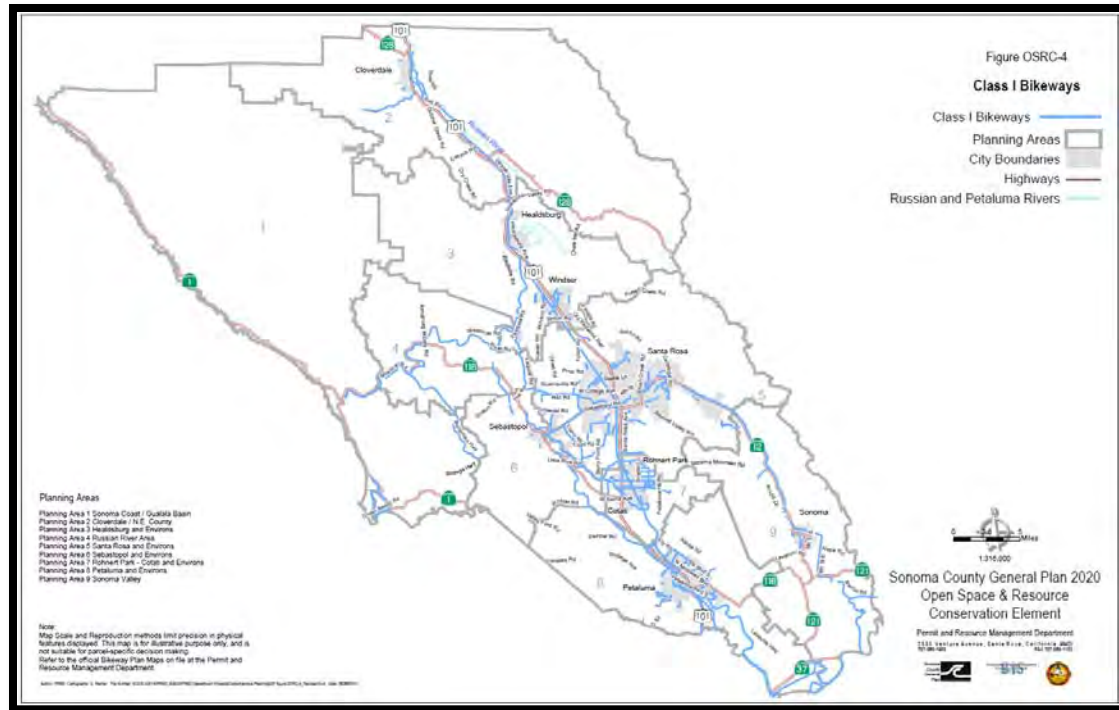
The Plan acknowledges that “a comprehensive, safe, and convenient bicycle and pedestrian transportation network is a critical component of an overall strategy to create a sustainable future for Sonoma County”, and its endeavor to create healthy well designed communities, to meet greenhouse gas emissions reduction standards, to promote tourism, and to create active recreational opportunities.

The Petaluma - Sebastopol Trail is identified as a “medium priority” Class I trail project and a regional connection that would serve as an alternative to bicycling on SR 116. The proposed project (Project ID #201) would extend from the Petaluma city limits to the Sebastopol city limits. The Plan also calls for the construction of Class II bike lanes/shoulders along SR 116 from the Sebastopol City limits south to Gilchrist Road as a high priority project (project ID #1G), from Gilchrist Road to Stony Point Road (project ID#1H), and from Stony Point Road to the Cotati City Limits (project ID#1I).

<http://www.sonoma-county.org/prmd/docs/misc/bikeplandraft.pdf>

Sonoma County General Plan 2020 (2008)

The Sonoma County General Plan 2020 (GP 2020) is the County’s comprehensive plan to guide its future physical development as required by State law. The Plan includes seven mandatory elements (Land Use, Circulation, Housing, Conservation, Open Space, Noise, and, Safety), along with four optional elements (Agricultural Resources, Air Transportation, Water Resources, and Public Facilities and Services). The 2010 GP 2020 updates the previous General Plan which was adopted in 1989. GP 2020 carries forward the major goals and policy framework of the 1989 Plan, and retains the overall format.





The primary purpose of the update was to conduct a policy review which focused upon specific issues that were of paramount importance to the community. GP 2020 also considers the policies and concerns of adjacent counties and regional agencies, including the Association of Bay Area Governments, the Metropolitan Transportation Commission, the San Francisco Bay Conservation and Development Commission, the Bay Area Air Quality Management District, the Northern Sonoma County Air Pollution Control District, the Bay Area Water Quality Control Board, the North Coast Regional Water Quality Control Board, the Sonoma County Water Agency, and others.

Relevant goals, objectives, policies, and discussion regarding bicycle and pedestrian facilities, multi-modal transportation, and transportation facility design are mostly contained in the Circulation and Transit Element. Similarly, the preservation of open space, protection of natural resources, and planning for outdoor recreation including parks, trails, and bikeways and related issues are largely contained in the Open Space and Resource Conservation Element. Highlights, findings, and related policy information from these elements are summarized below.

<http://sonomacounty.ca.gov/PRMD/Long-Range-Plans/General-Plan/>

GP 2020 Circulation and Transit Element

The Circulation and Transit Element addresses planned transportation routes and facilities and includes goals, objectives, and policies affecting the mobility of future residents, businesses, and visitors. It is correlated with the Land Use Element to assure that the transportation system serves future travel demand and helps attain the desired land use plan, and helps achieve a sustainable circulation and transit system. GP 2020 includes emphasis on the Highway 101 corridor along with an increased role for transit and non-motorized modes in serving commute trips and the importance of measures which will allocate existing highway capacity more efficiently during peak travel periods. Strategies for long-range solutions for Transit and Circulation include:

- Programs that improve air quality and reduce greenhouse gas emissions by creating alternatives to automobile use and reducing future increases in Vehicle Miles Traveled (VMT).
- Programs that reduce future dependence upon auto travel.
- Ensuring that land development projects are required to provide adequate pedestrian and bicycle facilities that will eliminate gaps and unsafe conditions in the bicycle and pedestrian network and furnish safe links to the alternative mode networks from 'trip generators'.

Key Findings related to the Petaluma – Sebastopol Trail study are summarized below:

- GP 2020 identifies a Class I Bikeway in the project study area between the City of Sebastopol and the city of Petaluma.
- The Transportation Network Improvements Map for the Sebastopol Area Environs shows a conceptual alignment for the Petaluma – Sebastopol Trail that utilizes both the SR 116/Stony Point Road corridors and the old Petaluma and Santa Rosa Railroad corridor.
- GP 2020 identifies a third lane (turn lane) and bicycle and pedestrian infrastructure improvements along SR 116 between Sebastopol and Cotati.
- Class II bike lanes are proposed along SR 116 between Sebastopol and Cotati.

Relevant policies from the Circulation and Transit Element are listed below:



- Objective CT-1.4: Reduce the need for future automobile use by a combination of improvements and land development policies that give equal favor to alternate modes as to automobile use.*
- Objective CT-1.5: Reduce greenhouse gas emissions by minimizing future increase in VMT, with an emphasis on shifting short trips by automobile to walking and bicycling trips.*
- Policy CT-1g: Provide east west connectivity within each community, including interchange improvements, transit/rail stops, and pedestrian, bicycle, and other alternative transportation mode improvements that will improve access to Highway 101 and the rail/transit system.*
- Policy CT-1m: Require development projects contribute a fair share for development of alternative transportation mode facilities, including pedestrian and bicycle facilities along project frontages and links from these to nearby alternative mode facilities. Development near urban boundaries should provide safe access to the urban area.*
- Objective CT-3.7: Provide a diverse range of recreational opportunities through a well designed network of bikeways, multi-use trails, sidewalks, and related support facilities.*
- Policy CT-3d: The Regional Parks Department shall be responsible for establishing and maintaining Class I bikeways, and the Department of Transportation and Public Works (TPW) shall be responsible for establishing and maintaining Class II and III bikeways and pedestrian facilities along public rights-of-way in unincorporated areas.*
- Policy CT-3q: Design, construct, and improve bikeways consistent with the “Bikeways Plan Project Priority List”. This list shall establish the priority, class, and location of Sonoma County bikeways projects.*
- Policy CT-3v: Where nexus exists, require private or public development to plan, design, and construct bicycle and pedestrian facilities to integrate with the existing and planned bicycle and pedestrian network.*
- Policy CT-3w: Where discretionary projects in Urban Service Areas and unincorporated communities are found to create additional demand for bicycle travel, require the project to directly provide or participate in the funding of bikeway improvements such as gap closures, shoulder widening, safety improvements and signage that will improve bicycle access to destinations located within 3 miles of the project site.*
- Policy CT-3cc: Review the status of abandoned railroad rights-of-way, natural waterways, flood control rights-of-way and public lands on an annual basis or as often as needed for opportunities to develop new Class I bikeways.*
- Policy CT-3mmm: Encourage multi-jurisdictional funding applications for design, construction and maintenance of bikeways and pedestrian facilities that provide regional connectivity.*



Policy CT-7t: Work with Caltrans in considering passing and turning lanes along Highway 116 to reduce congestion, provided that the improvements are consistent with the designated road classifications.

Policy CT-7gg: Prepare a baseline analysis of existing operational conditions on County maintained rural roads in Planning Area 8. When annexations are proposed in this area, prepare additional analysis to determine the impacts to County maintained rural roads that may be created if the annexation and subsequent development is approved. As part of this additional analysis, identify those traffic calming improvements for County maintained rural roads within the specific area between Bodega Avenue and Stony Point Road that will alleviate detrimental traffic conditions, with a priority on those methods that will promote the safety of pedestrian movement, especially for school children and for bicycle traffic.

GP 2020 Open Space and Resource Conservation Element

The purpose of the Open Space and Resource Conservation Element is to preserve the natural and scenic resources which contribute to the general welfare and quality of life for the residents of the county and to the maintenance of its tourism industry. The Open Space and Resource Conservation Element notes that, “greater use of bicycling and walking for transportation and recreation has the potential to create a wide range of health benefits not only for bicyclist and pedestrians, but for all citizens of Sonoma County”, and that “creating walkable and bikeable areas in unincorporated communities further enhances Sonoma County's tourism industry”.

The Petaluma Sebastopol Trail would be designed consistent with policies contained in the County's Open Space and Resource Conservation Element. GOAL OSRC-17 calls for establishing *a countywide park and trail system that meets future recreational needs of the County's residents while protecting agricultural uses. The emphasis of the trail system should be near urban areas and on public lands.*

Key open space findings related to the Petaluma Sebastopol Trail are summarized below:

- The lands and hills that surround the SR 116/Stony Point Road intersection are designated as scenic landscape units.
- The hills and farmlands that flank Stony Point Road between SR 116 and the Petaluma city limits are designated as a community separator.

Objective OSRC-17.1 calls for providing adequate parklands and trails primarily in locations that are convenient to urban areas to meet the outdoor recreation needs of the population, while not negatively impacting agricultural uses. Policy OSRC-17d identifies primary trails, including the Gossage and Hinebaugh Creek Trail at the intersection of Stony Point Road and SR116, as well as multiple use trails:

Use railroad rights-of-way and water agency channels as multiple use trails for hiking, equestrian and bike use. Use existing roadways as alternative routes if access cannot be obtained.

Policy OSRC-17g would apply to use of publicly owned rail parcels within the study area:



Use the following guidelines to determine consistency of projects involving lands with abandoned railroad rights of way where reasonably related to the impacts of the project:

- (1) The project does not or will not preclude the use of the right-of-way for trails.*
- (2) A width of 60 feet generally is reserved for trail purposes, unless the Regional Parks Department determines that a different width would be adequate.*
- (3) An irrevocable offer of dedication for the right-of-way has been made to the County of Sonoma.*

Goals, objectives and policies for bikeways are contained in Section 9.2 (18) and support the design, construction and maintenance of a comprehensive bikeways network that links the County's cities, unincorporated communities, and other major activity centers including schools, recreational areas and employment centers.

The trail would be within the Petaluma/Cotati Community Separator, as well as the Santa Rosa/Sebastopol area, with policies to preserve the visual character of the area, retain oak woodlands and riparian corridors, and preserving groundwater recharge. The trail project would be subject to CEQA review to assess impacts on native species, habitat diversity, sensitive natural communities, wetlands, and wildlife movement corridors; moreover, the development of individual trail segments would be subject to project-level CEQA review. Select General Plan policies related to biological resources include:

- Policy OSRC-1f: in Community Separators, site and design structures to utilize topography and vegetation to screen from view, preserve trees and blend with natural landscape.
- Policy OSRC-3i: Recognize Highway 116 from Highway 1 to the southern edge of Sebastopol as an official State Scenic Highway, and recognize the scenic qualities of this area.
- Policy OSRC-7b: trail segments would be approved with conditions and mitigation measures to protect resources, with avoidance of habitat given highest priority. This policy requires a 100-foot setback from marshes and wetlands, and encourages wildlife-friendly fences, culverts and other features to retain wildlife connectivity.
- Policy OSRC-7k through -7m includes requirements for protecting native trees, particularly oak trees.
- Other General Plan policies that apply to the proposed trail include: Policies OSRC-1d through -1g apply design standards to projects within Community Separators, Policies OSRC-2a through -2e apply restrictions to projects within Scenic Landscape Units, and Policies OSRC-4a through -4c limit night lighting along the trail.
- Objective OSRC-18.1: Design, construct and maintain a comprehensive Bikeways Network that links the County's
- Policy OSRC-18a: Use the adopted Sonoma County Bicycle and Pedestrian Plan as the detailed planning document for existing and proposed bikeways.
- Policy OSRC-18b: Develop a comprehensive system of bikeways through implementation of the Sonoma County Bicycle and Pedestrian Plan as described in the Circulation and Transit Element.
- Policy OSRC-18e: Consider connectivity to public and open space lands when identifying needs for new bicycle and pedestrian facilities.

Sonoma County Transportation Authority

The Sonoma County Transportation Authority acts as the countywide planning and fund programming agency for transportation projects in Sonoma County. The SCTA performs a variety of important functions related to advocacy, project management, planning, finance, grant administration and research. The SCTA coordinates the activities of local jurisdictions with regional, state and federal entities at both a policy and administrative level.



MOVING FORWARD 2040 – Sonoma County’s Comprehensive Transportation Plan (September 2016)

Moving Forward 2040 is Sonoma County’s long range 25-year transportation plan. Known as the Comprehensive Transportation Plan or CTP, it serves as the vision for transportation throughout Sonoma County. The Plan takes stock of the current conditions, analyzes trends, sets goals for the system, and coordinates efforts amongst the County, its nine cities, and where appropriate Caltrans. The CTP – Moving Forward 2040 – sets the following five goals:

Goal 1. Maintain the System Objective: Protect the investment in public transportation infrastructure

Goal 2. Relieve Traffic Congestion Objective: Reduce person hours of delay through strategic improvements, technology and changes in driving habits

Goal 3. Reduce Greenhouse Gas Emissions Objective: Meet the targets to reduce GHG emissions in the transportation sector

Goal 4. Planning for Safety and Health Objective: Increase safety and emphasize health aspects of transportation planning strategies

Goal 5. Promote Economic Vitality Objective: Reduce travel time and cost and increase mobility in communities of concern

The following projects listed in the CTP are relevant to the Petaluma to Sebastopol Trail Plan:

- Sebastopol Bike/Walk Petaluma-Sebastopol Trail (2023) (Plan ID – BP708, BP632)
- Highway Improvements – Widening and Rehabilitation SR 116 between Sebastopol and Cotati (Rehabilitate and widen State Route 116; involves realignment, new shoulders and intersection improvements at various locations) (Plan ID – 2016)
- State Route 116 South Class II Bike Lane Improvements-construct 2.46 mile Class II improvements (Plan ID – BP 854)
- City of Sebastopol State Route 116 Class II Bike Lanes (Construction of Class 2 Bike Lanes on State Route 116 in the City of Sebastopol) (Plan ID – 4517)
- Sebastopol SR 116 Curb, Gutter, and Sidewalk Improvements (Widen shoulder, construct curb gutter and sidewalks, relocate utilities and storm drains) (Plan ID – 2072)
- Sebastopol SR 116 Intersection control at two locations (Traffic signals or roundabouts at two intersections on Highway 116 in Sebastopol). (Plan ID – 2072)
- Highway 116 Intersection Improvements (County portion) Signalization & Intersection Safety Improvements (Plan ID – 4063)
- Llano Road improvements & extension (Llano Road improvements, Highway 116 to Occidental Road) (Plan ID – 2142)
- Stony Point Road Intersection Improvements (Signalization & intersection improvements at Roblar Road) (Plan ID – 2098)

<http://scta.ca.gov/planning/comprehensive-transportation-plan/>

Measure M

Measure M, the Traffic Relief Act for Sonoma County, was passed by voters in November 2004, and provides for a ¼ cent county sales tax that is used to maintain local streets, fix potholes, accelerate the widening of US 101, improve interchanges, restore and enhance transit, support development of passenger rail, and build safe bicycle and pedestrian routes.



The funds are dedicated towards specific programs and projects specified in the Expenditure Plan. The Act has created opportunities for multi-modal transportation improvements throughout the county. Measure M contributes 4 percent of its revenue to the Bicycle and Pedestrian Projects Program. Measure M Bicycle/Pedestrian Projects in the SR 116 Corridor include:
Street Smart Sebastopol- bicycle and pedestrian improvements in the downtown area (\$2.5M)

<http://scta.ca.gov/measure-m/>

Sonoma Countywide Safe Routes to School Program

The Countywide Safe Routes to Schools (SRTS) Program is designed to encourage and educate students to walk and bicycle safely to and from school; to educate parents, school officials, and staff about the benefits of walking and biking to school; and too advocate for needed changes where biking or walking is not safe. The Countywide SRTS program uses an integrated approach that includes five E's - encouragement, education, evaluation, engineering, and enforcement. Two distinct efforts are included under the umbrella of the Countywide Program: the Safe Routes to School Program which works with elementary and middle schools, and the Eco2School Program which works with High Schools. The Sonoma County Safe Routes to School Program is an ongoing effort that has been serving schools throughout the County for approximately a decade.

The Sonoma County Department of Health Services, Sonoma County Transportation Authority, Sonoma County Transportation and Public Works Department, Sonoma County Bicycle Coalition, and the Center for Climate Protection all partner to implement the Countywide SRTS program. The Program has been funded by a variety of sources including the County's Measure M transportation tax, federal Congestion Mitigation and Air Quality funding, Safe Routes to School state &/or federal funds, the Kaiser Permanente Community Benefit Fund, and other regional and local sources. The SRTS and Eco2School programs currently operate in approximately 35 schools throughout the County.

<http://www.sonomasaferoutes.org/>

<http://climateprotection.org/our-work/eco2school/>

SCTA Countywide Bicycle and Pedestrian Master Plan (2014 Update)

The *SCTA Countywide Bicycle & Pedestrian Master Plan Update* was developed by the Sonoma County Transportation Authority (SCTA). The Plan takes a comprehensive and coordinated approach, with a Countywide Overview Section that maintains a common vision, goals, objectives and policies that emphasize cooperation and coordination amongst the local agencies to achieve a cohesive interconnected bicycle and pedestrian system throughout Sonoma County. Local agency plans are coordinated under the "umbrella" of the Countywide Overview. The Plan is designed to facilitate transportation improvements for bicyclists and pedestrians. It inventories existing facilities, identifies the benefits of walking and bicycling, defines pedestrian districts and zones, prioritizes bicycle and pedestrian improvements, recommends design standards, provides implementation strategies, and fosters countywide collaboration and coordination. The recommendations of the plan include both physical and programmatic improvements, including expanding existing facilities, connecting gaps in the network, addressing constraints, providing greater local and regional connectivity, promoting walking and bicycling for transportation and recreation, and educating bicyclists, pedestrians, and motorists alike. The Plan highlights major opportunities to provide new facilities including the utilization of utility



corridors, Sonoma County Water Agency rights-of-way, existing highway rights-of-way, and historic railroad corridors among others.

The Petaluma-Sebastopol Trail (Project ID # 708), a Class I multi-use pathway extending between Petaluma and Sebastopol, is designated as a medium priority project in the 2014 Update. The Plan also identifies Class II bike lanes along SR 116 between Sebastopol and Stony Point Road as a high priority project (Project ID #'s 850,851). Class II bike lanes are identified as a high priority improvement (Project ID# 865) on Stony Point Road between Rohnert Park Expressway and the Petaluma city limits.

<http://scta.ca.gov/planning/countywide-bike-and-pedestrian-plan/>



Economic Impacts of Walking & Bicycling in Sonoma County (2013)

The 2013 Report on the *Economic Impacts of Walking & Bicycling in Sonoma County* was prepared to investigate the economic benefits of investing in non-motorized transportation infrastructure, bicycling and pedestrian events, and supporting amenities and activities in Sonoma County. The report, which was developed by the Sonoma County Transportation Authority, evaluates economic impacts on: Pedestrians and Bicyclists; Businesses; Government; and Residents or “Society at Large”. The report draws upon various local, regional, and national studies to determine impacts to health, transportation systems, property values, tourism, special event impacts, environmental benefits, and government resources among other areas of interest.

While the report findings are largely anecdotal vs. quantitative, persuasive arguments are made across all sectors regarding the individual and collective economic benefits of walking and bicycling in Sonoma County. Specifically in regards to tourism, the report finds that while visitors are drawn to Sonoma County for major events such as the Tour of California and the Wine Country Century, many more are casual independent tourists looking for attractive destinations with active recreational opportunities. Regardless of the attraction, tourist dollars are spent. The report estimates that visitors spend an average of two-hundred dollars a day on lodging, food and drink, and retail items. Further, the report estimates that annual revenue from sales, rentals, repairs, and services from small and medium sized bicycle and pedestrian related business in Sonoma County is between \$900,000 and \$1.5 million dollars annually.

Sonoma County Regional Parks Draft Sonoma County Integrated Parks Plan (2015)

The Sonoma County Integrated Park Plan (SCIPP) establishes a vision to guide the ongoing and future work of the Regional Parks system. The SCIPP highlights areas of opportunity to integrate existing and planned outdoor recreation facilities, trails and protected open space lands with key national and regional trends along different themes including: outdoor recreation, agriculture, health, tourism and transportation. The main goals of the plan are to: Conserve and protect natural and cultural resources; Ensure access for all to the County’s recreational resources; Promote physical, mental and community health; and Improve the vitality of the outdoor recreation economy in the County.

The Plan identifies the Petaluma to Sebastopol Trail as an opportunity and future resource in the West County that will enhance connectivity of County’s multi-use trails and would provide increased recreation opportunities and active transportation options.

Relevant goals and objectives are listed below:

- OR.4: Continue to invest in natural surface trail facilities that have the highest use and serve the broadest cross-section of the population, while increasing the number and diversity of trails throughout the park system, to attract new trail users of varied ability and interest. Core trail activities include walking, hiking, biking, and horseback riding.
- OR.5: Continue current collaborative efforts to connect regional trails for increased recreation opportunities and active transportation options.
- OR.10: Enhance and expand recreational bicycling including bicycle touring, regional trail riding, and mountain biking.



EV.7: Improve, increase, and diversify the transportation connections to parks and recreation destinations.

HC.5: Increase active transportation connections to and within parks and recreation destinations.

- Prioritize development of Class I trails that connect population centers to parks and provide off-road connections between communities.

Relevant Plan recommendations include:

- Work with Caltrans to connect the Joe Rodota Trail under the Highway 12 Bridge to the Sebastopol's Laguna Park.
- Develop the feasible sections of the Class 1 Laguna de Santa Rosa Trail, to the north and south, as identified in the bikeways plan.
- Develop the existing public access trail easements on Alpha Farm, Brown Farm, and Stone Farm in collaboration with the Laguna de Santa Rosa Foundation, Sebastopol, Santa Rosa, and others.
- Identify a preferred alignment for a Class 1 trail from Petaluma to Sebastopol, pursue feasible sections.

[http://parks.sonomacounty.ca.gov/About_Us/Project_Details/Sonoma_County_Integrated_Parks_Plan_\(SCIPP\).aspx](http://parks.sonomacounty.ca.gov/About_Us/Project_Details/Sonoma_County_Integrated_Parks_Plan_(SCIPP).aspx)

3.3 CITY OF SEBASTOPOL

City of Sebastopol General Plan (November 2016)

The 2016 Sebastopol General Plan is the overarching policy document that guides land use, housing, transportation, infrastructure, community services, and other policy decisions throughout Sebastopol. The General Plan includes the seven elements mandated by State law including: Circulation, Conservation, Housing, Land Use, Noise, Open Space, and Safety. The City's General Plan Update also addresses the following alternative elements: Community Services and Facilities, Economic Vitality, Community Character, and Community Health and Wellness. The General Plan sets goals, policies, and actions in each of these areas, serves as a policy guide for how the City will make key planning decisions in the future, and guides how the City will interact with Sonoma County, surrounding cities, and other local, regional, State, and Federal agencies.

<http://sebastopol.generalplan.org/>

The General Plan's Circulation Element reflects the City's desire to provide for complete street, bicycle, and pedestrian facilities. The following goals, policies, and actions support the Petaluma to Sebastopol Trail Project.

Goal CIR 1: Provide a Transportation System that Promotes the Use of Alternatives to the Single-Occupant Vehicle and Facilitates the Efficient and Environmentally Responsible Movement of People and Goods Within and Through the City of Sebastopol

Policy CIR 1-2: Ensure that the City's circulation network is a well-connected system of streets, roads, sidewalks, and paths that effectively accommodates vehicular and non-vehicular traffic



in a manner that considers the context of surrounding land uses and the needs of all roadway users.

Policy CIR 1-3: Regard the quality of life in Sebastopol, maintaining its special small-town character, and providing a safety network of pedestrian and bicycle facilities as more important than accommodating vehicle circulation.

Policy CIR 1-12: Provide high quality regular maintenance for existing and future transportation facilities including streets, sidewalks, and paths.

Actions in Support of Goal CIR 1:

- Action CIR 1a: The City shall cooperate with other jurisdictions in Sonoma County to reduce transportation congestion through the following actions:
Coordinate with the County of Sonoma including the Parks & Recreation Department in efforts to expand regional bicycle and pedestrian networks to meet anticipated demands
- Action CIR 1n: Create incentives for proposed development to incorporate measures to reduce vehicle trips, such as mixed use projects and including bicycle and pedestrian facilities in the development plans and connections to existing bicycle and pedestrian facilities.
- Action CIR 1r: Coordinate with Caltrans to implement traffic calming, vehicle safety, and bicycle/pedestrian network improvements throughout Sebastopol.

City of Sebastopol Bicycle and Pedestrian Master Plan (2011)

The City of Sebastopol Bicycle and Pedestrian Master Plan (2011) updates the City's 2008 Plan. Both the Plan and 2011 Update were developed under the guidance of the Sonoma County Transportation Authority. The Plan falls under the "umbrella" of the SCTA's Countywide Bicycle and Pedestrian Master Plan and is consistent with vision, goals, policies, and objectives of the countywide effort. The Plan addresses physical and programmatic needs within the City of Sebastopol.

The Sebastopol Plan conforms to the Sonoma County and SCTA Countywide Bicycle Plans, which provide for regional connections between jurisdictions. While the Plan does not specify an alignment for the Petaluma-Sebastopol Trail, the following projects are proposed as regional connections on the south end of town:

- Class II bike lanes are proposed on SR 116 (Gravenstein Highway South) within the city limits and connecting south into the unincorporated County.
- A conceptual alignment for a proposed Class I pathway through the Laguna de Santa Rosa is identified along the eastern city limit between the Joe Rodota Trail and the south end of town.

<http://ci.sebastopol.ca.us/page/streets-bikes-pedestrians>

Laguna Wetlands Preserve Restoration Management Plan (2016)

Village Park Feasibility and Planning Study (2012)

The purpose of the *Laguna Wetlands Preserve Restoration and Management Plan* is to guide the City of Sebastopol's long-term management of the properties consistent with the Laguna Master Plan, City policies, and the terms of the conservation easements held by the Sonoma County Agriculture and Open Space Preserve (SCAOSD) on Meadowlark Field, Tomodachi Park, and Railroad Forest. The Plan includes an inventory of the natural, cultural, and recreational resources of the Preserve; describes restoration



and management objectives and actions as well as environmental compliance requirements; provides a typical calendar of annual maintenance and monitoring activities; and includes a cost estimate for implementation. The Plan also identifies regional efforts, such as coordinated management of the entire middle reach of the Laguna, and describes how the City can contribute to them.

The Plan incorporated portions of the City's *Village Park Feasibility and Planning Study* (now called Tomodachi Park) (Questa, 2012), that included an informal trail connection from the Rodota Trail to Highway 12. Portions of the Plan related to conversion of the upland portion of the Village Park have been superseded by recent Council action to retain the mobile home park for affordable housing, but trail connection components are still applicable.

Select findings, policies, objectives, and recommendations listed below are relevant to the Petaluma to Sebastopol Trail project and its potential connection to or interaction with trails and properties within the Laguna de Santa Rosa.

Bicycling and Horseback Riding - Currently, equestrian use is prohibited on the Preserve, except for the Regional Parks trail segment on the east side of Meadowlark Field. Bicycling is prohibited on the Preserve's unpaved trails, with the same exception. These policies are based on Master Plan guidance.

Equestrian use requires facilities not readily available at the Preserve (e.g., parking), requires greater vegetation clearance than pedestrian trails, and would not be accommodated by the seasonal bridge. Bicycling on the Preserve was prohibited in the Master Plan out of concern for pedestrian-cyclist conflict on trails. Both equestrian and bicycle use are allowed on the Regional Parks trails connected to the Preserve.

Preserve Identity, Accessibility, and Connectivity - The public's awareness of the Preserve as a unified entity can be increased by improving directional signage and maintaining a consistent visual identity among the parcels, and by facilitating links to other local pedestrian or bicycle routes.

A North-South Connection at SR 12 - An undercrossing linking Tomodachi with the Americorps Trail would provide a valuable linkage. Caltrans did not include space for such an undercrossing in their bridge replacement plans, despite strong community interest and requests from the Sebastopol City Council. This area can be, and is, crossed casually during low flows, although abundant poison oak on the north side of the bridge makes this less appealing. Regional Parks has also expressed interest in such a connector trail. This issue should be revisited after the bridge replacement is complete.

In addition, a connector trail leading from the eastern end of the sidewalk is planned for the north side of the new SR 12 bridge to the Meadowlark Field perimeter trail would be valuable to the community. This would allow safe pedestrian access to Meadowlark throughout the year, including during the fall and winter when the Youth Park floating bridge is not installed.

The trail would need to lead down from the highway's elevation and across a seasonal swale. Additional considerations may include ADA accommodations for grade and trail width; Caltrans design requirements and encroachment permitting; avoidance of a PG&E gas line parallel to the highway; avoidance of existing native vegetation; and bridge construction methods to avoid impacts to wetlands. OBJECTIVE PU-2: Enhance connectivity of trails on the Preserve with other local trails and pedestrian walkways.

- At Tomodachi, develop a seasonal connector trail from the picnic area south to the Joe Rodota Trail. This trail will cross through existing riparian habitat, and will require regulatory and



SCAPOS D approvals. Tomodachi’s conservation easement limits trails to “unpaved single-track pedestrian trails” and requires prior SCAPOS D approval.

- After Highway 12 bridge replacement is complete, collaborate with other stakeholders (CalTrans, Regional Parks, SCAPOS D) to develop a pedestrian undercrossing linking Tomodachi Park with the Americorps Trail, as well as a connector trail from the Highway 12 bridge sidewalk (northeast portion) to the Meadowlark Field perimeter trail, if possible.

http://ci.sebastopol.ca.us/SebastopolSite/media/Documents/Laguna_Preserve/sebastopol_lwpmp_final_adopted_01-05-16.pdf?ext=.pdf

3.4 CITY OF PETALUMA

City of Petaluma General Plan 2025

The Petaluma General Plan, and the Petaluma Bicycle and Pedestrian Plan (adopted as part of the Plan) is the “blueprint” that guides development and policy decisions throughout the city of Petaluma. The General Plan includes the seven elements mandated by State law including: Circulation, Conservation, Housing, Land Use, Noise, Open Space, and Safety, and incorporates a variety of alternative subjects. The General Plan outlines a vision for Petaluma’s long-range physical and economic development and resource conservation.

The Plan was developed to reflect the aspirations of the community and enhance the quality of life for its residents. It provides strategies and specific implementing policies and programs that will allow the Plan vision to be accomplished. The General Plan establishes a basis for judging whether specific development proposals and public projects are in harmony with City policies and standards. It allows City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental resources, and minimize impacts and hazards.

Finally, the Plan provides the basis for establishing and setting priorities for detailed plans and implementing programs, such as the Development Codes, the Capital Improvement Program (CIP), facilities and master plans, and redevelopment projects.

<http://cityofpetaluma.net/cdd/plan-general-plan.html>

City of Petaluma Bicycle and Pedestrian Plan (2008)

The Petaluma Bicycle and Pedestrian Plan was prepared for the purpose of making Petaluma a pedestrian- and bicycle-friendly community by means of ‘complete’ streets, infrastructure improvements, and transportation planning for the benefit of all. It was developed to meet the statutory requirements of the California Bicycle Transportation Act. It also addresses and plans for pedestrian needs. The Plan was adopted as an Appendix to the City of Petaluma General Plan. The Bicycle and Pedestrian Plan map shows a proposed Class I trail leading from Denman Reach along the Petaluma River north to the City limits near Stony Point Road as well as Class II bike lanes connecting along Stony Point Road north into the unincorporated County. The following goals and policies are relevant to the Petaluma to Sebastopol Trail:

Goal – Create and maintain a safe, comprehensive, and integrated bicycle and pedestrian system throughout Petaluma that encourages bicycling and walking and is accessible to all.



BICYCLE IMPROVEMENTS

Policy 1 Implement the bikeway system as outlined in the Bicycle and Pedestrian Plan, and expand and improve the bikeway system wherever the opportunity arises.

MULTI-USE TRAILS

Policy 11 – Establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel. At the minimum, Class I standards shall be applied unless otherwise specified.

Program A – Review the status of ownership and use of railroad rights-of-way, creek maintenance rights-of-way, and other public lands and seek to include new bicycle and pedestrian routes by working with all appropriate agencies.

Program B – Fully implement the non-motorized components of the Petaluma River Access and Enhancement Plan.

Program C – Support the implementation of the SMART bicycle/pedestrian path along the NWPRR corridor and integrate it with the citywide bicycle network.

SAFETY, EDUCATION, AND PROMOTION

Policy 18 – Promote bicycle and pedestrian safety and increased use of non-motorized transportation alternatives through engineering, education, and enforcement programs.

Program E – Make bicycle and pedestrian safety improvements at street crossings a priority.

Policy 24 – Coordinate efforts and resources with the County to construct bikeways called for in the SCTA Countywide Bicycle Plan.

<http://cityofpetaluma.net/cdd/plan-general-plan.html>



3.5 METROPOLITAN TRANSPORTATION COMMISSION/ABAG

Plan Bay Area 2040

In 2013, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2040, the first integrated long-range transportation and land-use/housing plan for the San Francisco Bay Area that addresses the challenge of accommodating projected growth. The Plan includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan and represents the next iteration of a planning process that has been in place for decades. The Plan integrates transportation and land use to better align jobs and housing with the region's transportation network and to reduce greenhouse gas emissions. The Plan distributes growth to areas with greater accessibility to transit, job centers, shopping, schools, recreation, and other amenities, while planning for environments that better support walking and biking.

Plan Bay Area marks the nine-county region's first long-range plan to meet the requirements of California's landmark 2008 Senate Bill 375, which calls on each of the state's 18 metropolitan areas to develop a Sustainable Communities Strategy to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks. Working in collaboration with cities and counties, the Plan advances initiatives to expand housing and transportation choices, create healthier communities, and build a stronger regional economy.

<http://planbayarea.org/plan-bay-area.html>

FOCUS – A Development and Conservation Strategy for the San Francisco Bay Area (2009)

FOCUS is a regional development and conservation strategy, a component of the *Plan Bay Area 2040* that promotes a more compact land use pattern for the Bay Area. It unites the efforts of four regional agencies (Metropolitan Transportation Commission, Association of Bay Area Governments, Bay Area Air Quality Management District, San Francisco Bay Conservation Development Commission) into a single program that links land use and transportation by encouraging the development of complete, livable communities in areas served by transit, and promotes conservation of the region's most significant resource lands.

Through FOCUS, regional agencies will support local governments' commitment to these goals by working to direct existing and future incentives to Priority Development Areas and Priority Conservation Areas. Priority Development Areas are locally identified, infill development opportunity areas near transit. Priority Conservation Areas are regionally significant open spaces for which there exists a broad consensus for long-term protection. These areas have been identified based on criteria that are consistent with the Bay Area's regional goals.

Within the project study area the Laguna de Santa Rosa and the Santa Rosa Plane are identified as priority conservation areas. The Cotati Depot and Downtown, and Sebastopol Downtown Core are identified as Priority Development Areas.

<http://planbayarea.org/index.php>

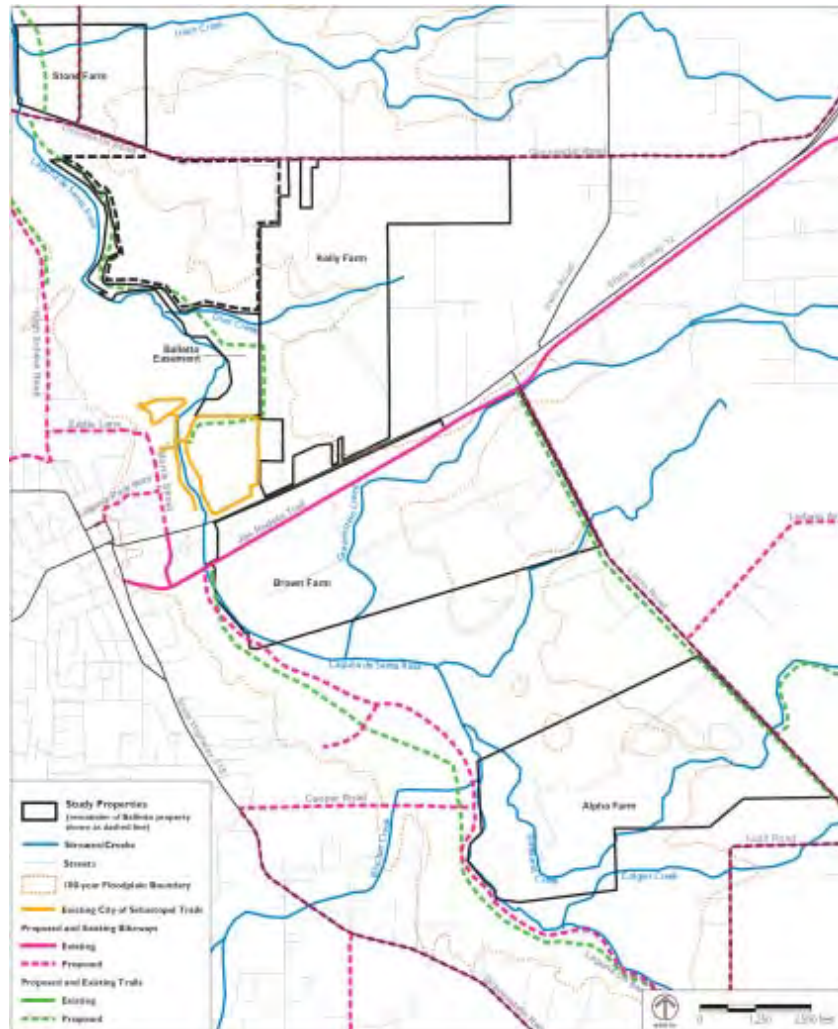


3.6 SONOMA COUNTY AGRICULTURAL PRESERVATION AND OPEN SPACE DISTRICT (SCAPOSD)

The Sonoma County Agricultural Preservation and Open Space District was approved by voters in 1990 to permanently protect the greenbelts, scenic viewsheds, farms and ranches and natural areas of Sonoma County. Through a sales tax, local funding for agricultural and open space protection is allocated through 2031. To date, the District has protected over 111,000 acres to benefit people and wildlife.

Laguna De Santa Rosa Protected Lands Trails Plan (2006)

The SCAPOSD Laguna de Santa Rosa Protected Lands Trails Plan was prepared to guide the provision of access to five properties located along the Laguna for public recreation and environmental education through establishment of a trail system. The Plan provides background information about the Laguna de Santa Rosa Protected Lands, including the regulatory setting, a description of current activities on the properties, and a summary of their natural and cultural resources. The plan used an extensive public process to gain input from the public, project stakeholder, technical advisors, and elected officials.



Laguna Trails Plan: Existing and Proposed Trails and Bikeways



The planning process for the Trails Plan included coordination with numerous agencies, a technical advisory committee, the City of Santa Rosa, and members of the community including agricultural operators in the study area. The project identified a subset of the trails that represents the first phase of a larger implementation program and for which construction documents would be prepared. Two types of trails are recommended as a part of the Plan; pedestrian only trails, and multi-use trails. In order to support the goals of resource protection as well as minimizing conflict with agricultural uses of the City Farms, proposed trails were generally planned in locations between natural and farmed areas. This was done to reduce conflicts between trail use and habitat functions, as well as between trail use and farming operations. In addition, the proposed trails do not enter the Laguna, but instead follow the edge of the riparian vegetation along the Laguna.

Project Goals:

- Create trails that allow users a variety of experiences in the Laguna de Santa Rosa.
- Create a variety of classes of recreational trails in the Laguna de Santa Rosa.
- Balance recreation with the protection and preservation of sensitive natural and cultural resources.
- Coordinate trail planning with restoration and enhancement of sensitive resources.
- Create linkages to existing and proposed trails, including undercrossings for both people and wildlife.
- Maximize the use of existing roads and access areas for trail alignments and staging areas while minimizing potential conflicts with ongoing agricultural uses and City operations on the Farms.
- Respect and coordinate with agricultural lessees and private property owners.
- Provide adequate trailheads, parking, staging areas and picnic areas, where appropriate.
- Provide interpretive opportunities.
- Include native plantings as part of trail development.
- Use sustainable materials, including permeable or semi-permeable trail surfaces.

Within the study area, bikeways are proposed along SR 116 as well as trails north of the study area along the Laguna de Santa Rosa.



4. LAND USE, RIGHT OF WAY AND PROPERTY OWNERSHIP

The majority of lands within the study area are in private ownership. Within the city limits of both communities, this includes single family and multi-family residential lands, as well as commercial and industrial uses. Within the unincorporated areas, most of the parcels are rural residential lots, large agricultural lands, or discontinuous commercial uses along SR 116. In addition to Caltrans' SR 116 right of way, public and protected lands include lands owned by the cities or county, as well as Sonoma County Water Agency, former railroad lands now owned by SMART or Sonoma County, and private lands that have open space easements under agreement with Sonoma County Agricultural and Open Space District.

4.1 PUBLIC AND PROTECTED LANDS

Public and Protected Lands within the Study Area are shown on **Figure 4.1-1**.

Sonoma County-Owned Lands

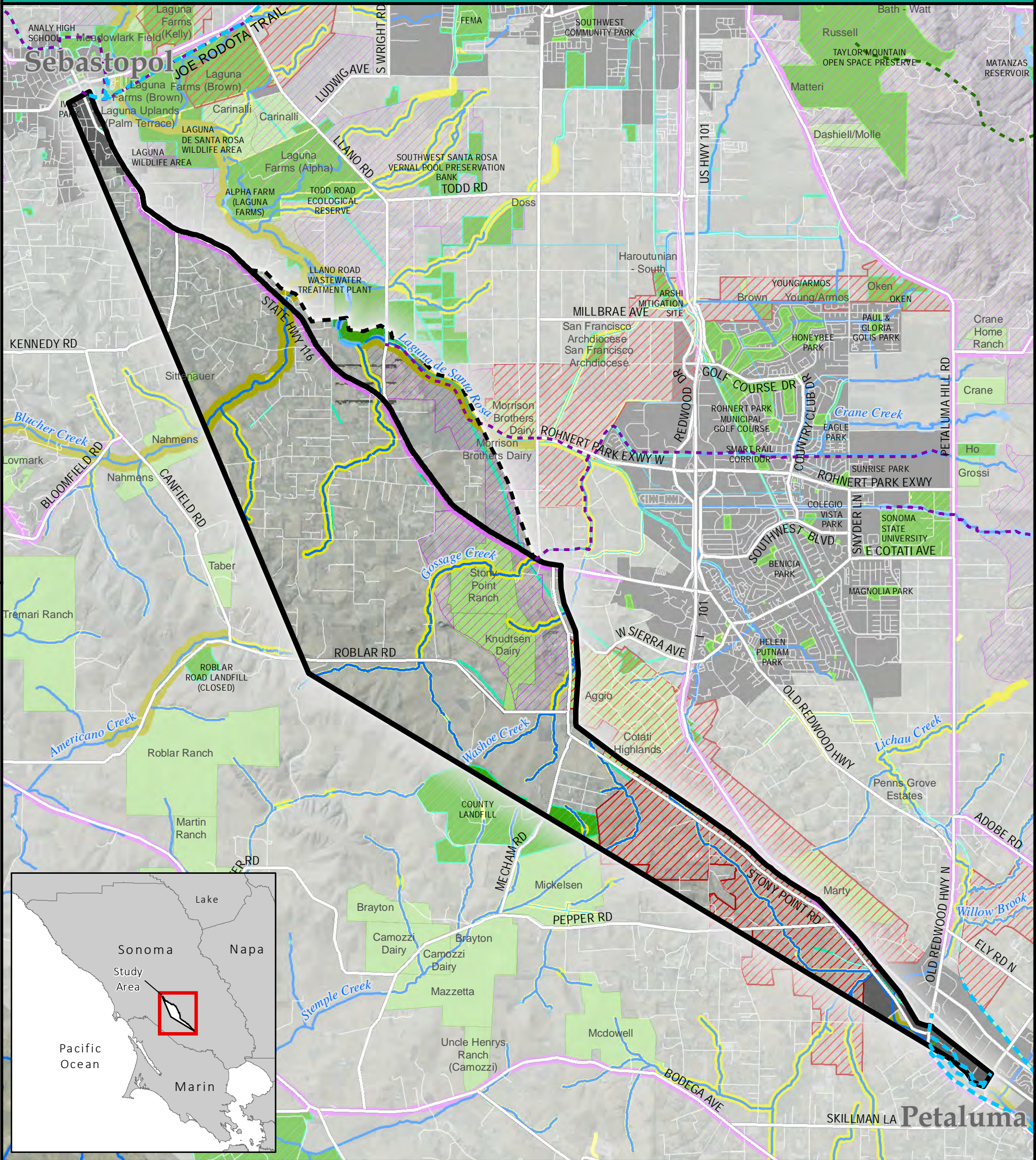
- **Former Railway Parcels.** Although many of the former railroad parcels (discussed below) either reverted to private ownership or purchased by adjacent landowners, there are sixteen parcels where these lands are owned either by Sonoma County or SMART (successor to the Petaluma and Sebastopol Railway). This includes parcels adjacent to SR 116 in the vicinity of Bloomfield Road, discontinuous parcels in the Hessel area, parcels along Roblar Road between Stony Point Road and Peterson Road, and lands south of Meham Road to the Petaluma City limits.
- **Sonoma County Central Disposal Site.** This 398 acre facility is operated by Republic Services under a 25 year lease (2013) with Sonoma County. The site accepts limited solid waste as well as operating a landfill gas power plant. Aside from public roads, the site is not adjacent to other public land.
- **Road right of way.** Public roads, including Stony Point Road, as well as other roads within the study area are owned by Sonoma County.

Sonoma County Water Agency (SCWA)

Within and north of the study area, SCWA owns multiple riparian parcels along the Laguna de Santa Rosa Creek, as well as right of way associated with the Russian River-Cotati Intertie project. Within a linear alignment, SCWA owns, operates, and maintains this corridor which contains a buried 48-inch diameter steel water supply pipeline that runs from Forestville to Cotati, where it connects to the Petaluma Aqueduct.

The Russian River-Cotati Intertie provides essential water service to approximately 350,000 residents and businesses within the Water Agency's service area in portions of Sonoma and Marin counties. The Russian River-Cotati Intertie conveys water from wells near the Russian River to customers in the Water Agency's service area. The Russian River - Cotati Intertie Project was installed in 1977. through open-cut trenching methods. The pipeline is buried at a relatively shallow depth (approximately 7 feet below ground surface). The majority of parcels within the study area may be used for trail purposes, however, one parcel indicates "Public use of the Right of Way for hiking or riding trails shall not be permitted without Grantor's written permission", for which additional negotiation may be needed to secure a continuous connection to the Laguna de Santa Rosa Trail.

Petaluma - Sebastopol Trail Feasibility Study



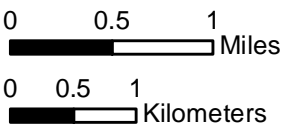
Sonoma County Protected Areas Database 2016 SCAPOSD, Sonoma County General Plan, 2020 Map Date: January 12, 2018

- Existing Trail Creeks Study Boundary Laguna Connection Study Area Incorporated City Boundaries
- Public and Protected Lands**
- Closed to the Public
 - Open to the Public
 - Restricted/Future/Permitted Access
 - Open Space Easement
- General Plan Designations**
- GP HIKING AND EQUESTRIAN
 - GP MULTI - USE TRAILS
 - Riparian Corridor
 - Scenic Corridor
 - Community Separator
 - Critical Habitat Area
 - Scenic Landscape Unit

Riparian Corridors 50 Feet Wide 100 Feet Wide 200 Feet Wide

THIS MAP IS NOT A TRAIL GUIDE

This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.





Sonoma County Agricultural Preservation and Open Space District (SCAPOSD)

SCAPOSD has entered into Conservation Easements with several parcels within the study area. These primarily consist of agricultural easements over private lands; public access is not a component of the easement. Lands with these conservation easements include:

- Stony Point Ranch, south of SR 116 between Peterson and Stony Point Roads, 285 acres. 1995 easement for agricultural preservation and visual access.
- Knudtsen Dairy, 221 acres along Roblar Road. 1996 easement for agriculture and scenic views.
- Aggio/Cotati Highlands, 566 acres on the east side of Stony Point Road (Gallo vineyards). 1994/1998 easement for agriculture and scenic buffer.
- Guardino, 8.65 acres on Cunningham Marsh, 2009 agricultural easement.
- Nahmens, 60 acre agricultural easement (1999).

Sonoma Land Trust (SLT)

Sonoma Land Trust is a local, non-governmental, nonprofit organization that works with private landowners, and public agencies to conserve scenic, natural, agricultural and open land for the future of Sonoma County. Within the study area, SLT has two conservation easements:

- Watson Ranch. SLT owns a conservation easement over the 530 acre Watson Ranch, north of Petaluma on the west side of Stony Point Road. This agricultural preserve was established in 1979.
- Blucher Creek. 7 acre easement in Cunningham Marsh, established to protect vernal pool species.

City of Sebastopol

Within the City of Sebastopol, right of way along SR 116 is owned by Caltrans. The City also owns and manages lands within the Laguna de Santa Rosa, including Tomodachi Park. SR 116 within Sebastopol will be improved with bicycle and pedestrian facilities

City of Petaluma

Within Petaluma, Class II bicycle facilities are located on Petaluma Boulevard North into downtown Petaluma. In addition, the City owns open space lands along the Petaluma River (Denman Reach) which provide habitat and public access between Petaluma Boulevard North and Corona Road. Portions of this trail have not been completed. Other public lands within the study area include lands owned by SMART, which will include a public access trail to connect the North Petaluma SMART station with Payran Street and the Petaluma River Trail.

4.2 PETALUMA AND SEBASTOPOL RAILWAY LAND USE AND OWNERSHIP

Overview

The plan to build an electric railroad connecting Petaluma, Sebastopol, and Santa Rosa was first conceived in 1903. The concept was to consolidate the various existing small horse-drawn and steam-



powered lines in the area which included the Petaluma Street Railway, the Santa Rosa Street Railway, the Union Street Railway, and the Central Street Railway.

The Petaluma & Santa Rosa Railway (P&SR) founders wanted to build an electric railway using the latest equipment which would run frequent trains and serve some of Sonoma County's most productive farmlands, as well as to provide passenger service from San Francisco to destinations in the region. The rail line would provide convenient access to the egg ranches, dairy farms, orchards, hop and grain fields, and other agricultural and natural resources in the area. The line would wind through the hills of Petaluma and Sebastopol, and then from Sebastopol it would extend east to Santa Rosa and connect with the California Northwestern Railroad (CNW). In Petaluma, the trains would meet the railroad owned river boats that floated farm products and other resources down Petaluma Creek and across San Pablo Bay to markets in San Francisco. The interconnected infrastructure would allow local products to reach markets in San Francisco in hours rather than days.

The Petaluma and Santa Rosa Railroad Company was incorporated in June 1903. In December 1903, the P&SR purchased its first river boat. In April 1904, rail construction began in Petaluma, in July the rails reached Sebastopol, and by October 1904, the electric line was running trains with customer freight. During its first year the P&SR put nearly 30 miles of track in operation and purchased 10 interurban passenger cars and 5 freight locomotives. Eventually, spurs to Forestville and Two Rock were built. Plans were developed to extend the line to San Rafael, Dillon Beach, Healdsburg, Sonoma, and Napa. However, the earthquake of 1906 and associated repairs, competition from other carriers, and various financial and operational issues prevented the realization of the expansion plans.

The Battle of Sebastopol Road



Despite the P&SR's quick start up, the railroad's development was not without issue. The California Northwestern Railroad (CNW) Company, which operated a parallel branch line between Santa Rosa and



Sebastopol dating back to 1890, would not allow the P&SR to construct a grade crossing of its north-south tracks at Sebastopol Road, thus denying the P&SR access into downtown Santa Rosa. Further, the CNW Railroad Company vowed to fight all attempts of the electric railway to cross their mainline and spur tracks; using both the courts and persuasive tactics to keep the P&SR from establishing a crossing. A grade crossing was necessary for the P&SR to reach downtown, and since they held right-of-way on both sides of the CNW rail line, tracks and overhead electric infrastructure were built on both sides of the CNW in anticipation of receiving a crossing. Conflict ensued and resulted in track sabotage at the P&SR shipyard in Petaluma, track blockades in Santa Rosa, a temporary crossing laid on top of the CNW tracks, court injunctions, Sheriff's standoffs, surprise attacks on infrastructure, hired thugs, bloodied noses, black eyes, and a multitude of documented skirmishes.

The events were known as "The Battle of Sebastopol Road". For a time, when the P&SR trolley would reach the CNW line, passengers would disembark and board another P&SR trolley on the other side of the crossing to continue their travels. Ultimately on March 2, 1905, the court issued an injunction and restraining order that allowed the P&SR to install a legal crossing of the CNW mainline at Sebastopol Road in Santa Rosa so trains could reach downtown, the P&SR now had a complete right-of-way.

Along with freight service the P&SR operated 10 interurban passenger cars. The passenger service was popular and cars made 9 round trips daily from Petaluma to Sebastopol, Forestville, and Santa Rosa. On April 18, 1906 the San Francisco earthquake struck and flattened most of Santa Rosa's commercial district. The P&SR proved helpful during debris removal. Despite the 1906 earthquake, growth of the P&SR was rapid through the early 1910's. Though P&SR was well patronized by both freight and passengers, the railroad operated at a loss until 1910. Passenger traffic reached a peak of over 760,000 riders annually in 1912. In 1913 the branch line to Two Rock opened, and by the end of that year, the P&SR included 37.36 miles of electric track, 91 cars, and 4 locomotives.

Freight service was a mainstay of the P&SR Railway, with daily steamboat service to San Francisco. The rail and boat services helped Petaluma become the "Egg Basket to the World". Following a foreclosure sale and reorganization, the Petaluma and Santa Rosa Railway became the Petaluma and Santa Rosa Railroad. In February of 1932, the Petaluma and Santa Rosa Railroad was purchased by the Northwestern Pacific Railroad, bringing the P&SR under the Southern Pacific Railroad Company umbrella. Improved roads and automobiles eroded the P&SR's passenger service and revenues, and in June 1932, passenger service ended. By the mid 1930's freight service began a steady decline as trucks began to play an increasing role in the transportation of freight. In 1946 the first diesel locomotives arrived, and in March 1947 electric train service ended.

Understanding Easements and Railroad Rights-of-Way

An easement is an agreement that establishes permanent property rights allowing a party to use the land or property of another for the purposes defined in the easement. Right-of-way is a type of easement that gives someone the right to travel across property owned by another person. Easements are perpetual and are not subject to termination or expiration. They "run with the land" and are automatically transferred from one owner to another as the land is sold. The holder of the easement can, at some point, choose to release their rights by consent of the agreement holder or by judge's order. An argument for removal must be based upon proof that the easement is no longer needed.

Most users of ROWs, including railroads and utility companies, do not own the underlying land that the right-of-way is on. They typically have an easement for a specific purpose. When that specific use is



discontinued, i.e. the railroad discontinues its use of the right of way, road is closed, utility is moved to another location, etc., the land could revert back to the then existing abutting or adjacent property owner – free of encumbrance or easement. However, if the right of way was acquired in fee title, the land does not revert back to the landowner when the use of the right of way is discontinued. Whether or not the property reverts back to the landowner depends on the contract conditions made between the landowner and utility company.

Railroad Abandonment and Railbanking

By the mid-1970's, the nation's rail transportation system was in dire financial condition. Rail carriers were faced with increased competition from other modes of transportation (especially trucking), rising labor, fuel and maintenance expenses, and regulation that made it difficult for carriers to get rid of unprofitable lines. Against this background, Congress enacted a series of new laws, most notably the Staggers Rail Act of 1980 (Staggers Act), which sought to increase the role of the marketplace, rather than government regulation in shaping rail transportation. Where the market has spoken clearly and regulation is found to be unnecessary, a rail carrier may usually abandon a line, subject to appropriate labor protection and environmental conditions. Indeed, lines over which no local traffic has moved for two years without any formal complaint have been exempted from traditional regulatory scrutiny and can be abandoned simply by filing a notice with the STB.

Today, railroad abandonment is handled by the Federal Surface Transportation Board (STB). The STB replaced the Interstate Commerce Commission which oversaw abandonments when the P&SR was abandoned.

Status of Rail Parcel Ownership



Through the 1960's and 1970's the P&SR Railroad slowly lost its identity and segments of the track were cut back leading to discontinued use of track segments over time. When the Sebastopol-Petaluma rail line segment was discontinued in 1978, the ownership of rail line parcels reverted to, or was purchased

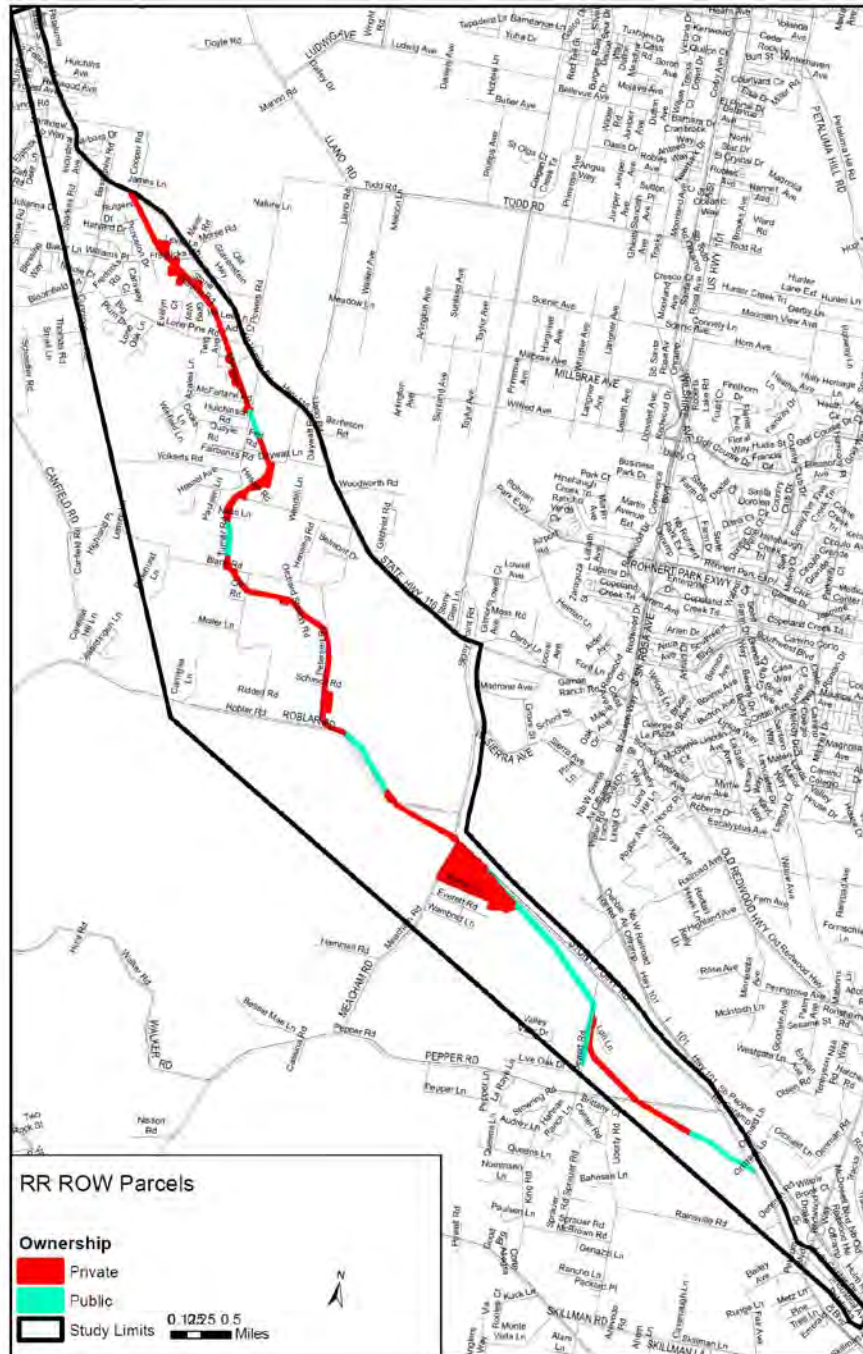


by the adjacent property owners, with the exception of small portions of the ROW which are owned by Sonoma County and Petaluma and Santa Rosa Railroad SMART. More specifically, eight miles of track were discontinued between Denman and Turner in 1973, and four more miles were discontinued between Turner and Alten in 1978. Final discontinued use of the Petaluma to Sebastopol line occurred in 1984. The segment from Santa Rosa to Sebastopol last had trains on it in 1984. Between 1984 and 1989, the Santa Rosa to Sebastopol segment was discontinued, at which point the Sonoma County Board of Supervisors directed the Regional Parks Department to acquire portions of the discontinued right-of-way. The segment from Santa Rosa to Sebastopol is now the Joe Rodota Trail and West County Trail. The Northwestern Pacific Railroad continued using the southern end of the line to serve local industries in Petaluma.

Within the Study area, there are approximately seventy five former railroad parcels, (some former parcels are now County/State roads). Of these, sixteen are currently in public ownership, clustered throughout the Study Area:

Table 4.2-1: Parcel Ownership

Parcel Number	Owner
SR 116 near Bloomfield Road	
1	063-250-052 Sonoma County
East of Hessel Road near Lupine Lane	
2	062-050-072 Sonoma County
3	062-080-031 Sonoma County
4	062-092-035 Sonoma County
Turner Road at Busch	
5	024-040-047 Sonoma County
6	024-040-038 Sonoma County
7	024-031-070 Petaluma and Santa Rosa RR (SMART)
8	024-031-073 Petaluma and Santa Rosa RR (SMART)
9	024-040-047 Sonoma County
10	024-040-038 Sonoma County
West of Stony Point, between Mecham and Jewett	
11	020-060-015 Sonoma County
12	020-060-016 Sonoma County
13	333-333-RRX Petaluma and Santa Rosa RR (SMART)
Stony Point near Liberty Field and Willow Brook	
14	113-140-046 Sonoma County (access to Liberty Field)
15	007-432-002 Sonoma County
16	007-422-041 Sonoma County



Several workshop participants requested additional information regarding acquisition and use of the former railroad right of way for a trail, since it might have a lower construction cost. The lower construction costs were attributed to the even, flat grade, fence encroachments and absence of utility conflicts requiring resolution. They indicated that built structures and other improvements within the corridor are generally limited. This was confirmed by the study team through review of on-line aerial photography and review of Assessor's Parcel assessment information.

Although construction costs may generally be lower for the former railroad option as compared to the SR116 corridor trail option for the reasons noted above, a major difference in costs and feasibility



between the former railroad option as compared to the SR116 corridor trail option are right of way acquisition costs and anticipated costly right of way engineering fees.

In order to provide some clarity and perspective on this issue, preliminary planning level right of way acquisition costs were estimated for the railroad corridor. This was done using on-line real estate costs for vacant or raw land properties currently on the market or recently sold from sources. Based on these sources and expressed on a square foot basis, un-developed land costs in the Hessel area were determined to be in the general range of \$5.00- \$10.00 per square foot (\$218,000-\$435,000 per acre for raw land), for small parcels under 2 acres. Using the railroad corridor width of 30 feet, which is generally consistent with trail right of way needs, property acquisition costs are in the range of \$150.00 to \$300.00 per linear foot of trail. Property acquisition costs for the 43,000 lineal feet of privately-owned former railroad corridor property would be in the range of **\$6.5** million to **\$13.0** million. Of the total former railroad property length of 58,000 lineal feet, 43,000 lineal feet are privately owned and 15,000 lineal feet are publically owned. Added to this are legal fees for title search and clearing often complex and obscure former railroad titles and easements or use agreements, boundary and property survey, and Right of Way Engineering and Realtor fees, which are expected to be in the range of 15-20%, or an additional **\$0.98** to **\$2.6** million. Railroad parcels with structures or other improvements such as sewer systems (e.g. leach field and lines) and the 22 merged parcels would likely be significantly more expensive and increase total acquisition costs.



As noted in the Trail Cost Estimate section, trail construction costs for a separated Class 1 Trail in an open space area with few conflicts are typically in the range of \$0.85 million per mile while costs for trail construction in areas of sloping terrain with utility and other conflicts are in the range of \$1.53 million per mile or an additional **\$0.68** million per mile. Property acquisition fees, including Legal, Realtor, and Right of Way Engineering Fees add **\$0.91** to **\$1.9** million per mile. This indicates that the additional costs of property acquisition are higher than the construction costs associated with resolving utility conflicts and engineering difficulty.

Right of way acquisition costs for SR 116 were not estimated, as the right of way along that corridor is generally 60-80 feet wide or more, with exact right of way needs to be determined during the design and engineering phase. Design techniques such as lane shifting, shoulder and lane width design, and reallocation of paved areas would be utilized to minimize total right of way acquisition as part of a comprehensive road improvement project.

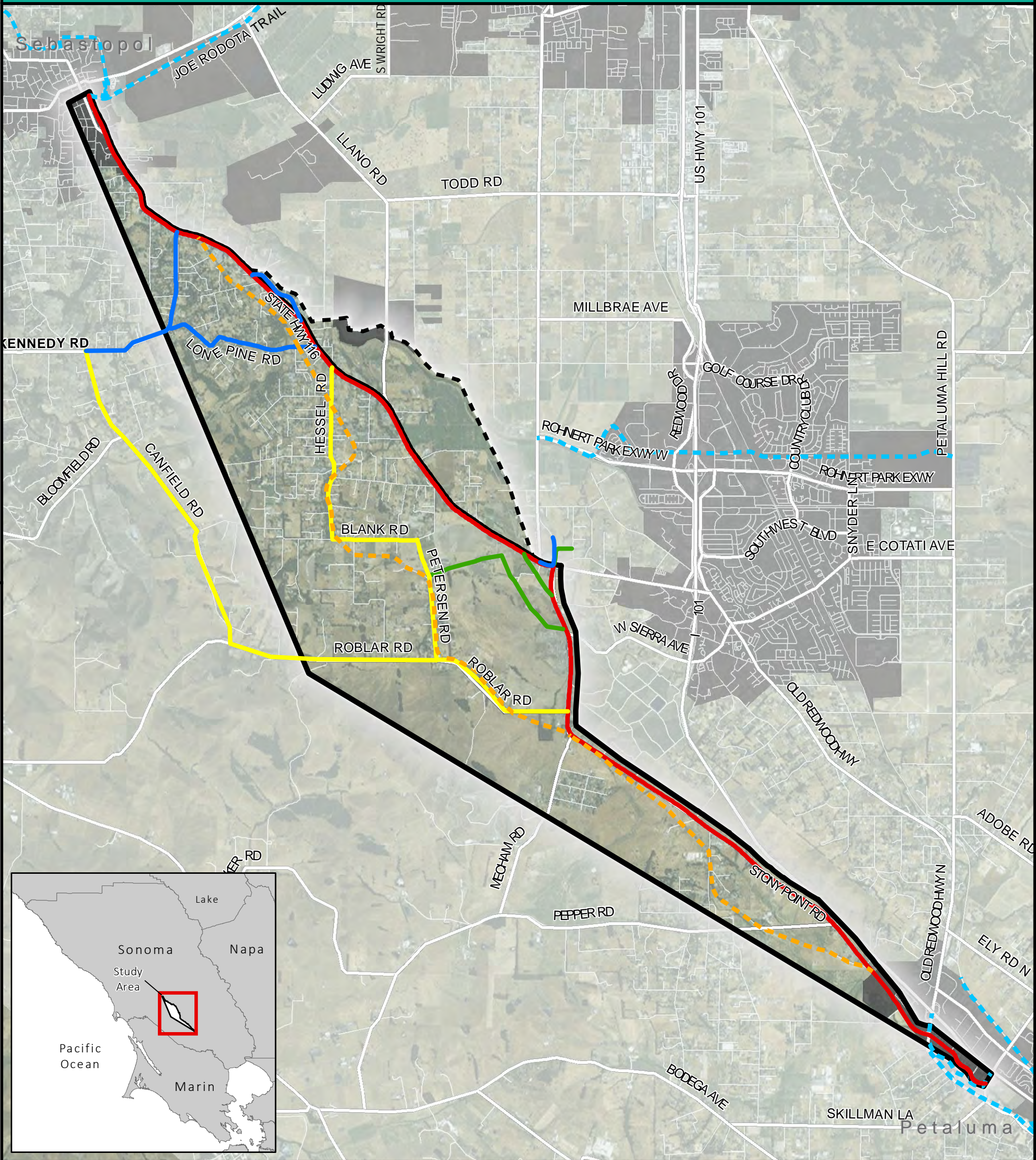
4.3 ROADWAY SYSTEM

The Study Area is served by a network of highways, arterial roads and local roads and lanes that connect the neighborhoods and destinations. SR 116 and Stony Point Road are also used for commuter routes, travel to tourist destinations such as the Russian River and Sonoma Coast, and commercial/institutional use such as the Sonoma County Landfill and Stony Point Quarry. Truck traffic is expected to increase along Stony Point Road with the approval of an additional quarry on Roblar Road (environmental review pending). **Figure 4.3-1** shows roads and streets within the Study Area, and routes initially reviewed for a potential trail alignment. **Table 4-3.1** describes existing roadways in the study area.

Table 4-3.1 Existing Roads and Trails

Route Types	
Arterial Routes – are high-capacity roads in the study area. The primary function of an arterial road is to deliver traffic between communities and from collector roads to freeways at the highest level of service possible.	
State Route 116 – <ul style="list-style-type: none"> • Two-Lane Rural Principal Arterial • East-West connection between Cotati/US 101 corridor and Sebastopol. • Transit corridor • High speed traffic • High traffic volumes • Variable width and/or limited shoulders 0 – 8' wide • Lack of turn lanes / acceleration and deceleration lanes at key side streets • Areas of congestion • Side streets and high driveway density in various locations results in side friction • Truck route • No curb, gutter, or sidewalks outside of Sebastopol city limits • Limited pedestrian crosswalks • Speed Limit varies by segment, 40 - 55 mph • Overhead and underground utilities present • Traffic signals at Lynch Road in Sebastopol, Bloomfield Road, Stony Point Road • Turn and merge lanes planned at Llano Road • Overhead cobra style street lights at major side streets 	
	
SR 116 South of Bloomfield Road	SR 116 near Lone Pine Road

Petaluma - Sebastopol Trail Feasibility Study



Sonoma County GIS, Sonoma Ecology Center. Map Date: January 12, 2018

Roads

- Arterial Route
- Local Connector
- Rural Street Route
- Offstreet Route
- Former Railroad Alignment
- Existing Trail

- Study Boundary
- Laguna Connection Study Area
- Incorporated City Boundaries

THIS MAP IS NOT A TRAIL GUIDE
This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.





Stony Point Road –

- Two-Lane Rural Principal Arterial
- North-south connection between Petaluma and Santa Rosa
- High speed traffic
- High traffic volumes
- Wide paved shoulders/rural bike lanes approximately 8 – 10' wide
- Turn lanes at most side streets
- Low side friction – limited driveways and side street in project study area
- No curb, gutter, or sidewalks
- Limited pedestrian crosswalks
- Truck route
- Speed limit 55 mph
- Traffic signals at SR 116, Mecham Road, Pepper Road/US 101 on-ramps, Petaluma Boulevard N.
- Overhead cobra style street lights at most intersections
- Overhead utilities, intermittent parallel water and high pressure gas lines







Stony Point Road south of Mecham Road



Stony Point Road at Mecham



Rural Routes (Major Collectors) – are local streets that provide local and residential access.	
Bloomfield Road – <ul style="list-style-type: none"> • Two-Lane Rural Major Collector • North-south connection from SR 116 • Paved shoulders/rural bike lanes approximately 8’ wide within the project study area • Provides access to Hillcrest Middle School • Heavy side friction from frequent residential driveways and side streets • Speed limit 45 mph • Overhead utilities 	
	
Bloomfield Road south of Hillcrest Middle School	Bloomfield Road south of SR 116
Lone Pine Road – <ul style="list-style-type: none"> • Two-Lane Rural Major Collector • Connects east-west between SR 116 and Bloomfield Road • Variable width paved shoulders approximately 0-4’ wide • Moderate side friction from residential driveways and side streets • Provides access to Gravenstein Elementary School • Speed limit 35 mph (School Zone Speed Limit 25 mph, when children are present) • Overhead utilities 	
	
Lone Pine Road east of Bloomfield Road	Lone Pine Road near SR 116 and Gravenstein Elementary



Rural Routes (Minor Collectors) – are local streets that provide local and residential access.

Hessel Road –

- Two-Lane Rural Minor Collector
- Two distinct segments (north-south and east-west), both connect to SR 116
- Narrow travel lanes, no shoulders
- Dense rural residential development
- Heavy side friction from rural driveways and side streets
- Speed limit: Hessel Road North-South-35mph, Hessel Road East-West-40 mph
- No curb, gutter, or sidewalks
- Overhead utilities



Hessel Road (north-south) near SR 116/Mt. Vernon Road



Hessel Road (north-south) near McFarlane Road



Hessel Road (east-west) near Turner Road



Hessel Road (east-west) near Turner Road



Turner Road –

- Two Lane Rural Local Road
- Narrow travel lanes approximately 9 – 10’ wide, no shoulders
- No curb, gutter, or sidewalks
- Speed limit 35 mph
- Overhead utilities



Turner Road near Hessel Road



Turner Road, old Railroad Tracks are visible in pavement

Blank Road –

- Two-Lane Rural Minor Collector
- Narrow travel lanes approximately 9 – 10’ wide, no shoulders
- No curb, gutter, or sidewalks
- Speed limit 35 mph
- Overhead utilities



Blank Road near Canfield Road



Blank Road near Turner Road



Old Gravenstein Highway –

- Two-Lane Rural Minor Collector
- Serves commercial and institutional uses as well as residential
- No curb, gutter, or sidewalks
- Speed limit 35 mph
- Overhead utilities



Off-Street Routes – are trails and paths that are separate from existing roadway rights-of-way.



Joe Rodota Trail



Joe Rodota Trail

West County Trail along SR 116 North



Laguna Uplands Preserve



Laguna Discovery Trail



Local Connectors – are streets and trails within the Project Study Area that provide connectivity to area destinations. These include rural roads that serve area schools.	
Twig Avenue Bloomfield Road Lone Pine Road	Mt. Vernon Drive Rancho Drive
Route Eliminated from Further Consideration	
Privately owned parcels in the Hessel area were eliminated from further consideration due to the lack of continuous right of way. As discussed in Section 4.2 , most of these parcels were relinquished in the 1970's and 1980s, and some have been merged with adjacent developed parcels, precluding trail use.	



5. ENVIRONMENTAL SETTING

This study and associated concept plan is a Feasibility and Planning Study to determine the issues associated with implementing the Petaluma Sebastopol Trail. In the future, when the trail alignment is approved, and specific project elements are defined, the Petaluma Sebastopol Trail will be identified as a “project”, and will be subject to environmental review under the provisions of the California Environmental Quality Act (CEQA), and possibly the National Environmental Policy Act (NEPA), if federal funding is obtained for project implementation. Feasibility Studies (including this Study) are statutorily exempt from CEQA under Article 18 of the Resources code (below). As such, it is not yet a “project” that requires adoption, approval or commitment of funding.

15262. FEASIBILITY AND PLANNING STUDIES

A project involving only feasibility or planning studies for possible future actions which the agency, board, or commission has not approved, adopted, or funded does not require the preparation of an EIR or Negative Declaration but does require consideration of environmental factors. This section does not apply to the adoption of a plan that will have a legally binding effect on later activities.

This section provides a description of key environmental issues, including constraints and challenges that were evaluated and used in preliminary trail alignment planning, as well as other environmental issues that are not anticipated to significantly affect the existing environment. Some of these issues will likely need to be evaluated in detail during project design and implementation.

5.1 AESTHETICS

Existing Conditions

The scenic characteristics of the study area include views of agricultural lands, vineyards and wooded hills and grassland areas. Along SR 116 and pockets along Stony Point Road, there are residential uses and commercial strip development which contribute to an eclectic viewshed. This includes a mixture of dwellings, commercial enterprises, and utility/industrial uses interspersed with open space areas, commercial areas and tree-lined roadways.

Constraints and Challenges

Although trails in general may not significantly affect aesthetic qualities, the design, alignment and materials used to construct the trail should be carefully considered to fit within the generally rural setting. The addition of a paved trail surface, fencing, and retaining walls or barriers could alter the foreground of motorists’ views of adjacent lands. In some cases, placement of a fence or vegetated buffer to define the trail may help unify the existing visual setting. The trail also presents an opportunity to facilitate public enjoyment of a scenic corridor for bicyclists, pedestrians and, in places, equestrians.

Design Considerations

- To avoid unnecessary impairment of scenic character, retaining walls, fences and barriers along the trail corridor should be limited to areas where they are required to resolve engineering constraints, provide resource or agricultural operations protection, and/or provide safety.
- Trail slope cuts larger than 4 ft. should be minimized and/or screened where possible.



- Natural topography, vegetation, and scenic features of the area should be retained to the maximum extent possible.
- Any needed traffic barriers should be consistent with the project setting. Concrete barriers could utilize muted-color concrete and/or natural rock-like facade; minimize vertical elements (supports) or embellishment (finials, etc.); use simple metal materials, and reduce the reflectivity of the vertical railing elements through treatment of the materials.
- Signage should be minimized and focused on existing developed areas or at staging areas.
- Trail wayfinding signage should be designed and at a scale that does not detract from the scenery.
- Concrete retaining walls should be colored and/or textured to minimize their contrast with the surrounding landscape, and disturbed areas should be re-vegetated.
- The appearance of other trail structures, such as pedestrian bridges, should also take into account the natural scenic quality of the area.

Additional Studies that May Be Needed

Analysis of visual impacts of the trail may be required as part of project development and environmental review, depending on project design.

5.2 AGRICULTURAL RESOURCES

Existing Conditions

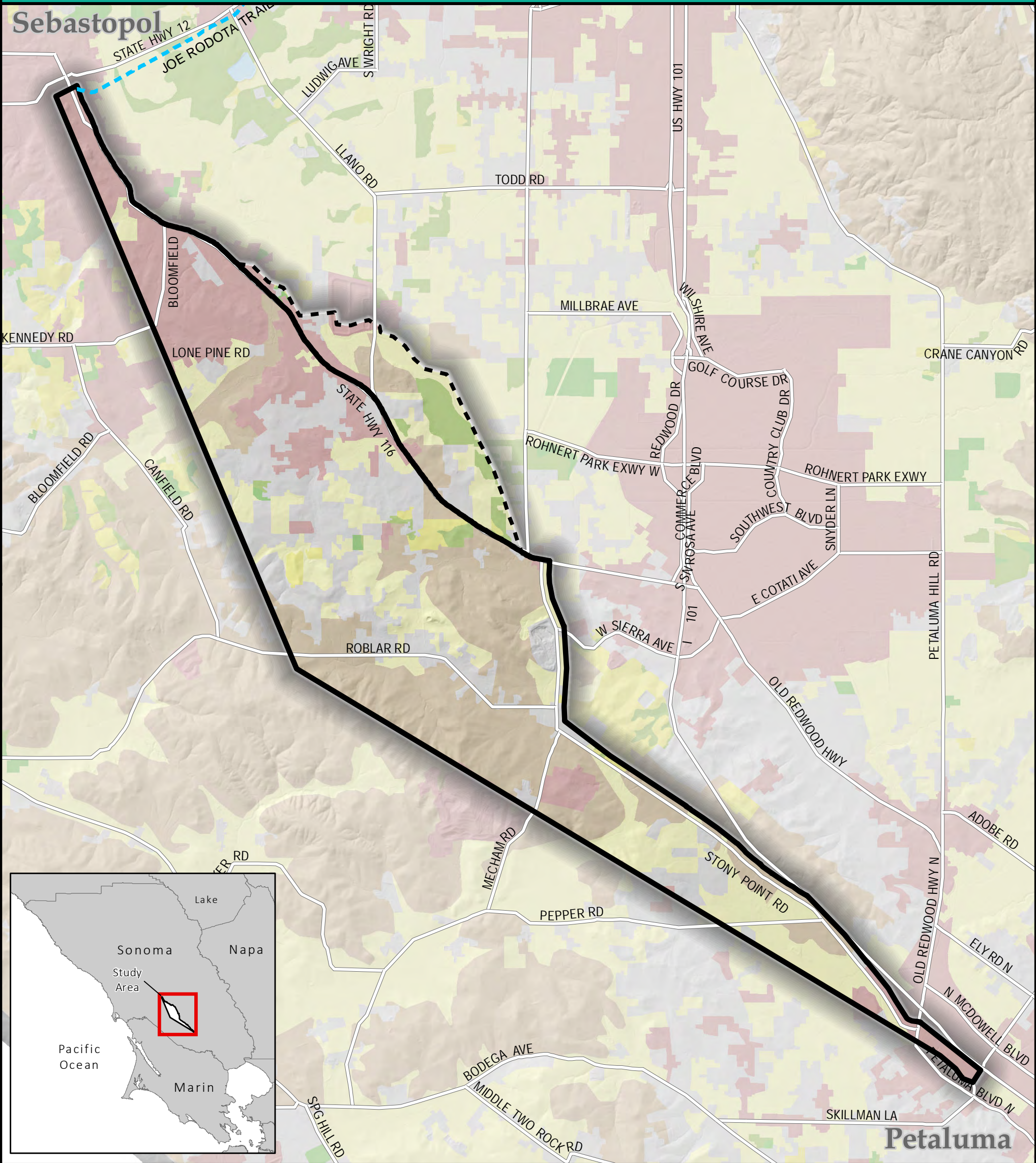
Agricultural land uses within the study area include dairy/grazing lands, specialty crops such as seasonal vegetables and tree farms, and vineyards.

As discussed in **Section 4**, several large parcels within the Study Area are protected by Conservation Easements established through the Sonoma County Agriculture and Open Space District (SCAPOSD) or Sonoma Land Trust. Most of these easements, established in the 1970's and 1980's (primarily to preserve agricultural uses of the land), contain provisions that limit development of buildings or infrastructure within the agricultural use area.

Much of the agricultural land within the south study area consists of hay or forage crops, with vineyards located adjacent to SR 116 as well as along the east side of Stony Point Road.

Prime and Important Farmlands. The California Department of Conservation maps and monitors agricultural land quality, land use and farmland conversion in California. The Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data used for analyzing land use changes and its impacts on California's agricultural resources. One series of maps produced by FMMP is the Important Farmland Map series (**Figure 5.2-1**). Agricultural land is rated according to soil quality, slope, irrigation water supply availability, and the type of agricultural crop grown. The best quality land is called Prime Farmland. Good quality farmland, but not Prime farmland, has some limitations due to slope, less desirable soil conditions such as poor drainage or stoniness, clay pans, or shallow depths. These conditions place some limitations on the kinds of crops that can be grown, and their yields, or require more intensive management. These lands are termed Farmlands of Statewide Importance. Unique Farmlands have some significant limitations such as slope steepness or shallow soil depths, but

Petaluma - Sebastopol Trail Feasibility Study



- Study Boundary** **Laguna Connection Study Area** **Existing Trail**

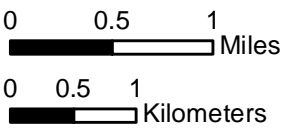
Sonoma County Important Farmland

- Farmland of Local Importance, Farmland of Statewide Importance, Grazing Land, Other Land, Prime Farmland, Unique Farmland, Urban and Built-Up Land, Water

Basemap Sonoma County LiDAR Hillshade, 2014 The Farmland Mapping and Monitoring Program (FMMP). Map Date: January 12, 2018

THIS MAP IS NOT A TRAIL GUIDE

This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.





are used to grow important crops such as vineyards and orchards. A large part of the study area is comprised of these three kinds of important farmlands.

Williamson Act Lands. Portions of some of the trail alternatives being evaluated are located near land under Williamson Act contracts. Under California's Williamson Act program, established in 1965, private landowners may voluntarily enter into a long-term contract (minimum of 10 years) with cities and counties to form agricultural preserves and maintain their property in agricultural or open space uses in return for a reduced property tax assessment based on the agricultural value of the property. The term of a contract is generally ten years and the contract automatically renews itself each year for another ten year period, unless a Notice of Non-Renewal is filed or the contract is cancelled. Obtaining the necessary right of way (ROW) and clearance to place trails on lands protected by Williamson Act contracts can be time consuming and challenging.

Constraints and Challenges

Typical conflicts between users of the Petaluma-Sebastopol Trail and adjacent agricultural operations include potential exposure of trail users to pesticides sprayed nearby, trespassing on farmland, and crop contamination from human or animal waste caused by trail users and their pets. However, since most of the trail will be located adjacent to existing roads, on existing roads, or within a corridor buffered from agricultural use, the degree of conflict may be minimized.



Trail use in agricultural areas also could interfere with the movement of agricultural vehicles, if the trail is co-located on farm field roads. For example, in ROW-constrained areas, the trail could potentially be routed on existing agricultural farm roads adjacent to farm fields or vineyards and used to access the lands. Joint use of the path might not be a conflict except at times when this area of the vineyard or farmland is accessed for management or crop harvesting. Periods of trail closure and re-routing may be needed during such times. In areas where farm access roads do not currently exist (such as the former



rail corridor in the south study area), trail placement may benefit the adjacent agricultural use through improved access.

Some segments of the trail could be located on lands with existing Williamson Act contracts, if the trail cannot be safely located within existing ROW. Where public improvements are located on Williamson Act lands, there is a procedure where the government agency acquires such land for construction of the trail and identifies this facility as necessary for the public. The acquisition of this land is possible in theory through land acquisition, and Williamson Act procedures require that the Lead Agency for trail construction and operation notify the California Department of Conservation and the local jurisdiction responsible for administering the agricultural preserve of the proposed change in land protection status.

Design Considerations

- Trail facilities, including staging areas, on agricultural property should be located to minimize conflicts with agricultural production, as well as provide opportunities for showcasing agricultural production, if desired.
- Fencing can be incorporated into the design in agricultural areas when necessary to deter potential vandalism or trespass from trail users, and should be located to facilitate accessibility for agricultural operations.
- Provide signage at trailheads regarding agricultural activities, especially when trail closures may be anticipated.
- Signage should be used to address the existence of neighboring agricultural operations, potential odors, and pesticide hazards that are inherent in such operations.
- During construction of the trail, excess dust emissions can be controlled by regular watering, paving, construction roads, or other preventive measures.
- If trails are placed on lands with conservation easements, a trail may need to be sited to avoid potential conflicts with agricultural uses.

5.3 BIOLOGICAL RESOURCES

Regulatory Setting

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, the California Department of Fish and Wildlife (CDFW) Streambed Alteration Program, and CEQA; and/or local ordinances or policies.

Special-status natural vegetation communities are those that are considered rare in the region, support special-status plant or wildlife species, or receive regulatory protection under Section 404 of the federal Clean Water Act or Section 1600 of the California Fish and Wildlife Code. The California Natural Diversity Data Base (CNDDB) has designated a number of communities as rare or sensitive.

Special-status plant species include those that are listed as Endangered, Threatened, or Rare or are proposed for listing by the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW). The California Native Plant Society (CNPS), a non-profit, non-governmental agency also maintains a list of species they considered. Although not a regulatory agency, portions of the CNPS



list may be utilized by the CDFW to determine potential candidates for listing. Only those plants that meet list 1 or 2 criteria are typically considered under CEQA.

Special-status wildlife species include those listed as Endangered, Threatened, Rare, or as Candidates for listing by the USFWS and/or CDFW. Other species regarded as having special-status include special animals, as listed by CDFW. Additional animal species receive special protection under the federal Bald and Golden Eagle Protection Act and the federal Migratory Bird Treaty Act. The Fish & Game Code of California provides protection for “fully protected birds”, “fully protected mammals”, “fully protected reptiles and amphibians”, and “fully protected fish”. USFWS also identifies plant and wildlife species that are declining or appear to be in need of conservation and designates species of special concern or a similar status.

The state has designated some wildlife species as “fully protected” which means that CDFW is charged with identifying and providing additional protection to those animals that are rare or face possible extinction. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collection for scientific research.

Existing Conditions

For the purpose of this report, the study area for biological resources was defined with an approximately 100-foot buffer on the northeast side of the preferred route and a larger buffer, at times reaching one mile in width, on the southwest side of the alternate route. The final route may occur along the available public ROW on or near Highway 116 and Stony Point Road, along portions of the former Petaluma-Sebastopol Rail Line, along other City of Petaluma and Sebastopol Streets and County Roads, or through public and nonprofit-owned lands in and near the Laguna de Santa Rosa. The greater width buffer on the southwest side provides data to inform decisions about alternatives.

This section is based on biological data collected from numerous sources, including relevant literature, maps of natural resources, and data on special-status species and sensitive habitat information obtained from:

- Aerial photographs of the study area and immediate vicinity
- Vegetation communities mapped within the study area from the Sonoma County Vegetation & Habitat Mapping Program
- United States Fish and Wildlife (USFWS) Critical Habitat Portal, which shows maps of designated critical habitat areas for listed species
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database records of state and federally listed species that have been previously documented within a 3-mile radius of the study area
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database records of state designated significant natural areas for species and ecosystems of conservation concern
- California Wetlands Inventory maps of wetlands and ponds for the study area
- Biologists with Sonoma County Permit and Resource Management Department and Sonoma County Water Agency regarding California freshwater shrimp
- Center for Ecological Management and Restoration (CEMAR) survey of steelhead populations throughout San Francisco Bay watersheds, and their evaluation of priority streams for regional steelhead recovery
- Sonoma County Water Agency surveys of aquatic life in Santa Rosa Creek



- Bay Area Open Space Council's mapping of Critical Linkages: Bay Area & Beyond, showing important locations for wildlife to be able to travel for survival
- Sonoma County General Plan 2020, including discussion of Habitat Connectivity Corridor and Riparian Corridors, in its Open Space and Resource Conservation Element
- Petaluma Watershed Steelhead Monitoring Report, 2015/2016 Spawning Surveys, United Anglers of Casa Grande High School
- Santa Rosa Plain Conservation Strategy (Including survey & figures), US Fish and Wildlife Service (USFWS)

Plant Communities

Fourteen plant communities, in addition to urbanized and rural developed land, were identified within the study area (**Figure 5.3-1**). The acreage of each community is shown in **Table 5.3-1**.

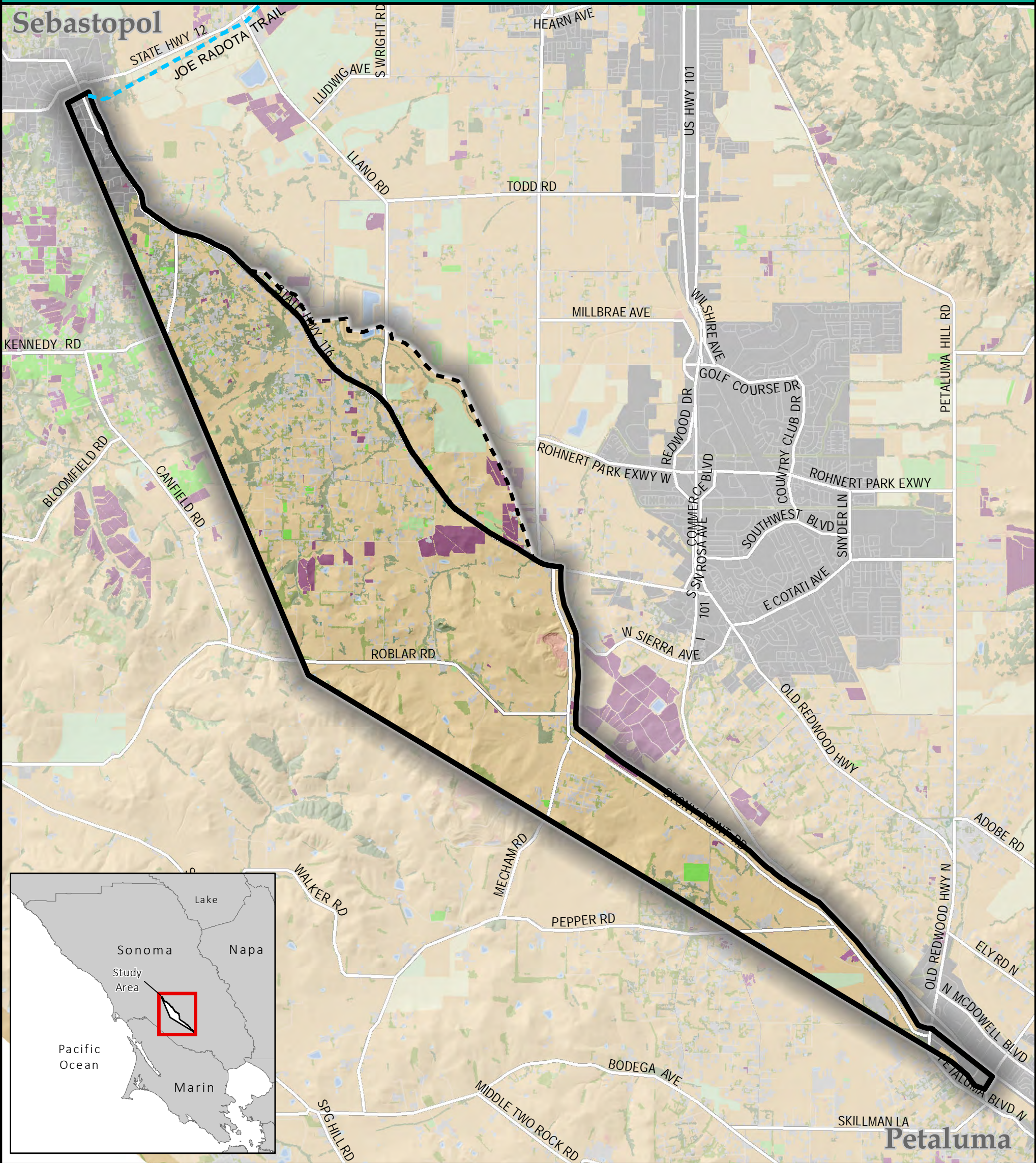
Table 5.3-1: Vegetation Communities

Vegetation Community	Acres	Percent of Study Area
Annual Cropland	27	0.3%
Barren & Sparsely Vegetated	45	0.5%
Developed	915	10.5%
Herbaceous	5,889	67.5%
Irrigated Pasture	38	0.4%
Major Roads	105	1.2%
Native Forest	662	7.6%
Non-native Forest & Woodland	449	5.1%
Non-native Shrub	20	0.2%
Nursery or Ornamental Horticultural Area	4	0.0%
Orchard or Grove	59	0.7%
Perennial Agriculture	6	0.1%
Shrub	39	0.4%
Urban Window	258	3.0%
Vineyard	194	2.2%
Water	10	0.1%
TOTAL	8,720	

Figure 5.3-2 provides an overview of biological resources within or near the study area, including wetlands and streams, critical habitat, occurrences of special-status species or natural communities. These resources are discussed in greater detail below.

Special-Status Plants. This section discusses the potential for plant species of concern to occur in the study area. 'Potential to occur' is based on the presence or absence of suitable habitat for each species reported in the scientific database queries and background literature research that were conducted for the study. All occurrences of regional species and habitats of concern that have been reported by the resource agencies within a three-mile radius of the study area were considered. Based on the biological

Petaluma - Sebastopol Trail Feasibility Study



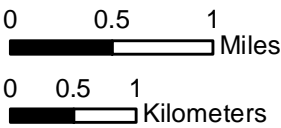
Sonoma County Veg Map Lifeform 2015
Map Date: January 12, 2018

- Study Boundary Laguna Connection Existing Trail
 Study Area

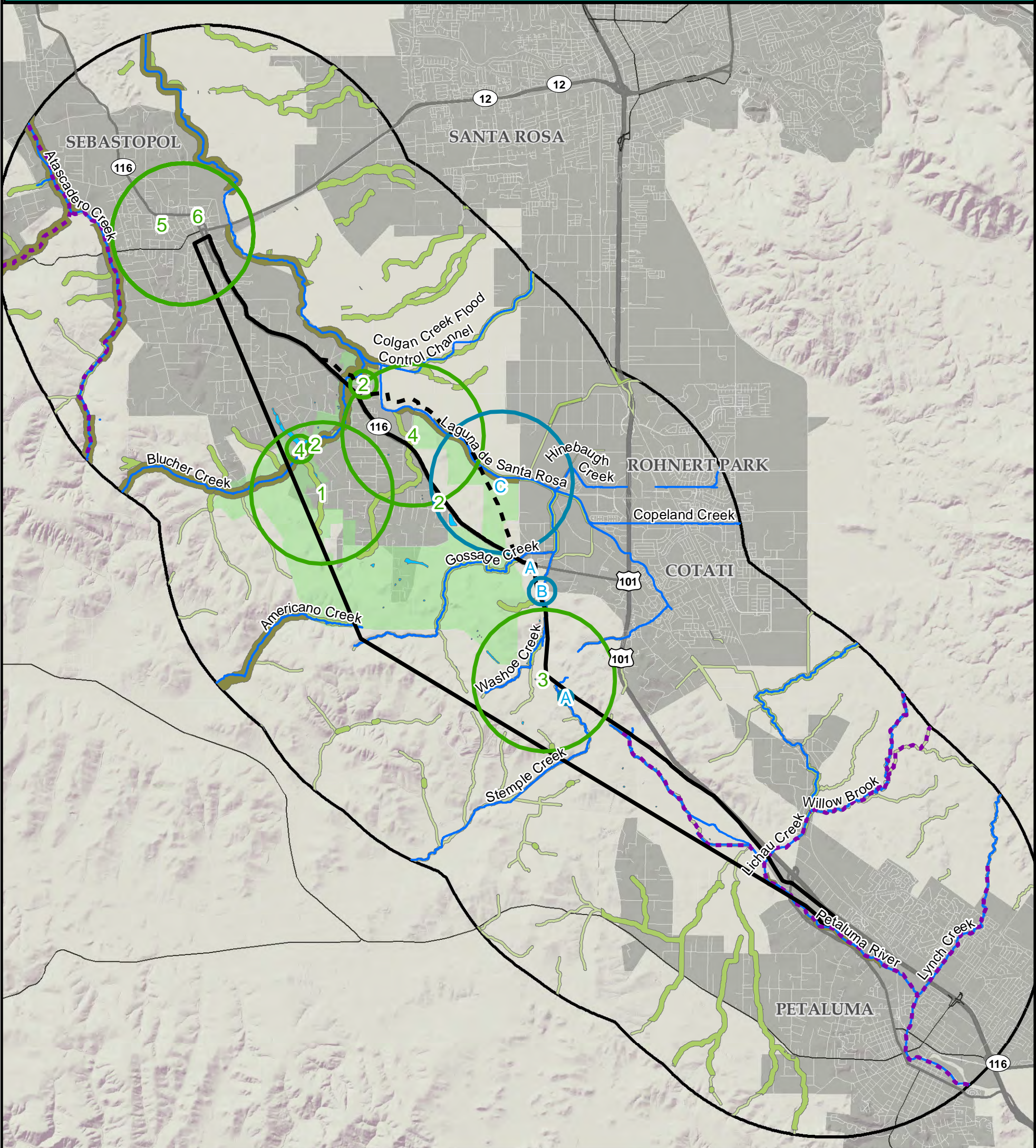
Land Cover

Annual Cropland	Herbaceous	Major Roads	Non-native Shrub	Shrub	Water
Barren	Hayfield	Native Forest	Orchard or Grove	Urban Window	
Developed	Irrigated Pasture	Non-native Forest	Perennial Agriculture	Vineyard	

THIS MAP IS NOT A TRAIL GUIDE
This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.



Petaluma Sebastopol Trail Feasibility Study



Study Area

Laguna Connection Study Area

Biological Resources Buffer (3-Mile)

Streams

Steelhead Habitat

Riparian Corridors

50 Feet Wide

100 Feet Wide

200 Feet Wide

Habitat Corridor

California Wetland Inventory (100 Foot Buffer)

Designated Critical Habitat
(Central Coast distinct population segment)

Open Space Resource Conservation Element (Sonoma County General Plan Designation)

Open Space Resource Conservation Element (Sonoma County General Plan Designation)

California Natural Diversity Database Records that Intersect Study Area

Animals

A. California Tiger Salamander

B. Northwestern Pond Turtle

C. Western Yellow-billed Cuckoo

Plants

1. Fragrant Fritillary

2. Sebastopol Meadowfoam

3. Showy Indian Clover

4. Sonoma Alopecurus

5. Sonoma Spineflower

6. Thin-lobed Horkelia

QUESTA
ENGINEERING CORP

THIS MAP IS NOT A TRAIL GUIDE

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5.3-2 Biological Resources



data queried and interviews conducted for this report, 6 special-status plant species have the potential to occur within the study area. The names, status, general ecological requirements, and type of habitat deemed suitable within the study for each special-status plant species with potential to occur on-site is summarized below: Further studies will be required to determine if these species actually occur within the trail alignment corridor.

- Fragrant Fritillary, a threatened perennial herb (bulb) in the lily family, found in prairie, grassland and wetland-riparian areas.
- Sebastopol Meadowfoam, an endangered species of meadowfoam found only in the Laguna de Santa Rosa in Sonoma County.
- Showy Indian Clover, an endangered purple-flowering plant from wet grassy areas, with only one to three remaining populations globally.
- Sonoma Alopecurus, an endangered perennial herb residing in marshes and swamps and riparian scrub.
- Sonoma Spineflower, an endangered annual herb, habitat is coastal prairie.
- Thin-Lobed Horkelia, a perennial herb, habitat is upland forest, chaparral and grassland areas.

Nesting Birds

The Migratory Bird treaty Act (MBTA) with Canada, Mexico, and Japan makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of any and all nests that are occupied by migratory birds during the nesting season. California Fish and Game Code Section (CFGF) 3500 also prohibits the destruction of any nest, egg, or nestling. The mixed riparian, coyote brush scrub, coast live oak woodland habitat within the study area provide suitable habitat for nesting birds protected by the CFGF and MBTA.



Wetlands, Riparian Areas, and Jurisdictional Areas

The CWI (California Wetlands Inventory) query found 66 ponds within the study area. The majority (48) are less than one acre in size, with an average size of 0.27 acre. Only three exceed 10 acres in size. These areas potentially fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the California Coastal Commission (CCC). Riparian forest, identified by the Conservation Lands Network maps, and which occur in varying widths along all of the previously named creeks, potentially fall under the jurisdiction of the California Department of Fish and Wildlife. All streams appearing as blue lines on standard USGS topographic maps have associated Riparian Corridors designated for protection by Sonoma County in the 2020 General Plan.



Petaluma River at Denman Reach

Invasive Plants

One of the more dominant plant community within the study area consists of non-native grassland, or ruderal areas. The roadside areas of SR 116 are frequently disturbed providing an opportunity for invasive weeds--particularly yellow star thistle and purple star thistle--to establish.

Special-Status Natural Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, the California Department of Fish and Wildlife (CDFW) Streambed Alteration Program, and CEQA; and/or local ordinances or policies.



Three sensitive natural communities, Coastal and Valley Freshwater Marsh, Northern Hardpan Vernal Pool, Northern Vernal Pool are known to occur within the 3-mile buffer surrounding the study area; and have the potential to occur within the study area.

Special-Status Animals & Critical Habitat

This section discusses known occurrences of animal species of concern in the trail study area. 'Potential to occur' is based on the presence or absence of suitable habitat for each species reported in the scientific database queries and background literature research that were conducted for the study. All occurrences of regional species and habitats of concern that have been reported by the resource agencies within a three-mile radius of the study area were considered. Based on the biological data queried for this report, four special-status animal species have the potential to occur within the study area. The names, status, general ecological requirements, and type of habitat deemed suitable within the study for each special-status animal species with potential to occur in the study area is summarized in **Appendix B**. Further studies are required to determine if these species actually occur within the study area.

California Tiger Salamander. There are several documented occurrences of California Tiger Salamander within the study area. Numerous additional documented occurrences are found within a 3 mile buffer surrounding the study area. A significant portion of both the study area and the surrounding 3-mile buffer fall within the US Fish and Wildlife Service designated Final Critical Habitat for the California Tiger Salamander.

As discussed earlier, portions of the trail study area traverse near to or lie within the known or potential range of the California Tiger Salamander (CTS); also as shown on the Sonoma General Plan 2020 Biotic Resource Areas map; and on the Santa Rosa Plain Conservation Strategy map. This includes several sites of known adult occurrences and extant or extirpated breeding pools near or straddling Stony Point Road and the southern portion of Highway 116.

The CTS is a federal endangered amphibian that depends on vernal pools and seasonal ponds for reproduction, it is also a CDFW species of special concern. Any trail construction activity that could potentially disturb its habitat, especially breeding pond locations, will need to be carefully sited and designed to avoid and minimize impacts and fully mitigate any unavoidable impacts that do occur. This will need to be planned and designed in accordance with the Santa Rosa Plains Conservation Strategy and in discussions with the US Fish and Wildlife Service and the California Department of Fish and Wildlife.

Central Coast Steelhead. The following streams, Blucher and Atascadero Creek and tributaries (which drain to the Laguna de Santa Rosa, the Laguna itself) the Petaluma River and its tributaries Lichau, Corona, Willow Brook, Stemple Creek and Lynch Creeks cross through the study area and are known to support central California coast steelhead at some stage of their life history. These drainages are designated Critical Habitat for the Central Coast distinct population segment of steelhead by the National Marine Fisheries Service and the US Fish and Wildlife Service.

California Red Legged Frog. There are three documented occurrences of California red-legged frog within a 3-mile buffer surrounding the study area. Including along Stemple Creek and Blucher Creek in the Llano road area.



California Freshwater Shrimp. California freshwater shrimp have been documented in two locations within a 3-mile buffer surrounding the study area: Blucher Creek and an unnamed tributary of Atascadero Creek (in the vicinity of Highway 12, west of Sebastopol).

Other Species. There is one documented occurrence of both the Western pond Turtle and Western Yellow-billed Cuckoo within the 3-mile buffer surrounding the study area.

Creeks and Drainages

The trail study area intersects the Laguna De Santa Rosa and the Petaluma River watersheds and a number of their tributary streams including Willow Brook, Lichau Creek, Corona Creek, and Lynch Creek. The 3-mile buffer surrounding the study area also includes more of the above drainages, plus portions of Estero De San Antonio and Stemple creeks which drain to the Pacific Ocean. The drainages within these watersheds are of biological importance considering they are utilized by species such as steelhead, California freshwater shrimp, California red-legged frogs, and foothill yellow legged frogs. All “blue-line” streams, that is, streams that appear on US Geological Survey topographic maps, are designated as riparian corridors and have protections under Sonoma County’s General Plan 2020. The following is a summary of the major creeks and their associated riparian corridors that occur within the study area. Additional information of these creeks is contained in the hydrology and water quality section.

Laguna de Santa Rosa. The Laguna and its tributaries drain a majority of the study area and the surrounding 3-mile buffer. The Laguna de Santa Rosa Foundation, a non-profit dedicated to restoring and conserving this watershed, describes it:

The Laguna's 22-mile channel extends from Cotati to its confluence with the River at Forestville, but the Laguna is far more than its main channel. It is a unique ecological system covering more than 30,000 acres and comprised of a mosaic of creeks, open water, perennial marshes, seasonal wetlands, riparian forests, oak woodlands and grasslands. The Laguna is an important stopover for thousands of birds migrating along the Pacific Flyway and is home to a wide variety of life: more than 200 species of birds ranging from bald eagles to hummingbirds, rare and endangered salmon, steelhead, salamanders and plants, mountain lion, bobcat, coyote, mink, badger, and river otter.

In addition to the habitat it provides for wildlife, the Laguna is used for agricultural, recreational and educational purposes. It serves as a natural holding basin during our wet season and as an overflow area for the Russian River during floods, slowing and capturing floodwaters and easing their impact on lower Russian River communities. As the receiving water of a watershed where most of the county's human population lives, it is a landscape feature of critical importance to Sonoma County's water quality, flood control, and biodiversity.

Petaluma River. This watershed covers about 146 square miles and is about 19 miles long and 13 miles wide with the city of Petaluma near its center. The lower 12 miles flow through the Petaluma Marsh and are tidally influenced. The lower Petaluma River marsh hosts several federally endangered animals including the saltwater harvest mouse and California clapper rail and California central coast steelhead. Endangered plants include the soft bird's-beak, Baker's stickseed, Burke's goldfields, Showy Indian clover and Sebastopol meadowfoam. Because most of the length of the watershed is tidal and urban/suburban, most of the pollution comes from nearby storm drains and there are significant amounts of tidally deposited debris on the banks.

The upper Petaluma River and its tributaries have freshwater/riparian habitat in the Study Area that supports steelhead, foothill yellow legged frog, and western pond turtle.



Americano Creek. This creek begins in the hills 4 miles west of Cotati and drains westward into Bodega Bay. Approximately 6 miles from the coast, the official watercourse changes to Estero Americano. In 1994, California's water quality report designated all of Americano Creek and most of Estero Americano as "impaired" per Federal Water Resources Statutes section 303(d), due to runoff from pastureland and feedlots. The creek's headwaters are a historic habitat for a number of special status plants, including Sebastopol meadowfoam, Showy Indian clover and Pitkin Marsh lily. Americano Creek is an intermittent stream and is dry 4-6 months of the year. Pollutants found at hazardous level include fecal bacteria, copper, ammonia and zinc.

Stemple Creek. Stemple Creek begins in the coastal hills 2 miles southwest of Cotati. It flows about 16 miles west before feeding into the Estero de San Antonio, then into the Pacific Ocean. This stream also is declared "impaired" due to runoff from pasture land and feedlots. The following pollutants have been found at hazardous level - copper, ammonia and zinc.

Blucher Creek. Blucher Creek and its small tributaries drain an approximately 17 square mile watershed and are located northwest of Petaluma and southwest of Sebastopol in the Hessel area. Blucher Creek is a perennial creek in this area and has a well developed riparian corridor dominated by arroyo willows and coast live oak. It flows eastward to the Laguna de Santa Rosa with its confluence near Todd Road. It supports three endangered species; Steelhead, California Freshwater Shrimp and the Pitkin marsh Lilly, a California Endangered Species Act (CESA) and Federal Endangered Species Act (ESA) plant. The Pitkin marsh Lilly is a three to six foot tall flowering plant known to occur on lands owned and managed by the Sonoma Land Trust.

Habitat Connectivity

The study area crosses through a Habitat Connectivity Corridor in the western-central portion of the trail study area as designated in the Sonoma County General Plan 2020. This is one of two such designations in the County (The other connects the Sonoma Mountains to the Mayacamas Mountains). These are designed to protect the valuable, largely undeveloped open space. This corridor connects the Blucher Creek, Gossage and Washoe Creek areas to the Laguna de Santa Rosa. This connection serves wildlife as they travel to find food, water, and mates, and also serves plant species which may be shifting their ranges as the climate changes. These same corridor are identified in the Bay Area Open Space Council's regional connectivity analysis, Critical Linkages: Bay Area and Beyond, as important for allowing medium- and long-distance wildlife movement between Point Reyes and the Blue Ridge-Berryessa natural area.

Summary

Numerous sensitive biological resources are present in, or within the vicinity, of the trail study area. Based on the biological data reviewed for this report, there is the potential for several special-status plant species and special-status wildlife species to be present within the trail feasibility study area. Depending on location, the trail may also impact nesting birds, wetlands, jurisdictional areas, and critical habitat, and may result in the spread of invasive weeds. Potential constraints would be severe where alignments would require new drainage crossings and where they intersect with occurrences of special-status species such as vernal pool plants or California Tiger Salamander potential occurrences. Mitigation measures such as those recommended below will likely be required; however, once the final trail alignment and design is determined, further studies will be needed to determine the extent of impacts and if the types of mitigation would be required.



Constraints and Challenges

Construction of the Petaluma-Sebastopol trail has the potential to adversely affect special-status plant and wildlife species, critical habitat for steelhead, wetlands, nesting birds, protected riparian areas, and jurisdictional areas. However, the trail design and construction would include final placement of the trail to avoid sensitive features, as well as incorporate Best Management Practices, habitat protection, and enhancement features to minimize potential impacts to biological resources. At creek crossings, clear-span bridges or boardwalks would be utilized to separate trail users from the riparian corridor. The proposed trail also has the potential to reduce harm to, or even benefit, biological resources through habitat enhancement along its route, particularly where it crosses perennial or seasonal streams and wetlands. Furthermore, the trail could provide interpretative signage to improve public awareness of biological resources. Finally, although the trail could serve as a vector for the spread of invasive species, landscaping with native species would minimize this risk.

Design Considerations

To minimize potential impacts to biological resources in the trail corridor, the following is a preliminary list of measures that may be incorporated into project implementation:

- Restore and enhance natural habitat at drainage crossings;
- Landscape with native species in the trail corridor, including replacement of native oak trees;
- Avoid removal (where possible) of significant trees along the trail corridor, by re-routing the trail around them and selective use of boardwalks to avoid root compaction;
- Conduct seasonally appropriate surveys of special-status plants and animals along the trail corridor;
- Avoid, minimize, or mitigate for special-status plants and animals;
- Construct wildlife-friendly fencing or night lights along the trail;
- Construct the trail so that natural flows of water pass unimpeded across the trail corridor;
- Train construction employees in environmental awareness, including erosion prevention;
- Observe Best Management Practices (BMPs) during construction, including provisions of Sonoma County's FishNet4C program and protocols for preventing introduction of weed seeds.

Additional Studies that May Be Needed:

- Caltrans PEAR Farmlands/Timberlands Technical Summary
- Caltrans Natural Environment Study (NES)
- Wetlands, Sensitive Habitat, and Special Status Animal and Plant Species

5.4 CULTURAL RESOURCES

Cultural resources are the remains and sites associated with human activities and include prehistoric and ethno historic Native American archaeological sites, historic archaeological sites, historic buildings, and elements or areas of the natural landscape which have traditional cultural significance (<http://www.sonoma.edu/projects/asc/defaultpage/owners.html>, December 30, 2002). This includes archeology associated with Native American inhabitants of the land from roughly 8,000 years ago to the



history in the early 1800's when the county was settled by European and Mexican colonists, and when most Native Americans were brought into the Mission system.

Regulatory Setting

National Historic Preservation Act. Section 106 of the NHPA required federal agencies to take into consideration the potential effects of proposed undertakings on cultural resources listed on or determined eligible for inclusion in the NRHP, and to allow the Advisory Council on Historic Preservation the opportunity to comment on the proposed undertaking. The regulations implementing Section 106 are promulgated by the Secretary of the Interior, as codified in Title 36 Code of Federal Regulations (CFR) Part 800. Section 106 requirements apply to properties not formally determined eligible, but which are considered to meet eligibility requirements. Archaeological resources are typically considered eligible for inclusion in the NRHP because of the information they have or may be likely to convey. Intensity of impacts to archaeological resources relates to the importance of the information they contain and the extent of the disturbance or degradation.

The quality of significance in American history, architecture, archaeology, engineering and cultural is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and:

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or*
- (b) That are associated with the lives of persons significant in our past; or*
- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- (d) That have yielded, or may be likely to yield, information important in prehistory or history.*

Determining the NRHP eligibility of a site or district is guided by the specific legal context of the site's significance as set out in 36 CFR Part 60.4. The NHPA authorizes the Secretary of the Interior to expand a National Register of districts, sites, buildings, structures and objects of significance in American history, architecture, archaeology, engineering and culture. A property may be listed in the NRHP if it meets criteria for evaluation as defined in 36 CFR 60.4. Section 110(d) (6) (A) of the NHPA allows properties of traditional religious and cultural importance to a tribe to be determined eligible for inclusion in the NRHP.

California Assembly Bill 52 became effective in 2015, and establishes a consultation process with all California Native American Tribes on the Native American Heritage Commission List, mandating notice and meaningful consultation. AB 52 also defined Tribal Cultural Resources, and requires consideration of Tribal Cultural Values in determination of project impacts and mitigation. In order to participate in AB 52 tribal consultation, a tribe must request, in writing, to be notified by lead agencies through formal notification of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated. A Tribal Cultural Resource is: A site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe, and/or On or eligible for the CA Historic Register or a local historic register, or: The lead agency, at its discretion, chooses to treat the resource as a TCR. If requested, the lead agency must consult with the Tribe prior to release of the environmental document, and the evaluation must include a discussion of significant effects, alternatives to the project, and



mitigation measures. The environmental document cannot be certified until the tribal consultation process has concluded.

Senate Bill 18 requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting tribal cultural resources and stipulates that, beginning on March 1, 2005, cities and counties must send any proposals for revisions or amendments to general plans and specific plans to those California Native American Tribes that are on the NAHC's contact list and have traditional lands located within the city or county's jurisdiction. Cities and counties must also conduct consultations with these tribes prior to adopting or amending their general plans or specific plans.

The disposition of **Native American burials** is governed by Section 7050.5 of the California Health and Safety Code and PRC Sections 5097.94 and 5097.98 and fall within the jurisdiction of the NAHC.

Native American Cultural Resources

Cultural resources are traces of human occupation and activity that include prehistoric and historic archaeological sites, districts, and objects; standing historic structures, buildings, districts, and objects; and locations of important historic events or sites of traditional and/or cultural importance to various groups. Remaining material evidence of these historic archaeological sites include: graves, buildings, tools, and pottery. In Sonoma County this generally involves the study of the Native American inhabitants of the land from roughly 8,000 years ago to the early 1800's when the county was settled by American, Russian, Spanish, and Mexican colonists, and most Native Americans were brought into the mission system.

Ethnographic Resources

Centuries before the North Bay region became important in European struggles for empire and profit, four Native American tribes settled in village communities throughout Sonoma County: Pomo / Kashia, Wappo, Coast Miwok, and Patwin. These people inhabited the county for several thousand years. This region of the Pacific coast was occupied at the time of historic contact by peoples representing four language groups: Southern Pomo, Southwestern Pomo, Coast Miwok, and Wappo. Each group was made up of a number of autonomous village communities that held a specific tract of land, often spoke a distinct dialect, and was organized under one or more headmen.

Groups speaking two closely related Pomoan languages, Southwestern Pomo and Southern Pomo, held most of the trail study area which was to become Sonoma County. The Southwestern Pomo occupied about thirty miles of the northwestern Sonoma County coast, extending inland up to 13 miles. This territory consisted primarily of rocky coastline and unbroken redwood forest. Shellfish, sea mammals, and salmon were major resources. Village sites were situated along the coast and on inland ridges. The Southern Pomo held the Russian River drainage south of the Mendocino-Sonoma County line, except for the mouth of the river. This territory consisted of valleys and foothills with plentiful resources and a temperate climate. The Laguna de Santa Rosa's marshlands and seasonal lake provided year round resources. Permanent occupation sites were most frequently at the confluence of streams, in the valleys, and at the bases of hills.

The Coast Miwok territory included all of present-day Marin County and extended north to that of the Southern Pomo. It included the Petaluma River basin and, during the post-Mission period also, the



Cotati area. The Coast Miwok depended heavily on the gathering of shellfish, primarily mussels and clams. Living sites were generally along the shoreline or near bays and lagoons.

Historical Resources

Historical resources, as distinguished from archaeological resources, include antiques, buildings, structures, and sites generally of the past two centuries, marking the successive eras of Russian, Mexican, and North American occupation of Sonoma County.

Although Spain and England originally claimed the land that is now California, Spain lost the title to Mexico in 1821, before the settlement of Sonoma County began. Russia, although a colonist for about 29 years, was never recognized by foreign powers. The actual staking and settling were largely the efforts of Mexican citizens and of persistent Yankee traders, trappers, adventurers, and seamen who kept “slipping in” during the last quarter of the eighteenth century.

Over the next century there were numerous attempts by Spanish, Mexican, and Russian governments to colonize various parts of Sonoma County. By the Mid-1840’s Americans were present in substantial numbers and in June of 1846 thirty three Americans raised the Bear Flag in Sonoma and declared independence. The war between Mexico and the United States, which had begun a month before the action in Sonoma, ended in 1848 and resulted in the addition of California to the territories of the United States. Statehood came in 1850, and in 1851 California was divided into counties.



Table 5.4-1 shows the Sonoma County Historic Landmarks, State Points of Historical Interest, and National Historic Landmarks, as well as resources listed on the California Register of Historical Resources or the National Register of Historic Places, listed alphabetically by the name of the nearest town, and occurring in the trail study area.



Table 5.4-1: Historic Landmarks

Name / Description	Location	SCHL	CRHR	SPHI	NPHP	NHL
Washoe House	Hessel	X				
Dunham School	Petaluma	X				
Liberty Cemetery	Petaluma	X				
Watson Ranch (Pepper Farm)	Petaluma	X				
Llano Road House	Sebastopol	X			X	
Sebastopol Depot of the Santa Rosa Railway	Petaluma and Sebastopol				X, B	
Petaluma and Santa Rosa Railway Powerhouse	Sebastopol				X, B	

Sources: *California State Historical Landmarks in Sonoma County*

SCHL – Sonoma County Historic Landmark

CRHR – California Register of Historical resources

SPHI – State Point of Historical Interest

NRHP – National Register of Historic Places

B – These sites were listed after 1986

In addition to the Washoe House, which is a Sonoma County Historic Landmark, the Llano House, located at 4353 Gravenstein Highway South (APN: 062-070-042), was listed on the National Register on May 22, 1978, at the local level of significance. Although the original nomination did not specify under which criterion the property was eligible, eligibility under Criterion C was inferred. The period of significance was determined to be 1850-1880. The National Register boundaries are the current limits of the Sonoma county assessor's parcel. Caltrans later confirmed that the resource is eligible under both National Register criteria A (early settlement patterns) and C (architecture and construction) at the local level of significance.

Other properties include the Enmanji Buddhist Temple, located at 1200 Gravenstein Highway South (APN: 060-140-063), which was determined eligible for the National Register at the local level of significance under Criterion C, as a fine example of a Japanese Buddhist temple built in the Eclectic style of the late Kamakura period. The period of significance is 1933-1934. The National Register boundaries consist of the footprint of the temple structure.

The Enmanji Temple, Washoe House and the Llano House are also considered historical resources for the purposes of CEQA.

Constraints and Challenges

There are several historic architectural properties and cultural resource properties/sites in the trail study area that have CEQA and trail planning significance. These include eight previously-recorded archaeological sites (CA-SON-921, -1695, -517, -1807, -2360H (historic), -2358, -159, and -2359) that were originally identified as within or adjacent to the Study Area during investigations of proposed Caltrans road improvements along SR 116 in 2009. Of these sites, two sites, CA-SON-159 and -1695, had been previously evaluated and determined eligible under Criterion D of the National Register.



Although a minor amount of right of way may be needed for several sites near the trail, each cultural resource site must be evaluated to determine the trail's effect on the resource, and consultation with Native American peoples will be required as part of the planning and implementation process. Project design should strive to avoid resource disturbance below ground level.

Design Considerations

- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the District Environmental Branch so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Additional Studies that May be Needed

If the Trail project could adversely affect archaeological resources a Treatment Plan will need to be prepared and implemented in order to mitigate the potential adverse effect of trail construction, per Section 106. This could include field investigations, possible data recovery excavations, and curation of associated artifacts. This Treatment Plan implementation will minimize impacts by providing new information on the site. Concurrently, and following criteria outlined in the Treatment Plan, the project design may include non-standard design details to minimize impacts to the archaeological site.

Further analysis will be completed as part of the environmental review for trail implementation projects.

5.5 GEOLOGY AND SOILS

Regulatory Setting

State legislation regarding geology and geologic hazards is focused on fault and earthquake events and associated damage, such as landslides and liquefaction. The principal legislation addressing earthquake fault zones is the *Alquist-Priolo Earthquake Fault Zoning Act*. In 1972, the State of California began delineating Earthquake Fault Zones (called Special Studies Zones prior to 1994) around active and potentially active faults to reduce fault-rupture risks to structures for human occupancy. The Act has resulted in the preparation of maps delineating Earthquake Fault Zones to include, among others, active segments of the Healdsburg-Rodgers Creek fault. The Act provides for special seismic design considerations if developments are planned in areas adjacent to active or potentially active faults.

The major State regulations protecting the public from geo-seismic hazards, other than surface faulting, are contained in California Code of Regulations, Title 24, Part 2, the *California Building Code* and California Public Resources Code, Division 2, Chapter 7.8, the *Seismic Hazards Mapping Act*. All of these regulations generally apply to public buildings (and a large percentage of private buildings) intended for



human occupancy, but also are generally considered applicable to trail structures such as bridges and boardwalks.

Section 1634, Non-building Structures, of the Building Code also extends code requirements to all other self supporting structures (such as retaining walls, bridges, and overcrossings) that carry gravity loads and resist the effects of earthquakes. Because non-building structures within the trail feasibility study area alignment would be in the “near-source” area (within 3.1 miles of a known active fault) of the Rodgers Creek fault, Section 1629, Criteria Selection, of the Building Code requires special seismic design factors be applied to the project.

The major State regulations protecting public roadways and bridges from geo-seismic hazards are contained in *Caltrans Seismic Design Criteria Version 1.2* (December 2001) and *Caltrans Highway Design Manual*, Section 110.6, Earthquake Consideration (November 2001). Bridge design is required to be in accordance with *Caltrans’ Bridge Design Specifications*, *Bridge Memos to Designers*, *Bridge Design Practices Manual*, and *Bridge Design Aids Manual*. Bridge design is required to be based on the “Load Factor Design methodology with HS20-44 live loading”. Seismic design is required to conform to the *Bridge Design Specifications*, and Section 20 of the memos to Designers, including the Caltrans Seismic Design Criteria.

Existing Conditions

This section discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. The Department’s Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

The primary source of information used in preparation and analysis of the section on geology and soils, including regional and local geology, faults and seismic activity, landslides and liquefaction, was the Association of Bay Area Governments website on Hazards. Additional information contained in the Sonoma County General Plan/EIR and the General Plans/EIR’s for the Cities of Sebastopol and Petaluma, including their Seismic Safety Elements was also used extensively. Geologic maps of the Petaluma, Cotati, and Sebastopol quadrangles were also used in preparing this section of the Feasibility Study.

The Study Area does not cross a fault mapped on Alquist-Priolo maps. The likelihood of ground rupture on an unmapped fault is very low.

There have been no historical earthquakes attributed to the Rodgers Creek fault, the closest major fault to the project site. However, large historical earthquakes such as the 1906 Great San Francisco Earthquake may have produced shaking at the site, and numerous small earthquakes have occurred in Sonoma County. Since there are no structures along the project alignment, the project does not increase risk to the public above the current level.

Regional Geology. The Study Area is located within the Coastal Range Geomorphic Province. This province lies between the Central Valley of California and the Pacific Ocean and extends from northern Santa Barbara County to Oregon. The Coast Range province is structurally complex. It is comprised of



sub-parallel northwest-southeast trending faults, folds, with interspersed small to medium sized valleys, often bounded by named mountain ranges. The northwest-southeast trending structures (valleys and mountains) can be attributed to the San Andreas Fault Transform Boundary, which is characterized by a right-lateral strike-slip fault zone. The movement of the Pacific and North American plates on either side of the San Andreas Fault is the source of many fault ruptures in western California. The Coast Ranges are composed mainly of thick strata of Mesozoic and Cenozoic sedimentary rock, but also includes areas of metamorphic and volcanic rock. In the San Francisco Bay Area the Coast Ranges are separated by a structural depression containing the Bay.

Within this northern portion of the Province, the Trail Feasibility Study Area lies within the western Santa Rosa Plain and the northern part of the Petaluma River Valley. The City of Sebastopol is located in the northwestern portion of the Plain, while the City of Petaluma is near the center of its river valley. The Estero Lowlands are located between these two features, in an area where the coastal mountains are lower and where it opens up to Pacific Ocean and Bodega Bay. This area is also known as the Petaluma Gap.

Local Geology. The Study Area geology is comprised mainly of alluvium and soft weathered sedimentary bedrock (**Figure 5.5-1**). The alluvium consists of both recent stream and alluvial fan deposits and areas of older, semi-consolidated alluvial deposits with clay rich and cemented sub-soils. The areas of recent alluvial deposits generally occupy the flatter valley bottom-land terrain associated with the Laguna de Santa Rosa, Estero Americano and Stemple Creeks and the Petaluma River and their tributaries. Areas underlain by older alluvium most often have gently undulating topography and contain areas of un-drained shallow depressions that trap rain water in winter months. Many of the alluvial soil areas are clay rich and expansive.

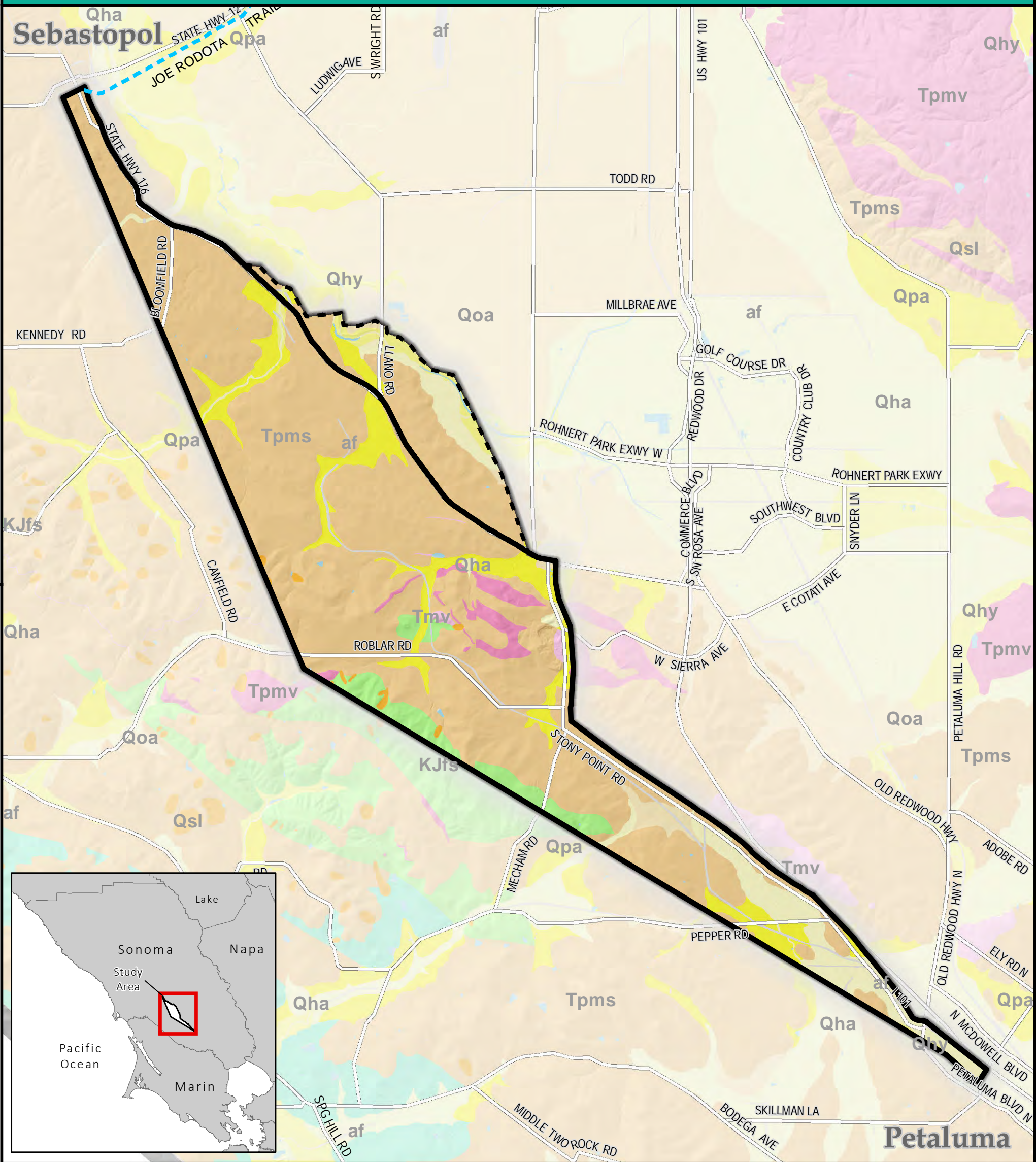
The sedimentary rock areas are comprised of Miocene to Pliocene Wilson Grove Formation (marine sandstone, conglomerate, tuff) and Petaluma Formation (non-marine claystone, mudstone, siltstone). Areas underlain by these formations typically have more rolling and hilly topography. Franciscan Complex rocks underlie areas of Wilson Grove and Petaluma Formation at depth, and where exposed at or near the surface typically have stronger topographic expression with bedrock outcrops and with some areas of steep slopes and hilly terrain that has an irregular, knobby and landslide prone topography.

Faults and Seismicity. There are no currently designated active faults (Alquist Priolo Act Faults) in the Study Area. The U.S. Geological Survey (USGS) and the California Geological Survey (CGS) define active faults as those that have had surface displacement within Holocene time (approximately the last 11,000 years). The existence of cliffs in alluvial terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts are all indicators of recent surface fault displacement.

The San Andreas, and Healdsburg -Rogers Creek Faults are the two most likely active faults to seismically impact the trail corridor, although none of these faults are directly located within the study area (**Figure 5.5-2**). The Healdsburg-Rodgers Creek Fault is located about 6 to 10 miles to the east, along the western side of the Sonoma Mountains. The well known San Andrea Fault system lies about 10 to 18 miles to the west.

The Working Group on California Earthquake Probabilities estimated a minimum 27 percent chance of a magnitude 6.7 or greater earthquake along the Healdsburg-Rogers Creek fault by 2037. Two earthquakes of magnitudes 5.6 and 5.7 shook Santa Rosa October 1, 1969, damaging about 100

Petaluma - Sebastopol Trail Feasibility Study



Basemap Sonoma County LiDAR hillshade
USGS Sonoma County Geology Map 1998.
Map Date: January 12, 2018

Study Boundary **Laguna Connection Study Area** **Existing Trail**

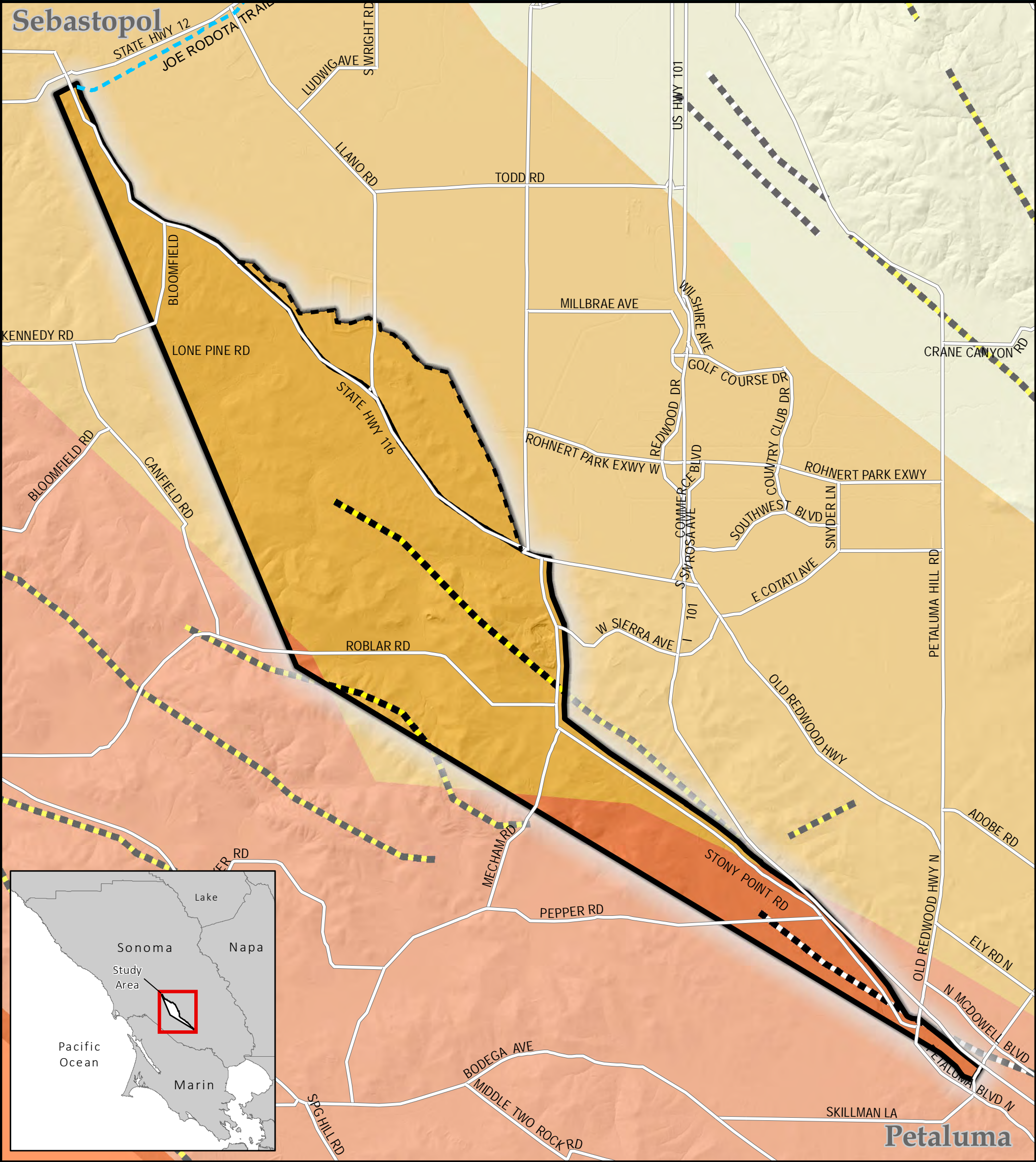
- | | | |
|---|-------------------------------------|---|
| Jfv - Franciscan Complex volcanic rocks | QTs - Sediments | Qsl - Hillslope deposits (Quaternary) |
| Jsp - Great Valley complex serpentinite | Qha - Alluvium (Holocene) | Tmv - Volcanic rocks (Miocene) |
| KJfc - Franciscan Complex chert | Qhy - Alluvium (late Holocene) | Tpms - Sedimentary rocks (Pliocene and early Miocene) |
| KJfm - Franciscan Complex metamorphic rocks | Qhym - Mud deposits (late Holocene) | Tpmv - Volcanic rocks (Pliocene and early Miocene) |
| KJfs - Franciscan Complex sedimentary rocks | Qoa - Alluvium (early Pleistocene) | af - Artificial Fill |
| Open water | Qpa - Alluvium (Pleistocene) | fsr - Franciscan Complex melange |

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0 0.5 1 Miles
0 0.5 1 Kilometers



Petaluma - Sebastopol Trail Feasibility Study



Study Boundary **Laguna Connection Study Area** **Existing Trail**

Faults **Certain** **Concealed**

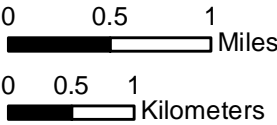
Landslides Incidence and Susceptibility

- High landslide incidence (over 15% of the area is involved in landsliding)
- Moderate landslide incidence (1.5 - 15% of the area is involved)

Basemap Sonoma County LiDAR hillshade
Faults: California Geologic Survey Jennings
Landslide Susceptibility USGS.
Map Date: January 12, 2018

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structures. The 1969 quakes took place along the Healdsburg Fault. They were the strongest earthquakes to affect the City since 1906. The epicenters were about two miles north of Santa Rosa. Primary earthquake hazards are due to surface fault rupture along the trace of the fault, and therefore unlikely. Secondary earthquake hazards are caused by earthquake induced ground shaking and affect a much larger area. Ground shaking is influenced by the distance of the site to the seismic source, local soil and bedrock subsurface conditions, and depth to groundwater. Earthquake-induced ground shaking is the greatest cause of widespread damage in an earthquake. Recent seismic hazard modeling efforts have attempted to evaluate earthquake potential for a given area by factoring various potential seismic sources. The anticipated peak ground acceleration for the site area could be up to 0.52g; this could adversely impact trail structures such as retaining walls and bridges.

Constraints and Challenges

Potential geotechnical impacts or constraints primarily include slope instability of cut and fill slopes, in this area a minor risk of landslides, and potential soil erosion problems associated with trail construction and use, especially on steeper slopes (**Figure 5.5-3**). Trail alignments located on moderate to steep slopes, as well as near or crossing creeks or waterways have the highest potential impacts or constraints. The Trail Study area is relatively flat to gently rolling, so the risk of land sliding, soil erosion and loss of topsoil is mostly low, with only localized areas of steeper slopes that will need to be traversed. The Trail Study area contains soils developed on younger and older alluvial fans and terraces and stream alluvial deposits, soft, weathered sedimentary rocks and volcanic rocks. Steeper slope areas underlain by soft, weathered sedimentary rocks represent potentially unstable geologic units. Areas underlain by unconsolidated alluvial deposits with shallow groundwater are susceptible to strong ground motion, lateral spreading along incised stream areas, subsidence and settlement under structural loading, and liquefaction.

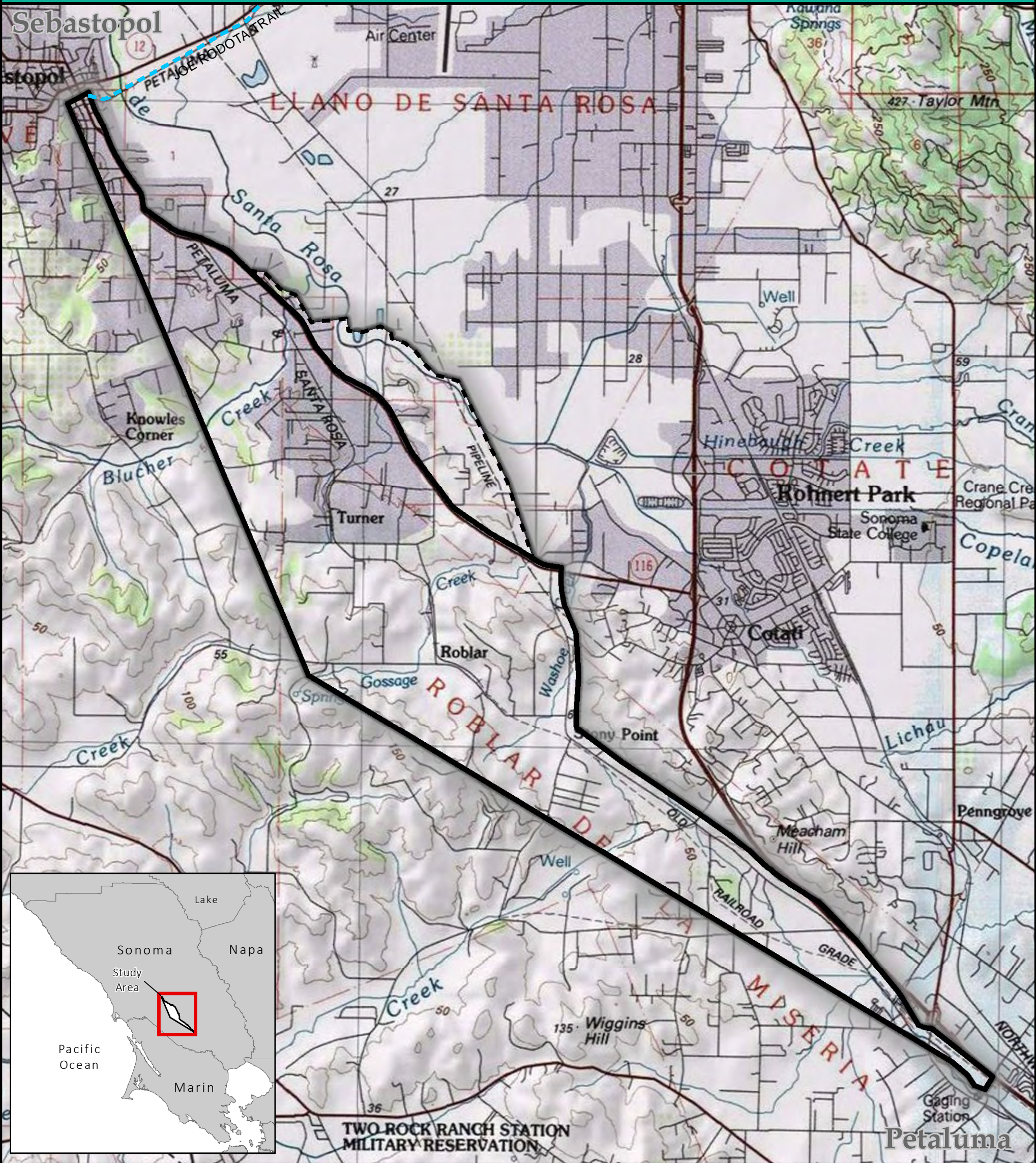
The study area is located in the northern San Francisco Bay Area, a region of intense seismic activity. As noted previously, strong ground shaking could result from a rupture along the Healdsburg- Rogers Creek Fault, San Andreas Fault, or any of the major Bay Area regional earthquake faults. Such strong ground shaking motion could damage elevated structures such as bridges and retaining walls that are part of the trail system.

There is a significant risk of another major earthquake on several regional and more local active faults during the next thirty years. The hazards related to ground shaking vary depending on the location of the proposed bicycle and pedestrian improvements and underlying soils and geologic conditions. In areas underlain by consolidated bedrock, seismic hazards include small rock falls and possibly landslides that could harm bicycle and pedestrian facility users and damage the improvements. In areas underlain by unconsolidated sediments, ground failure and differential settlement could result from a severe earthquake, damaging paved surfaces and elevated structures. Liquefaction potential is highest in areas underlain by poorly engineered fills, and areas underlain by unconsolidated alluvium with shallow groundwater conditions.


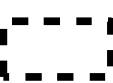

Design Considerations

A detailed Geotechnical Investigation will need to be completed associated with trail design, especially bridge structures, and the final design and implementation would need to be consistent with the Geotechnical Investigation recommendations, California Building Code, Caltrans Highway Design

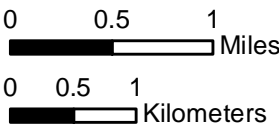
Petaluma - Sebastopol Trail Feasibility Study



Esri Online Basemap: World Topographic Map
Map Date: January 12, 2018

-  Study Boundary
-  Laguna Connection Study Area
-  Existing Trail

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Manual, City/County Grading Drainage and Building Codes and Ordinances, and other applicable regulations. Trail design would also need to be consistent with the Sonoma County General Plan and the policies of the Cities of Sebastopol and Petaluma related to geologic and seismic hazards. Since the study area is not within an Alquist-Priolo Earthquake fault zone area, nor in an area included in the Seismic Hazards Zoning Act, did fault relate site field investigations are not required.

All construction, notably grading and foundation engineering will be performed in accordance with the recommendations of the Geotechnical Investigation. The design plans will identify specific mitigation measures to reduce the landslide risk and erosion potential of surface soils.

Additional Studies that May Be Needed

A design-level Geotechnical Investigation should be prepared for each trail segment that is implemented, under the direction of a California Registered Geotechnical Engineer, or Civil Engineer experienced in geotechnical and foundation engineering. The Geotechnical Investigation will establish the seismic and geotechnical design parameters, in accordance with requirements of the California Building Code and applicable Sonoma County Codes. The Geotechnical Investigation will be reviewed and approved by the by the County Engineer and by the Project Engineer as part of civil and structural design review of trail grading and drainage and any structures, such as retaining walls, grade separation structures, bridges and/or boardwalks.

5.6 HYDROLOGY AND WATER QUALITY

Regulatory Setting

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when a project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the US Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Department activities on its highways and facilities. Department construction projects are regulated under the Statewide permit, and projects performed by other entities on Department right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 acre require a Water Pollution Control Program.

The project is located within the North Coast Regional Water Control Board (RWQCB) jurisdiction (Region 1). Work may include replacing and/or extending the existing 36 cross-culverts (not including



the three bridge/culverts at creek crossings). The eventual receiving body of water from the project area is the Laguna de Santa Rosa, which is on the EPA's 303(d) list of impaired water bodies for ammonia, low dissolved oxygen, nitrogen, phosphorus, temperature, and sedimentation/siltation. The Laguna de Santa Rosa drains to the Russian River, and also serves as an overflow reservoir for the Russian River during flood conditions. The Russian River, through collectors and reservoir projects administered by the Sonoma County Water Agency, is the main source of water for agriculture, municipal and industrial uses in the Russian River watershed, which includes the project area.

Caltrans has performed many studies to monitor and characterize highway storm water runoff throughout the State. Pollutants of Concern in Caltrans runoff are phosphorus, nitrogen, copper (total or dissolved), lead (total or dissolved), zinc (total or dissolved), sediments, general metals (unspecified metals), and litter. Some sources of these pollutants are natural erosion, phosphorus from tree leaves, combustion products from fossil fuels, trash and falling debris from motorists, and the wearing of brake pads.

The proposed project's total soil disturbance is approximately 12.5 hectares (30.9 acres). About seven acres of new impervious surface (pavement) will be added which will slightly increase roadway runoff. Groundwater should be anticipated where construction occurs at creek locations.

Where groundwater is encountered, early discussion will be initiated regarding the handling and disposal of groundwater water during construction.

When implemented, any future project will incorporate Water Quality Best Management Practices (BMPs) for the control and treatment of runoff, including those required by an agency NPDES permit and Construction General Permit, and provisions which may be specified by regulatory agencies as conditions of their permits and certifications. A 401 Water Quality Certification from Region 1 RWQCB is anticipated. BMPs will be incorporated to reduce the discharge of pollutants during construction as well as permanently to the Maximum Extent Practicable. Final determination of BMPs will be made during project design.

Construction Site BMPs are implemented during construction activities to reduce pollutants in storm water discharges throughout construction and will be incorporated into a Storm Water Pollution Prevention Plan (SWPPP). These may include temporary silt fence, stockpile cover, stabilized construction entrance/exit and temporary soil stabilizers. Grading of existing slopes will be required.

Design Pollution Prevention BMPs, permanent measures to improve storm water quality by reducing erosion, stabilizing disturbed soil areas, and maximizing vegetated surfaces, will be determined during the design phase. These may include erosion control measures, methods to reduce runoff velocity, and source controls to reduce the volume of runoff generated on-site and eliminate opportunities for pollutants to enter the drainage system.

Existing Conditions

The primary sources of information used for watersheds, hydrology, and flooding, included information from Sonoma County Resource Conservation District, Sonoma Ecology Center, Wikipedia, and ABAG Hazards maps, as well as the General Plans from the cities of Petaluma and Sebastopol and the Sonoma County General Plan and EIR.



Watersheds and Major Creeks. Although the Petaluma-Sebastopol trail alignments being evaluated in this Feasibility Study only traverse about 10 miles of landscape, they cross 3 distinct watersheds, comprising lands in the Petaluma River, Stemple Creek, and the Russian River, including the Laguna de Santa Rosa and Green Valley Creek sub-basins of this large river system (**Figure 5.6-1**). To make a complete connection, the trail will need to be located very near or cross at least 6 major creeks and several larger tributaries between the cities of Sebastopol and Petaluma.

It is interesting to note that although there are no significant topographic breaks separating the 3 watersheds, they discharge to widely separated points, with the Petaluma River discharging to northern San Pablo Bay, more than 12 miles south of Petaluma, Stemple Creek discharging directly west to the Pacific Ocean, and the Laguna de Santa Rosa and the creeks of the Green Valley sub-basin discharging to the Russian River and thence the Pacific Ocean at Jenner, more than 50 miles from San Pablo Bay

Petaluma River. The portions of the trail study area in the northern portion of the City of Petaluma and surrounding unincorporated areas are in the 146 square mile upper Petaluma River watershed, including Willow Brook north of the City and along portions of Stony Point Road, and the Denman and Corona Reaches of the Petaluma River. Creek flow is perennial in this area, with the lower 11 miles of the 16 mile long main stem of the river being tidal, to just above downtown Petaluma. In addition to the main stem of the Petaluma River, there are several named and un-named tributary creeks and small drainages that the trail may need to cross, including Capri Creek near Corona Road and Lynch Creek, north of East Washington Blvd.

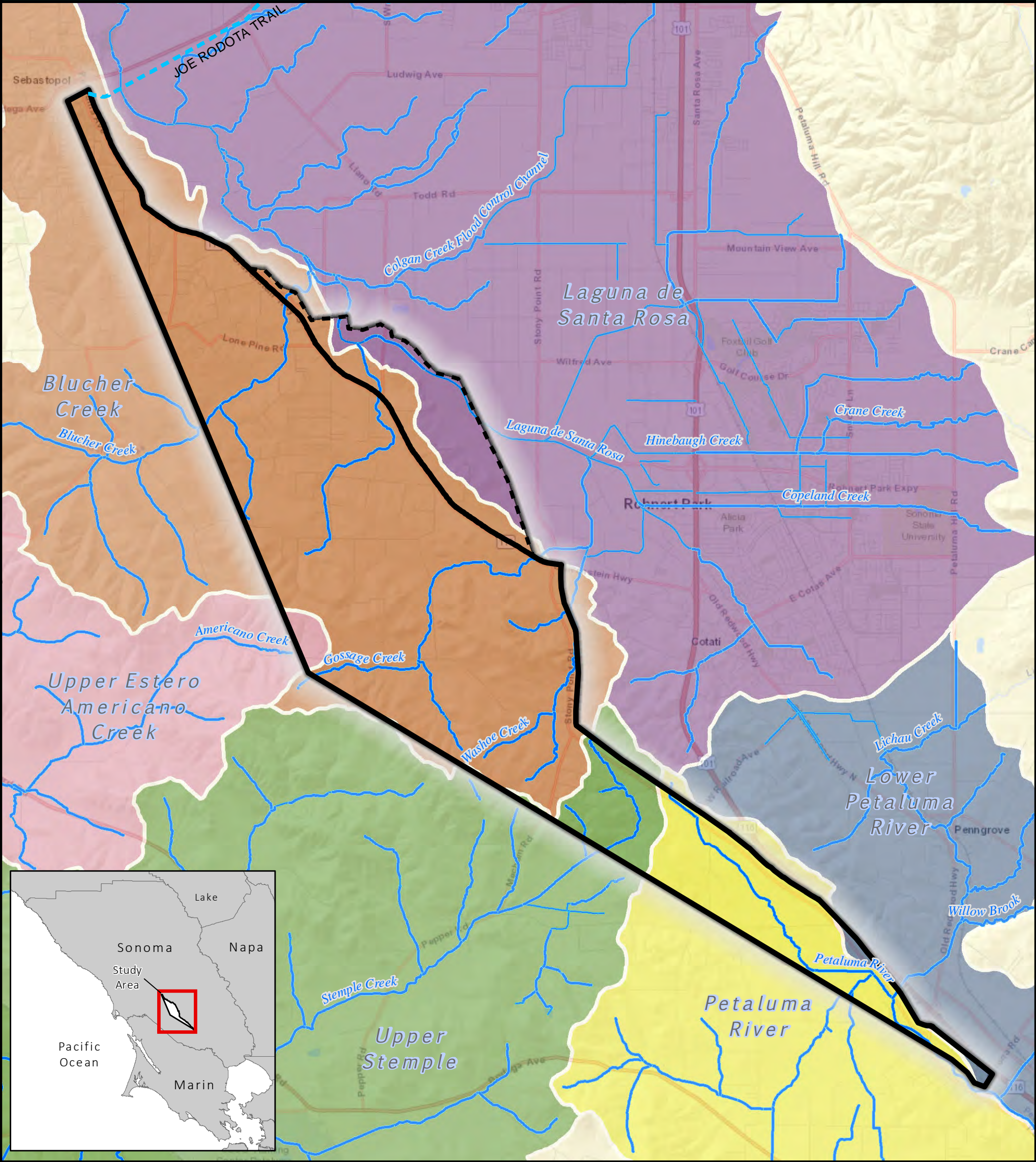
Nearly all of these reaches and their tributaries have a narrow riparian corridor with adjacent lands either urbanized, such as along and between Industrial Avenue and Petaluma Blvd North in Petaluma, but also interspersed with open space and agricultural hay lands and grazing lands. The riparian zones associated with these creeks serve a critical function as wildlife movement corridors, in addition to providing habitat.

The City of Petaluma has been actively acquiring and restoring flood prone open lands in this area, including along the Denman Reach, north of Corona Road, and along Capri Creek. As noted above, this area is flood-prone and has experienced a number of large flood events over the last 35 years, including most recently large floods of December 2005 and January 2017. The 100-year floodplain of the Petaluma River is quite wide in this area, with flood depths of 4 to 8 or more feet. In some places channel and overbank floodplain flow velocities are quite high and will need to be considered in the design of a resilient trail.




Stemple Creek. Stemple Creek is a small intermittent creek that lies within a mostly rural watershed of about 50 square miles of small farmland areas, ranch lands, dairy lands and open space areas. It discharges to the Pacific Ocean via Estero de San Antonio. The trail would need to cross Stemple Creek and its narrow floodplain along or near Stony Point Road and just south of Roblar Road and the historic Washoe House.

Laguna de Santa Rosa and Green Valley Sub-basins of Russian River. The City of Sebastopol and much of the un-incorporated sub-urban to rural residential and commercial lands to its south are located in the middle and lower Laguna de Santa Rosa (Laguna) Sub basin and the Green Valley Sub basins of the Russian River watershed. The Laguna Sub basin drains an area of about 62 square miles and includes







Petaluma - Sebastopol Trail Feasibility Study





Calwater 221 CDF Planning Watersheds, NHD 1:24k Hydrology Flowline Streams
Map Date: January 12, 2018

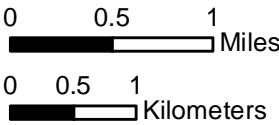
-  Study Boundary  Laguna Connection Study Area  Existing Trail

Watersheds and Hydrology

- | | | |
|---|--|--|
|  Blucher Creek |  Lower Petaluma River |  Upper Estero Americano Creek |
|  Laguna de Santa Rosa |  Petaluma River |  Upper Stemple |

-  Stream / River
 Artificial Path/Canal/Ditch

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most of the City of Sebastopol. It discharges to the Russian River via Mark West Creek 6 miles to the north and near or east of Forestville.

The Laguna's principal tributary streams originate on the southern and western slopes of the Sonoma and Mayacamas Mountains, east of the Trail Study Area. The Laguna follows a sinuous path generally paralleling Highway 116 and to the east through the western Santa Rosa Plan a total of 22 miles in length. The Laguna crosses under Stony Point Road about 1 mile north of Highway 116 and on the west side of the Cities of Rohnert Park and Cotati. It is a widened and re-aligned flood control channel in this area, and contains a flood control channel maintenance road that also serves as an un-improved trail. Llano Road crosses a more natural course of the Laguna further to the north and Highway 12 crosses the Laguna on the southern edge of the City of Sebastopol.

Some of the trail alignment alternatives that were evaluated would need to cross the small and intermittent Laguna tributaries consisting of Washoe Creek and Gossage Creek in the area immediately east of Stony Point Road, where these creeks flow under Highway 116, as well as possible trail alignments near and parallel to the Laguna channel and its riparian corridor.

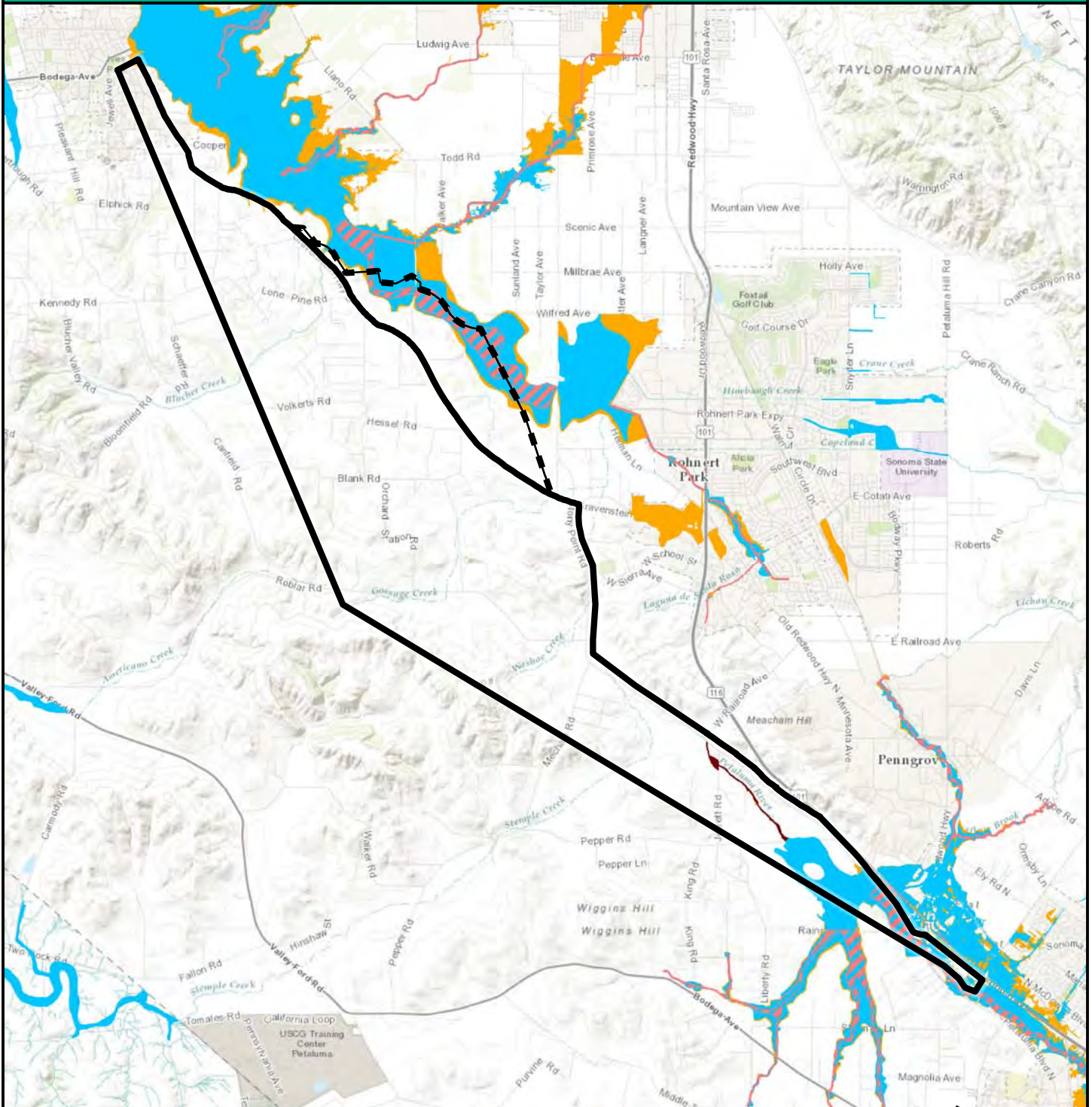
The trail would also need to cross Blucher Creek, a major Laguna perennial tributary near the center of the Trail Study area. It originates in the English Hill area and runs parallel to Blucher valley Road. Blucher Creek Crosses under Bloomfield Road, Canfield road, Lone Pine Road and Highway 116 where it joins the Laguna just west of Todd Road. Any roadway or trail improvements in this area, including placing bike lanes on roadway shoulders to provide local connections, would need to accommodate Blucher creek and its floodplain.

The Green Valley Subbasin also is a tributary of the Russian River and drains an area of about 38 square miles, including the northwest portion of Sebastopol. Its major creek system in the northwest part of Trail Study area is Atascadero Creek. Atascadero Creek also has its headwater on English Hill, on the north side, north of Burnside Road. It is a perennial creek with a well developed riparian corridor. It supports sensitive species, including steelhead trout, California freshwater shrimp and coho salmon.

Flooding. During heavy rainfall induced runoff events, areas adjacent to all of the creeks in the study area are subject to flooding from over bank topping. With the exception of the main Laguna de Santa Rosa channel, all of the tributary creeks in the Trail Study area can begin to rise within hours of a heavy storm event if antecedent soil moisture levels are high and the ground is saturated, with creek channel over-topping occurring within the same day or two of the storm. Flooding typical is of short duration, often lasting from 2 to 5 days. The exception is the lower Laguna de Santa Rosa, which experiences backwater flooding from major flood events of the Russian River. The system is slower to respond and flooding can last much longer. However, since the flooding is from backwater, flood flows are typically very slow moving.

The Federal Emergency Management Agency (FEMA) has prepared a series of maps that show flood hazards along many of the small tributary creeks in the Study area (**Figure 5.6-2**). These were assembled by the Association of Bay Area Governments (ABAG) to produce regional maps showing flood hazards. Flooding is possible, generally in relatively narrow 100-year flood zones along the tributary creeks, but in relatively wide zones along the Petaluma River and Laguna de Santa Rosa.

Petaluma - Sebastopol Trail Feasibility Study



FLOOD HAZARD ZONES

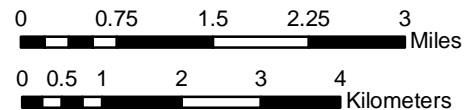
- 1 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CHANNEL
- 0.2% Annual Chance Flood Hazard
- FLOODWAY
- FLOODWAY CONTAINED IN CHANNEL



Study Boundary



Laguna Connection
Study Area



Source: The National Flood Hazard Layer (NFHL), FEMA. Accessed 2016.

5.6-2 FEMA Flood Zones



Constraints and Challenges

As noted earlier, a number of creek or small tributary drainage crossings will be required to implement a continuous trail between Sebastopol and Petaluma. Most of these crossings will be bicycle or pedestrian bridges crossing relatively narrow regulatory floodplain areas, with bridges less than 50-100 feet in length most common. The upper Petaluma River has a wide 100-year floodplain, as does the Laguna de Santa Rosa and any new bridge crossing of it would be more difficult to engineer, obtain environmental clearance and permits for, and would be relatively. Modifications to existing bridges and culverts to incorporate parallel bicycle bridges should be evaluated. Drainage crossings can introduce a concentrated sediment load to the waterway which can cause a decrease in water quality. Increase in sediment loads to the Laguna, Petaluma River and their tributaries is a potentially significant concern and therefore a significant constraint in the watershed, unless carefully designed and constructed, construction of the Petaluma-Sebastopol Trail could result in the disturbance of existing waterway and riparian conditions by increasing sediment loads to all of the creeks and altering current hydrologic conditions.

Trails can be located within floodplain areas with much greater flooding frequency than the 100-year regulatory flood (i.e., 10-year floodplain), provided that appropriate considerations are included in the trail and structure designs to prevent frequent and costly trail damage and washouts, clogged drainage structures, and exacerbated local flooding, or prolonged trail closure. In general, the trail design surface elevation should be a minimum of 1 foot above the 10-yr flood elevation. This will typically require consultation with the local flood control agency (Sonoma County Water Agency).

Particular attention should be paid towards the hydraulic design of bridges and any needed boardwalk structures. The bottom cord or structural support member of all bridges and boardwalks within any regulatory floodplain should ideally be at a minimum elevation of the 100-year or Base Flood Elevation plus 2 feet of freeboard to be fully compliant with Sonoma County Water Agency Flood Plain Management regulations and FEMA regulations. Each bridge or boardwalk crossing should be designed to have minimal impact on flood water surface elevations, or block or redirect flood flows to adjacent lands, and clear span the creeks.

Design Considerations

Structures that cross regulatory floodplains must be designed appropriately, as noted above. Other design considerations include:

- To prevent sediments from entering, BMPs should include measures such as:
 - Use temporary measures, such as flow diversion, temporary ditches, and silt fencing or straw wattles.
 - Surface disturbance of soil and vegetation must be minimized; existing access and maintenance roads should be used wherever feasible.
 - Stockpiled soil should be placed, sloped, and covered so that it would not be subject to accelerated erosion.
 - Accidental discharge of all project-related materials and fluids into local waterways should be avoided by using straw rolls or silt fences, constructing berms or barriers around construction materials, or installing geofabric in disturbed areas with long, steep slopes.



- After ground-disturbing activities are complete for each area, all graded or disturbed areas should be covered with protective material such as mulch, and/or erosion control blankets and re-seeded with native plant species.
- Consider the need to establish a flood warning and trail closures to protect trail users, if severe weather or flooding events are forecast where the trail is located near streams with frequent and dangerous flooding.
- Bridge construction should address potential hydraulic impacts on channel flow with respect to steelhead salmon and freshwater shrimp.
- Consider enhancement of roadside drainage areas to treat and filter water before it enters the creek. Incorporate bicycle and pedestrian facilities into bridge repair and rehabilitation projects to minimize creek disturbance, or plan separate parallel structures to avoid creek disturbance.

Trails can be located within floodplain areas with much greater flooding frequency (i.e., 10-year floodplain), provided that appropriate considerations are included in the trail and structure designs to prevent frequent and costly trail and bridge damage and washouts, clogged drainage structures, or prolonged trail closure. In general, the trail design surface elevation should be a minimum of 1 foot above the 10-yr flood elevation. Particular attention should be paid towards the design of bridge and boardwalk structures. The bottom chord or structural support member of all bridges and boardwalks within any regulatory floodplain should ideally be at a minimum elevation of Base Flood Elevation plus 2-3 feet of freeboard to be fully compliant with FEMA regulations. Each bridge or boardwalk crossing should be designed to have no impact on flood water surface elevations, or block or redirect flood flows to adjacent lands, and clear span the creeks.

Trail segments need to be consistent with the Sonoma County Water Agency Channel Management Guidelines, according to which flood-prone natural drainage courses should be maintained in their natural states to protect native vegetation and wildlife habitats. Permitting for any drainage alterations to major creeks and their tributaries would address this requirement.

Additional Studies that May Be Needed

A detailed hydraulic analysis should be prepared of all impacted creeks and waterways, with recommendations regarding the design elevations of all pedestrian bridges in compliance with Sonoma County Water Agency floodplain management regulations. This includes 100-year flood elevation freeboard requirements, the locations of the bridge abutment structures with respect to flood flows, bridge abutment, scour, and channel bank protection requirements.

A Stormwater Pollution Prevention Plan (SWPPP) and a Spill Control and Countermeasures Plan (SCCP) should be prepared for each individual trail segment. Specific measures, as cited below, should be adapted from the most current edition of the Stormwater Best Management Practice Handbook for Construction, published by the California Stormwater Quality Association (CASQA).

The SWPPP should include Best Management Practices (BMPs) to prevent or minimize stormwater pollution during construction activities, and post construction. An Erosion Control and Revegetation Plan, and a Spill Control and Countermeasures Plan, should be included in the SWPPP, and in the



Construction Documents. BMPs should be prepared and implemented to control short-term construction-related water quality impacts.

5.7 HAZARDS AND HAZARDOUS MATERIALS

Regulatory Setting

Many state and federal laws regulate hazardous materials and hazardous wastes. These include not only specific statutes governing hazardous waste/hazardous materials, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Existing Conditions

Trail projects can generally result in exposure to hazardous materials in several ways. First, during site grading, construction workers can be exposed to any soil-based contaminants that are released. Any hazards discovered during site investigations at the design level or during construction would be remediated.



Second, during operation of a trail, the use of hazardous chemicals on adjacent properties can result in exposure to trail users. For example, pesticides applied on adjacent farmland may drift onto a trail corridor.

The following databases are utilized to identify known sources of hazardous materials:

- The State Water Resources Control Board (SWRCB) GeoTracker database.
- The Department of Toxic Substances Control (DTSC) EnviroStor database.
- The Cortese List. (Cal-EPA)

During evaluation of planned road improvements along SR116 in 2009, the following sites with potential hazardous substances were identified:

- Northwest corner of SR-116 and Stony Point Road
- Landers Automotive, 3610 Gravenstein Highway
- Hessel Garage, 3880 Gravenstein Highway
- Bill's Deli, 3705 South Gravenstein Highway
- Claremont Energy, 5216 South Gravenstein Highway (closed)

Agricultural Sites. Pesticide use represents a potential health risk to trail users. The U.S. EPA defines pesticide spray drift as the physical movement of a pesticide through air at the time of application or soon thereafter, to any site other than that intended for application. Spray drift occurs when nozzles on ground spray equipment produce small droplets that stay suspended and are carried by air currents to off-target locations. The degree of health hazard from spray drift depends on factors such as the proximity of sensitive receptors to the area of pesticide application, the amount of spray drift, and the toxicity of the pesticide.

Constraints and Challenges

Already known hazardous conditions will be identified and evaluated during project environmental review and design to ensure that alignment adjustments or significant design modifications are incorporated to avoid hazards discussed in this section.

Design Considerations

Design of the project will follow regulatory requirements to utilize Best Management Practices to ensure that the project is designed and built to minimize exposure to hazardous conditions. To avoid exposure to adjacent agricultural operations regarding pesticide use, informational signage may be utilized at trailheads or temporarily in cooperation with agricultural operators to inform about proposed operations that may affect use of the trail during spray operations.

Additional Studies that May Be Needed

A Phase I Environmental Site Assessment may be needed for some trail study segments.

5.8 TRANSPORTATION/TRAFFIC

Public transit and multi-modal transportation facilities play a vital role in providing a range of transportation choices for people across Sonoma County. Bicycling and walking provide essential “last



mile” connections to and from transit. Transit has the potential to extend trip ranges for bicyclists and pedestrians beyond comfortable walking or biking distances, and transit can provide an alternative during unfavorable conditions such as darkness, extreme heat, rain, and cold. Commuters who would use the trail could access existing transit stops at various locations along the route. The proposed trail would also facilitate improved access for bicyclists and pedestrians to various transit transfer locations including bus transfers in Sebastopol and the multi-modal transit malls in Cotati and Petaluma, where local and regional services including the SMART Train can extend trip ranges to nearby communities as well as destinations beyond Sonoma County. Implementation of the Petaluma – Sebastopol Trail would help to fill gaps in the current non-motorized transportation network and improve access to transit in the project study area. Convenient transit facilities that include basic infrastructure and amenities such as shelters, short and long-term bicycle parking, passenger information systems, water and air, etc. will help to make such trips a reliable option for commuters.

Sonoma County Transit

Sonoma County Transit (SCT) provides local and regional fixed route bus service in the project study area and throughout Sonoma County. SCT provides countywide service along major travel corridors including service to the County’s rural areas. The system links most small towns and communities throughout the County, and the County’s nine incorporated cities including Cloverdale, Healdsburg, Windsor, Santa Rosa, Sebastopol, Cotati, Rohnert Park, Sonoma and Petaluma.

Sonoma County Transit operates 22 routes Monday through Friday between approximately 5:30 AM and 10:30 PM. Weekend service consists of thirteen routes operating on Saturday’s and ten on Sunday’s between approximately 7:00 AM and 9:30 PM. Sonoma County Transit plans to provide feeder bus service to SMART including enhanced east-west connections from Sebastopol . SCT allows bikes on all of its buses. All SCT buses are equipped with front loading bike racks that accommodate two or more bicycles. Bikes are allowed inside the bus if the front loading racks are full.



SR 116 4000 block SC Transit Stop sign on shoulder looking north

Currently, limited infrastructure and/or amenities are provided at transit stops along the SR 116 corridor within the study limits. Stops generally consist of a bus stop sign located along the highway shoulder. However, transit shelters and support infrastructure are provided at significant bus stops in the cities of Sebastopol, Cotati, and Petaluma.

Five Sonoma County Transit routes serve the project study area. The routes generally circulate within the local communities and/or operate along the SR 116 and US 101 corridors. Currently no SCT routes



provide service along Stony Point Road on the west side of US 101 between SR 116 and Petaluma Boulevard North in the project study area. Route details are summarized below.

Route 20 – Russian River Area, Forestville, Sebastopol, Santa Rosa

Route 20 provides daily service, weekday express service, and weekend service between Monte Rio, Guerneville, Forestville, Graton, Sebastopol, and Santa Rosa. Route 20 operates on approximately 90-minute headways on weekdays between 6:00 AM and 8:00 PM. Weekend service is provided between approximately 8:00 AM and 8:00 PM, with three-hour headways.

Route 22/26 – Santa Rosa, Sebastopol

Route 22 provides weekday service between Sebastopol and Santa Rosa, and then continues as Route 26 along SR 116 to Rohnert Park. Route 22 operates between approximately 7:30 AM and 6:30 PM, with two trips during morning commute and three trips during the afternoon commute.

Route 26 – Sebastopol, Rohnert Park, Cotati

Route 26 provides weekday service (Monday – Friday) between Sebastopol and Rohnert Park. Route 26 circulates around downtown Sebastopol and then along SR 116 to Cotati and Rohnert Park. Route 26 operates during the morning and afternoon commute periods with approximately one hour headways. Route 26 originates and terminates as Route 22 with service to/from the Santa Rosa Transit Mall via SR 12 and Sebastopol Road.

Route 24 – Sebastopol Local

Route 24 provides Monday through Saturday local shuttle service around Sebastopol with headways ranging between approximately 30 – 90 minutes. Route 24 connects to the Sebastopol Transit Hub, and is coordinated with Route 20 which serves outlying communities in the West County and ultimately connects to the Santa Rosa Transit Mall and the government services at the County Administration Center.

Route 44 /48 – Petaluma, Pennngrove, Cotati, Rohnert Park, Santa Rosa

Routes 44/48 provide daily service between Santa Rosa and Petaluma with stops in Rohnert Park, Cotati, and Pennngrove. While the route includes stops of both the east and west sides of US 101, the majority of the route is located on the east side of US 101 outside of the project study area. Weekday service operates between approximately 5:30 AM and 10:30 PM, with express busses during the morning and afternoon commute periods. Weekend service operates between approximately 7:00 AM and 10:00 PM.

Petaluma Transit

Petaluma Transit, which is operated by the city of Petaluma, provides local fixed route bus service and ADA eligible paratransit services in Petaluma. The system connects with Sonoma County Transit and Golden Gate Transit, to extend travel options for riders within Sonoma County and into Marin and San Francisco Counties. Bus service operates Monday – Friday between approximately 6:00 AM and 6:00 PM, and on Saturday's from approximately 7:00 AM – 6:00 PM. No evening or Sunday service is provided. All Petaluma Transit buses are equipped with front-mounted bicycle racks that accommodate two to three bicycles. Riders are responsible for loading and unloading bicycles on first-come, first-served basis. The Petaluma Transit mall is located on Copeland Street between East "D" and E. Washington Streets. It serves: Petaluma Transit Routes 1, 2 and 3; Sonoma County Transit Routes 40, 44 and 48; and Golden Gate Transit Route 80 and 101. The system will connect with SMART once trains are up and running. Petaluma Transit Route 5 – circulates on Petaluma's west side and stops on Industrial



Avenue near Stony Point Road and Petaluma Boulevard North in the vicinity of the proposed Petaluma to Sebastopol Trail.

Sonoma Marin Area Rail Transit (SMART)

The Sonoma-Marin Area Rail Transit (SMART) project includes building and operating a 15-station, 70-mile passenger rail line from the Larkspur Ferry terminal, with connecting service to and from San Francisco, to Cloverdale using the previously long-dormant publicly owned right of way of the former Northwestern Pacific (NWP) Railroad line, which roughly parallels US 101. The project also includes a Class I multi-use pedestrian and bicycle path parallel to much of the line. SMART passenger service is planned as the backbone of an integrated transportation system in Sonoma and Marin Counties that optimizes bus, bike, and pedestrian transportation. Local and regional planning efforts identify the SMART train as an important alternative to commuting by car, especially as the cost of driving continues to increase the need and effort to reduce Green House Gas (GHG) emissions becomes increasingly imperative.

The State Legislature established the Sonoma-Marin Area Rail Transit (SMART) District in January 2003 to plan, construct, and operate a commuter rail line in Marin and Sonoma Counties. In 2008, Marin and Sonoma County voters passed a one-quarter cent sales tax to fund the bulk of the SMART project which is being built in stages. Phase 1 will connect the Sonoma County Airport in Santa Rosa to downtown San Rafael and will serve all of the cities along the 43 mile corridor. Passenger service on the first segment is expected to begin in late 2016. Phase 2, which extends the project south to the Larkspur Ferry terminal is anticipated by 2018, and Phase 3 will extend the project north to Cloverdale. The project accommodates freight rail services, which have been active on the corridor since 2011. SMART Passenger service will utilize two-car train sets of self-propelled Diesel Multiple Units. Each train set has capacity for up to 158 seated passengers, 160 standing passengers and 24 bicycles — depending on mix of bikes, wheelchairs, strollers and use of flip seats. Trains will operate in both directions every 30 minutes during peak commute hours, with a mid-day trip and weekend service planned as well. A train ride from Santa Rosa to San Rafael is expected to take about an hour.

Golden Gate Transit

Golden Gate Transit (GGT) primarily provides regional inter-county transit service between Santa Rosa, Rohnert Park, Cotati, Petaluma, Marin County and the downtown San Francisco financial district. GGT currently operates six routes that serve Sonoma County. Route 101 offers all-day service between Santa Rosa and San Francisco. Several inter-county commute routes offer peak hour and peak direction service during morning and evening commute periods (routes 72, 72X, 74, 76, 101X). Peak direction is defined as toward San Francisco in the morning and from San Francisco in the afternoon. These buses offer fast, express service with relatively few stops. GGT stops within the project study are located in Cotati and Petaluma.

Transit to Trails – Car Free Hiking and Biking Adventures

Transit & Trails is a project of the Bay Area Open Space Council. The Open Space Council is a coalition of organizations that includes nonprofits, city, county, regional, state and federal agencies that are involved in conserving, stewarding, and promoting the use of parks, trails, and open spaces in the San Francisco Bay Area. Since many of the Bay Area's parks, beaches, trails, and recreation areas are accessible by public transit, the Open Space Council has developed a promotional campaign and an on-line mapping tool to highlight some of the possibilities for car-free outings to help bring nature within



reach of all Bay Area residents. Sonoma County members of the Open Space Council include: Sonoma County Agricultural Preservation and Open Space District, Sonoma County Regional Parks, Sonoma County Water Agency, and Sonoma Land Trust among others.

The Petaluma – Sebastopol Trail will become part of a trails network to serve recreation enthusiasts. When combined with the Joe Rodota and West County Trails, the trail system will provide non-motorized access and recreation opportunities serving a large portion of western Sonoma County. The Transit & Trails Project can help to inform residents and visitors about the opportunities to access parks, open space destinations, and regional trails in and around the project study area.

5.9 OTHER ENVIRONMENTAL ISSUES

Other environmental categories that are evaluated as part of a project are listed below. In general, implementation of the Petaluma Sebastopol Trail is not anticipated to trigger significant impacts in these categories. These issues would be evaluated further when a specific project is defined.

- **Air Quality.** Implementation of trail projects typically does not negatively impact air quality, and may have beneficial impacts associated with reduction in vehicle use by trail users or commuters. Temporary air quality impacts due to construction activity are regulated to minimize potential effects.
- **Greenhouse Gas (GHG).** Like air quality, implementation of trail projects typically does not negatively impact greenhouse gas emissions, and may have beneficial impacts associated with reduction in vehicle use by trail users or commuters, and may be included in regional plans. Temporary impacts associated with project construction are analyzed as part of detailed implementation, and projects may require use of low emission equipment, minimization of off-site transport and other measures to reduce short-term effects.
- **Mineral Resources.** The trail would not affect mineral resources.
- **Noise.** The primary source of noise along the corridor is highway noise from vehicles. The trail would be unlikely to increase ambient noise levels. Temporary construction impacts associated with noise would be regulated to comply with code requirements, and to minimize potential effects. Specific impacts associated with trail implementation would be identified when the trail project is defined.
- **Population and Housing.** The trail would not affect population and housing.
- **Public Services and Recreation.** The trail would fulfill a recreational purpose, as well as enhance connections to existing and planned recreational facilities, and in some cases, may be beneficial by improving access for maintenance of existing public resources. Specific impacts associated with trail implementation would be identified when the trail project is defined.
- **Utilities and Service Systems.** Portions of the trail would be located within easement or on lands owned by utilities such as Sonoma County Water Agency or other entities. Overhead utility poles may conflict with a specific trail alignment. The trail alignment would be designed in coordination with applicable agencies to ensure that utility conflicts are minimized.



6. BENEFITS ANALYSIS

Introduction



This section provides an analysis of the benefits of multi-use trails. The analysis focuses on potential **Safety, Economic, and Public Health** benefits. Research was conducted to document local, regional, and national findings. Issues specific to the Petaluma Sebastopol Trail are discussed, and local opportunities and benefits are highlighted. In addition to the three focus areas (Safety, Economics, and Public Health), multi-use trails and non-motorized transportation also yield significant environmental and societal benefits which include but are not limited to: helping Sonoma County to achieve its' goals to reduce VMT (vehicle miles traveled) and associated greenhouse gas emissions; protect open space and natural resources; preserve cultural and historical assets; and implement long-standing land-use and transportation plans and projects. Further, development of trail projects allows local agencies to gain access to regional, state, and federal transportation funding that is specific to non-motorized projects which may otherwise go to jurisdictions outside of Sonoma County.

Over the last two decades a number of studies have been performed that address a wide spectrum of multi-use trail/greenway and walking/bicycling related issues. These studies have been conducted at national, regional, and local levels by agencies such as the Federal Highway Administration (FHA), National Park Service (NPS), state departments of transportation, universities, local agencies, non-profits, and various associations and trade groups. The findings in this section of the Feasibility Study draw upon the results of these studies.



Overview

Multi-use trails, and walking and bicycling for both transportation and recreation have myriad benefits to both individuals and communities, examples of which have been documented throughout the nation. The development of multi-use trails or “greenways” and increasing opportunities for people to walk and bicycle can achieve a variety of community benefits. As a result, transportation legislation, funding mechanisms, and land-use and transportation policy have evolved substantially in the past two decades to support walking and bicycling as viable transportation modes, important community features, and healthy recreation activities.

Some of the many benefits of multi-use trails and walking and bicycling include:

- Making communities better places to live by preserving and creating open spaces;
- Encouraging physical fitness and healthy lifestyles;
- Creating new opportunities for non-motorized transportation and outdoor recreation;
- Improving traffic safety for bicyclists and pedestrians;
- Strengthening local economies;
- Protecting the environment; and
- Preserving culturally and historically valuable areas.

Safety Benefits

Safety issues associated with trails and non-motorized transportation generally include **Traffic Safety**, **Personal Safety**, and **Property Crime**.

Traffic Safety is a top concern amongst all non-motorized travelers, and whether the concerns are real or perceived, they are a well-documented impediment to increased use of walking and bicycling.³ Individuals who travel on foot, by bicycle, children, and the elderly who travel with the aid of a mobility device, are our most vulnerable roadway users. Real and perceived safety concerns limit the number of people who walk and bicycle along SR 116 and the rural roadways between Petaluma and Sebastopol in the project study area. Safety concerns related to walking and bicycling in Sonoma County and the project corridor include: lack of safe places to ride, conflicts with vehicle traffic, high speed traffic, narrow roadways, lack of shoulders or bike lanes, limited lighting during dark hours, speed, and a lack of courtesy amongst roadway users. These concerns prevent many local residents from walking and bicycling in rural environments, from allowing their children to travel by bike or foot to area schools and local destinations, and from accessing nearby transit services by foot or bicycle.

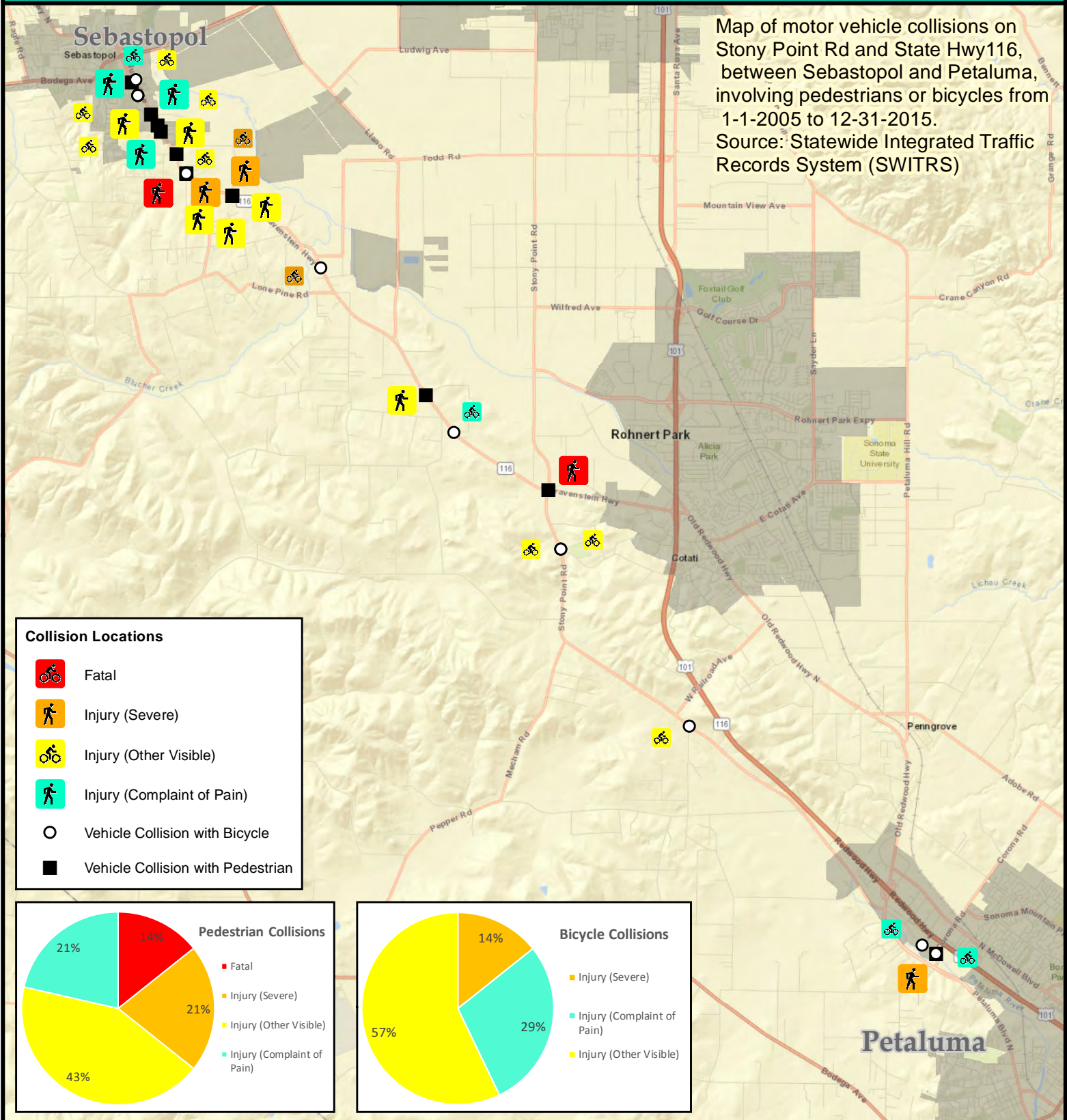
To better understand the potential traffic safety benefits associated with the proposed Petaluma to Sebastopol Trail (and walking, bicycling, and trails in general) crash statistics from a variety of sources were reviewed and analyzed. Sources include the National Highway Traffic Safety Administration’s *2016 Traffic Safety Facts*, the collision analysis from the *2014 SCTA Countywide Bicycle and Pedestrian Master Plan*, safety findings from the *National Non-Motorized Pilot Program* (2013), and 2013 California Office of Traffic Safety Collision Rankings were reviewed (**Figures 6.1-1 and 6.1-2**).

³ FHWA National Walking and Biking Study, Case Study #1 Reasons Why Walking and Bicycling are Not Being Used More Extensively as Travel Modes, US DOT FHWA, 1992

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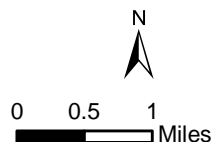
Map of motor vehicle collisions on Stony Point Rd and State Hwy116, between Sebastopol and Petaluma, involving pedestrians or bicycles from 1-1-2005 to 12-31-2015.

Source: Statewide Integrated Traffic Records System (SWITRS)



THIS MAP IS NOT A TRAIL GUIDE

This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.



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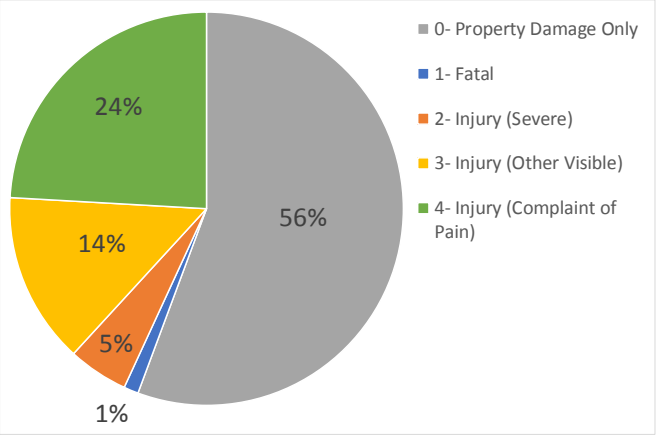
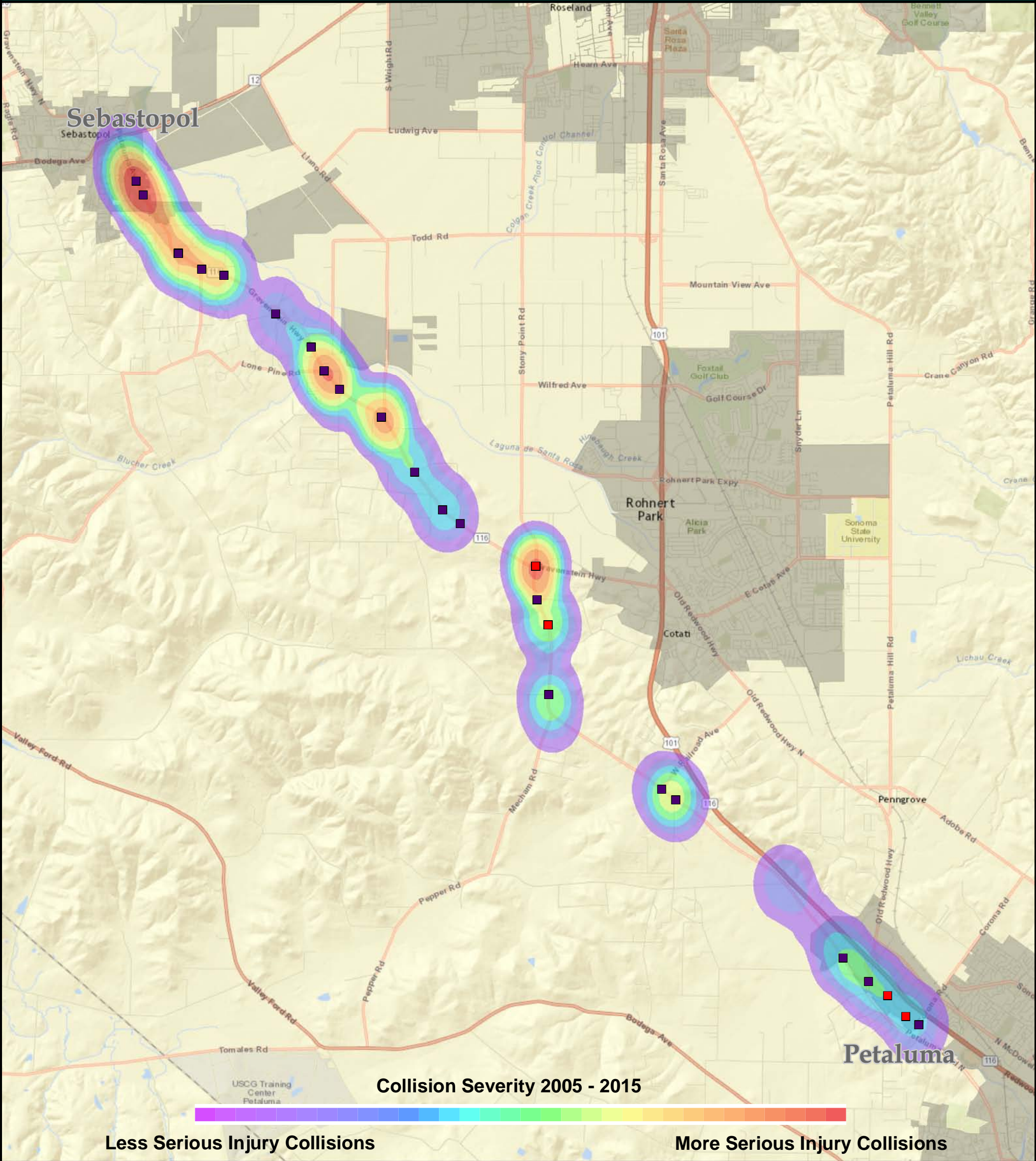
Parisi
TRANSPORTATION CONSULTING



Map Date: January 12, 2018

6.1-1 2005 - 2015 Bicycle & Pedestrian Collisions

Petaluma - Sebastopol Trail Feasibility Study



Motor Vehicle Involved With	Collisions	Percentage
A - Non-Collision	23	3%
B - Pedestrian	11	1%
C - Other Motor Vehicle	562	68%
D - Motor Vehicle on Other Roadway	5	1%
E - Parked Motor Vehicle	18	2%
G - Bicycle	13	2%
H - Animal	15	2%
I - Fixed Object	160	19%
J - Other Object	13	2%

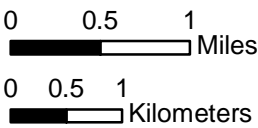
Fatal and Severe Injury Locations 2005 -2015

■ Fatal

■ Severe Injury

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The vast majority of the bicycle collisions in Sonoma County (approximately 70%) are between bicyclists and motorists; only 1 percent of bicycle collisions involve a pedestrian⁴. According to the US Department of Transportation's National Highway Traffic Safety Administration, "the Nation saw 2,348 more fatalities from motor vehicle crashes in 2015 than 2014 – a 7.2 percent increase". Further, *5,376 people were killed in pedestrian/motor vehicle crashes nationwide in 2015 (the highest number since 1996). That is more than 14 people every day of the year, and there were 70,000 reported pedestrian injuries nationwide; one injury every 8 minutes*⁵. *Bicyclist fatalities increased by 89 (representing a 12.2-percent increase over the previous year) and are at their highest level since 1995*⁶. *Between 2007 and 2011, an average of approximately 120 pedestrian collisions were reported throughout Sonoma County on an annual basis. 92% of the collisions involved vehicles and pedestrians, and approximately 5% of the collisions resulted in a pedestrian fatality.*⁷

Based on these findings, development of the proposed Petaluma Sebastopol Trail would result in traffic safety benefit for bicyclists and pedestrians by providing a transportation corridor that is separated from motor vehicle traffic.

Further, local traffic safety benefits may be realized with improved bicycle and pedestrian access to schools in the project study area including (Gravenstein Elementary, Hillcrest Middle School, Dunham Elementary, and Analy High School), transit stops, various recreation destinations, residences, and the many employment and commercial destinations located within the project study area.



⁴ Sonoma Countywide Bicycle and Pedestrian Master Plan, Sonoma County Transportation Authority, Draft 2014

⁵ Traffic Safety Facts 2015 Data, US Department of Transportation National Highway Traffic Safety Administration, August 2016

⁶ Traffic Safety Facts 2015 Data, US Department of Transportation National Highway Traffic Safety Administration, August 2016

⁷ Sonoma Countywide Bicycle and Pedestrian Master Plan, Sonoma County Transportation Authority, Draft 2014



Personal Safety can include a variety of issues such as traffic safety, medical issues, and crime. The proposed Petaluma - Sebastopol Trail will provide a significant benefit to the personal safety of pedestrians and bicyclists by providing a safe and comfortable place to walk and bicycle separate from motor vehicle traffic, and to connect to local transit stops. With the development of the proposed trail, residents and visitors who otherwise chose not to walk or bike in the area will have a safe environment to do so, one that greatly reduces conflicts with adjacent motorized traffic. At locations where vehicular traffic intersects with the trail, the trail will need to be designed with countermeasures to minimize potential conflicts and increase user safety. The new trail will be operated and maintained by Regional Parks, in the unincorporated areas the trails will be regularly patrolled by park staff and local law enforcement, and have a public presence that will increase personal safety and security for trail users that exceeds the current conditions encountered by those who walk or ride along SR 116 or alternative County roadways between Petaluma and Sebastopol. Within the cities of Petaluma and Sebastopol, the trail would be constructed, maintained, and operated by the respective jurisdiction.

Thousands of residents and visitors safely utilize Sonoma County Regional Parks' parklands and trails throughout the County on a daily basis. While accidents, injuries, medical emergencies, and occasional crimes do occur, these incidents can happen anywhere, and the risks of such incidents are generally not increased in parks or along trails. In fact, Sonoma County Regional Parks and local law enforcement work together to minimize potential crime and increase user safety through a variety of techniques including: facility design; operational procedures; trail speed limits; signing and striping; trail etiquette education; hours of operation; strategic lighting; maintenance; routine patrols by park staff and law enforcement; volunteer trail patrols; regular correspondence with affected property owners; signage and awareness campaigns for specific issues; and visitor feedback.

Property Crime and concerns about safety are a common objection to proposed trail projects, particularly in locations without relevant examples close by. Property owners and community members worry that property values will be negatively impacted, that they may experience a loss of privacy, and that the trail may serve as a conduit for more crime in their neighborhood. A number of studies have been conducted throughout the nation that have evaluated the impact trails have on safety and crime. These studies, police records, and experiential evidence in Sonoma County and the San Francisco Bay Area demonstrate that trails do not result in increased criminal activity. In fact, public trails bring an increase in legitimate public activity and a sense of ownership and public care that are a direct deterrent to crime and anti-social behavior.

While there are a number of trails and trail studies that can be reviewed for data, not all of them are created equally. That is, some trail studies address corridors that are with former or active railroad rights-of-way, many of which were discontinued or neglected, and/or include suburban, urban, or industrial land-uses. Thus development of public access in these locations often has the effect of cleaning up blight, restoring degraded habitat, or moving unwanted activities out of neglected urbanized areas. The proposed Petaluma – Sebastopol Trail differs in this regard, but still shares similarities since unrestricted public access is provided along SR 116 and the County roadways in the project study area twenty-four hours a day, 365 days a year.

Literature review of several major trail studies reveals consistent findings:

- Crime on trails and/or in parks could affect people's perception in an undesirable way; and
- Problems or criminal activities most commonly associated with trails are litter, illegal use by motorized vehicles, vandalism, unleashed dogs, and noise.



These studies determined that crime on multi-use trails is minimal, and that incidents must be considered in perspective with crime rates and risks associated with other activities and in the community at large. The level of crime associated with recreational facilities is generally correlated with the level of crime in the neighboring area. To address potential crime, the development of a trail should have a designated operator, a clear plan for maintenance and patrol, and the ability to address issues that arise. While a poorly planned facility can result in problems, a well-planned facility can improve the quality of life for neighbors and the community, resulting in a more desirable place to live.



In a 1998 study, the Rails to Trails Conservancy (a national nonprofit dedicated to creating a nationwide network of trails from former rail lines and connecting corridors to build healthier places for healthier people), in cooperation with the National Park Service, conducted a survey of 372 trails from 38 states. The surveyed trails represented a diverse set of trail types (rural, suburban, and urban), trail lengths, and geographic locations.

The motivation for the study was to help address the range of safety concerns that residents often voice during the planning phase of proposed trails. The study provides incident statistics for major crimes for the years 1995 and 1996 along the 372 trails surveyed in comparison to national crime rates. The study found crime rates on urban rail-trails to be very low when compared to national crime rates for urban areas, crime rates on suburban trails to be even lower than on urban rail-trails, and major crimes occurred even less frequently on rural rail-trails than on urban or suburban trails. A summary of the study's findings are provided in **Table 6.1**.



Table 6-1

Comparisons of Incidence Rate of Major Crimes on Rail-trails to U.S. Crime Rates, 1995

Crime	Urban		Suburban		Rural	
	1995 National*	Rail Trail**	1995 National*	Rail Trail**	1995 National*	Rail Trail**
Mugging	335	0.53	102	0.00	19	0.0
Assault	531	0.58	293	0.02	203	0.01
Forcible Rape	43	0.04	29	0.00	26	0.01
Murder	11	0.04	4	0.01	5	9.01

*Rates per 100,000 Population. FBI Uniform Crime Reports for 1995

**Rates per 100,000 users, RTC Survey results 1995

Jobs and Industry. A survey of bicycle and pedestrian related businesses conducted for the SCTA's *Countywide Bicycle and Pedestrian Plan* found that Sonoma County is home to more than 50 bicycle and pedestrian related businesses. The industry includes manufacturers and retailers of bicycles and parts; bicycle repair and maintenance services; running and cycling apparel; hydration equipment; bicycle tour operators; and specialty foods and nutritional supplements. Associated businesses range from small independent shops, to large regional and national retailers. In 2013, local business owners were interviewed for the Countywide Bicycle and Pedestrian Plan in order to gain an informal understanding of the economic impacts bicycle and pedestrian related businesses have on the County. The survey determined that revenue from sales, rentals, repairs, and services from small and medium sized bicycle and pedestrian related business, excluding national chain stores, is estimated at \$900,000 to \$1.5 million annually.

A direct benefit of bicycling and walking in Sonoma County is through the job opportunities resulting from bicycle-related manufacturing, retail sales and maintenance of bicycles; planning, design and construction of non-motorized infrastructure; bicycle and pedestrian advocacy; safe routes and safety programs; plus those generated by non-motorized events (including associated media use and reporting); rentals; and tours. As described above, jobs may be directly related, or indirectly by way of visitor and resident spending ancillary to events and tourism.⁸ According to the League of American Bicyclists, bicycling supports nearly 1.1 million jobs nationally.⁹

Construction Benefits While the impact is temporary, there is a significant economic stimulus that results from construction/infrastructure improvement projects. Construction projects create immediate employment opportunities, resulting in large initial expenditures that ripple through local and regional economies including sectors such as fuel, construction materials, raw resources, equipment, tools, rentals, hospitality and service industries, and food among others. Large scale construction projects create jobs within a region and generate tax dollars for the jurisdictions within that region. While the primary objective of the Petaluma Sebastopol Trail is not the benefits and economic impacts trail construction is expected to produce, it is worth noting that construction of the trail will have the immediate effect of stimulating the local economy and producing tax revenues.

⁸ Sonoma Countywide Bicycle and Pedestrian Master Plan, Sonoma County Transportation Authority, Draft 2014

⁹ Darren Flusche, The Economic Benefits of Bicycle Infrastructure Investments, League of American Bicyclists, June 2009



Tourism is significant component of Sonoma County's economic profile. According to the Sonoma County Economic Development Board's (EDB) *2014 Annual Tourism Report*, destination spending (the money spent by tourists visiting Sonoma County) was estimated at \$1.6 billion in 2012, and the industry supports an estimated 17,700 jobs. According to the EDB's 2014 survey of tourism businesses, "the most reported niche market was culinary tourism (80%), followed by cycling (56%) and eco-tourism (50%)." Cyclists from around the world are drawn to Sonoma County for a variety of reasons including major bicycle events, its' storied environment and scenic and challenging rides, the suitable climate, and its' food, wine, and hospitality industry. Tourists participate in local races, club events, tour groups, and/or pursue independent itineraries and rides. *Independent tourism, and annual bicycle and pedestrian events provide a benefit to the local economy through spending by riders, support staff, riders' families, spectators, staff, and media personnel on food and drink, shopping, recreation and lodging. Organized bicycle events also generate business for local media and advertisement suppliers, event staff, enforcement, and ancillary services.*¹⁰

Local Example - Sonoma County Tourism Bureau

The Official Sonoma County Visitors Guide "Do you speak Sonoma?" advertising campaign prepared by the Tourism Bureau, highlights the 10 best things to do in Sonoma County. Number 9, is "Ride a bike". *9. Ride a bike – Sonoma County is known as a cyclist's paradise – 1,400 miles of secondary roads and off-road bike trails. Go all out, attacking tough climbs or cycling from winery to winery on a tasting tour; Sonoma County offers you the best cycling experience in Wine Country.*

- See more at: <http://www.sonomacounty.com/articles/10-best-highlights#sthash.EtzSbZhE.dpuf>

Public Health Benefits

The health benefits of regular physical activity are documented in extensive medical research. They are known to be far reaching and to improve the quality of life for people of all ages. The U.S. Department of Health and Human Services recommends adults achieve at least 150 minutes of moderate cardiovascular exercise per week, such as walking or bicycling, in addition to strength training. According to the federal government, "biking for transportation can count toward the minimum 150 minutes a week of moderate-intensity aerobic activity recommended for physical health. It is also listed as the safest way to get physical activity."¹¹ Periods of cardiovascular activity can be as short as 10 minutes to provide benefits. Public Health benefits associated with multi-use trails and walking and bicycling include personal health benefits, community benefits, and larger societal benefits. Regular physical activity is shown to help:

- Reduce the risk and impact of cardiovascular disease and diabetes;
- Reduce the risk of certain types of cancer;
- Reduce asthma cases;
- Control weight;
- Improve mood and mental health;
- Cut health care costs; and
- Reduce the risk of premature death.

¹⁰ Sonoma Countywide Bicycle and Pedestrian Master Plan, Sonoma County Transportation Authority, Draft 2014

¹¹ U.S. Department of Health and Human Services, 2008 - 2008 Physical Activity Guidelines for Americans



Over the last decade, there has been greater recognition of the health impacts of transportation choices. Many of these impacts are directly related to public costs of health care delivery; and lost productivity due to sickness and absenteeism. If a population's health can be improved through the increase in non-motorized modes, personal, private (e.g., employers) and governmental costs can be reduced.¹² A study of nearly 2,400 adults found that "those who biked to work were fitter, leaner, less likely to be obese, and had better triglyceride levels, blood pressure, and insulin levels than those who didn't active commute to work."¹³

Another health benefit of walking and bicycling is that it becomes safer as it becomes more popular. Called "Safety in Numbers," a 2004 study of collisions at intersections indicates that as more people walk through a particular intersection, pedestrians at that location are safer. The study showed that if the number of people walking in a given intersection is considered when evaluating how many vehicle-pedestrian collisions occur, the risk that a pedestrian might be hit by a motor vehicle is often lower at intersections with greater pedestrian volumes—even if those intersections experience more collisions.¹⁴ The public health and physical activity benefits of the Petaluma Sebastopol Trail will continue long into the future, as more people take advantage of the trail and the growing network of non-motorized facilities in the area and Sonoma County.

¹² Sonoma Countywide Bicycle and Pedestrian Master Plan, Sonoma County Transportation Authority, Draft 2014


¹³ Gordon-Larsen, P., et al., 2009 - Active commuting and cardiovascular disease risk, Archives of Internal Medicine, 169, 1216-1223

¹⁴ Sonoma Countywide Bicycle and Pedestrian Master Plan, Sonoma County Transportation Authority, Draft 2014

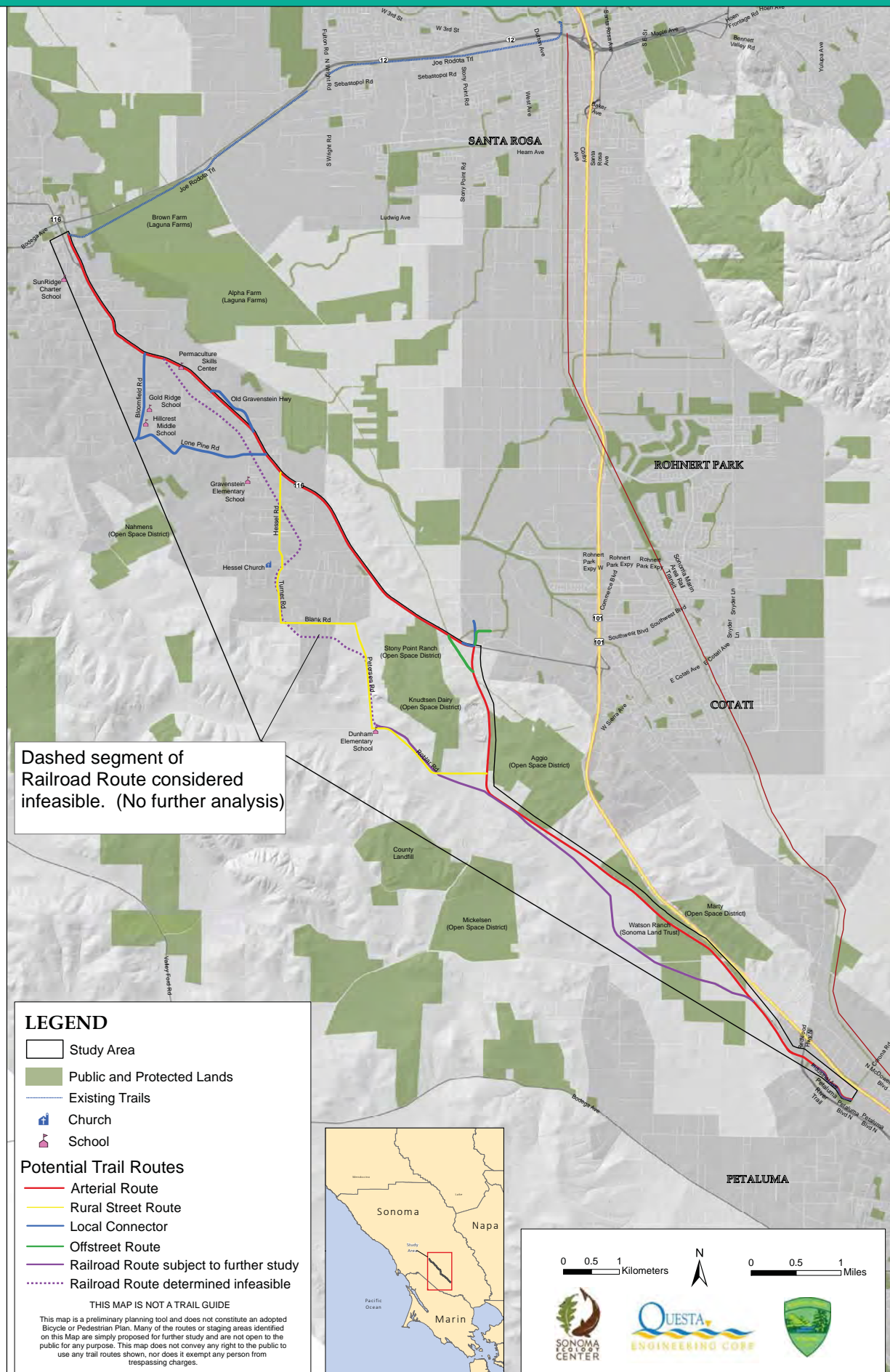
7. ISSUES, OPPORTUNITIES, ALTERNATIVES

Potential trail alignments and alternatives (six segments) in the study area were evaluated. Each of the segments start and stop at a segment break or node, generally a signalized intersection or other feature selected because it consists of a destination point and has “independent utility,” which is important in funding and phased implementation. Several roughly parallel alignment options were developed and evaluated within each segment.

Table 7-1 summarizes the potential trail alignment options identified (**Figure 7-1**).

Table 7-1: Existing Conditions	
Segment	Existing Conditions / Design Issues
State Route 116 Sebastopol City 3.2 Miles	
 <p>Cyclists eastbound on SR 116 near Fircrest Avenue.</p>	<p><u>Description:</u> Segment 1 is defined by urban development within the city of Sebastopol. For a portion of this segment, SR 116 is divided into two one-way streets, Petaluma Avenue (northbound) and South Main Street (southbound). South of the one-way couplet, Gravenstein Highway South can be characterized by strip development.</p> <p><u>Road Width:</u> Petaluma Avenue – 40 – 43'; South Main Street 36 – 54.5'</p> <p><u>Travel Lanes:</u> Petaluma Avenue 2; South Main Street 2</p> <p><u>Turn Lanes:</u> A continuous TWLT lane is provided between the merge of the one-way couplet and Fircrest Avenue. Left turn lanes are provided at Fircrest Road, Corline Court, Lynch Road and Cooper Road.</p> <p><u>Shoulders:</u> Shoulders and on-street parking are provided on both sides of Petaluma Avenue and South Main Street. Wide shoulders and intermittent on-street parking are provided on Gravenstein Hwy South.</p> <p><u>Speed Limit:</u> 25 – 30 mph</p> <p><u>Pedestrian Crossings:</u> <u>Petaluma Avenue</u> enhanced crosswalks are provided at the Joe Rodota Trail, Walker Avenue, and Palm Avenue, and marked crosswalks are provided at Fannen Avenue.</p> <p><u>South Main Street</u> enhanced crosswalks are provided at Willow Street, Calder Avenue, Walker Avenue, and Palm Avenue.</p> <p><u>Gravenstein Hwy South</u> enhanced crosswalks are provided at Hutchins Avenue and Redwood Avenue, and crosswalk is provided at the signal at Lynch Road.</p> <p><u>Curb, Gutter, Sidewalk:</u> Petaluma Avenue – Yes, South Main Street – Yes, SR 116 – varies.</p> <p><u>Side Street Intersections:</u> There are eleven (11) side street intersections within the segment including Cooper Road.</p> <p><u>Driveway Count:</u> S/B (West Side) 43; N/B (East side) 28</p> <p><u>Utilities & Infrastructure:</u> Given the urban nature of segment 1, utilities can be found on both sides of the street and overhead street lights are provided through the segment. Overhead utilities are generally located along the north side of Gravenstein Hwy South and along the south side of Petaluma Avenue.</p> <p><u>Environmental Issues:</u> Traffic circulation and parking impacts, overhead utilities.</p>

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	<p>Observations: Class II bike lanes are proposed along Petaluma Avenue, South Main Street, and Gravenstein Highway South within the City.</p>
<p>Cooper Road (South Sebastopol City Limit) to Llano Road</p> <p>2A: Cooper Road to Bloomfield Road Distance: 0.66 miles (3,508')</p>  <p>Foot path on the south side of SR 116 between Elphick Road and Sequoia Market Place.</p>  <p>Pedestrian walking on the shoulder west of Bloomfield Road. Shade from trees limits impacts the visibility of bicyclists and pedestrians using the shoulder.</p>	<p>Description: Segment 2 is defined by a mix of strip development and rural residential uses. Bicycle and pedestrian traffic are common along segment, walking and biking along the highway shoulder.</p> <p>Road Width: 46 – 54'</p> <p>Travel Lanes: Two travel lanes plus intermittent Two Way Left Turn Lane (TWLT)</p> <p>Turn Lanes: Left turn lanes are provided at Cooper Road, Elphick Road, Industrial Avenue, Sparkes Road and Bloomfield Road.</p> <p>Shoulders: Variable width paved shoulders 4 – 8' wide.</p> <p>Speed Limit: 40 – 45 mph</p> <p>Pedestrian Crossings: Marked crosswalks are provided on the north and west legs of the signalized Bloomfield Road/SR 116 intersection.</p> <p>Curb, Gutter, Sidewalk: No curb, gutter, or sidewalks are provided.</p> <p>Side Street Intersections: North Side 1 (Industrial Avenue); South Side 2 (Elphick Road, Sparkes Road)</p> <p>Driveway Count: North Side 3; South Side 11</p> <p>Utilities & Infrastructure: Overhead utilities transition from one side of the highway to the other. Starting at Cooper Road overhead utilities are located on the north side of the road, they transition to the south side near Elphick Road and continue on the south side through the segment to Bloomfield Road. Overhead street lights are provided at Cooper Road, Sparkes Road, and Bloomfield Road. Short segments of guard rail are installed in the vicinity of the creek undercrossing.</p> <p>Environmental Issues: Drainage swale on the south side of the highway. Seasonal creek crosses under SR 116 approximately 1,000' north of Bloomfield Road. Overhead utilities.</p> <p>Observations: Many bicyclists and pedestrians are found using the shoulders on both sides of the highway through this section for utilitarian trips to and from Sebastopol. A well worn footpath or "desire line" extends along the south side of the highway between Elphick Road and the Sequoia Marketplace.</p>
<p>2B. Bloomfield Road to Lone Pine Road</p> <p>Distance: 1.8 miles (9,495')</p>	<p>Description: Segment 3 includes a mix of commercial businesses and rural residential uses. Traffic congestion is common at Lone Pine Road during school commute periods and at Midgley's Country Flea Market on weekends. Turning movements associated with commercial business, residential side streets, and residential driveways.</p> <p>Road Width: 34 – 54'</p> <p>Travel Lanes: Two 12-foot wide travel lanes plus a section of Two Way</p>



 <p>Sonoma County Transit bus stop on SR 116 east of Bloomfield Road.</p>	<p>Left Turn Lane near the northern intersection of Old Gravenstein Highway with SR 116.</p> <p><u>Turn Lanes:</u> Left turn lanes are provided at Bloomfield Road and Old Gravenstein Highway.</p> <p><u>Shoulders:</u> Variable width paved shoulders 4 – 8’ wide.</p> <p><u>Speed Limit:</u> 45 mph</p> <p><u>Pedestrian Crossings:</u> Marked crosswalks are provided on the north and west legs of the signalized Bloomfield Road/SR 116 intersection. Pedestrian warning signs are provided on SR 116 in the vicinity of Lone Pine Road to inform motorists.</p> <p><u>Curb, Gutter, Sidewalk:</u> No curb, gutter, or sidewalks are provided.</p> <p><u>Driveway Count:</u> North Side 41 , South Side 34</p> <p><u>Utilities & Infrastructure:</u> Overhead utilities are provided along both sides of the SR 116 between Bloomfield Road and Fredricks Road. Overhead utilities are generally provided on the north side of the SR 116 between Fredricks Road and Lone Pine Road. Overhead street lights are provided at side street intersections including Bloomfield Road, Old Gravenstein Highway, and Lone Pine Road. Residential fences.</p> <p><u>Environmental Issues:</u> Overhead utilities, drainage swales, trees, creek crossings. Blucher Creek crosses under SR 116 approximately 1,000’ east of Stone Station Road.</p> <p><u>Observations:</u> Bicyclists and pedestrians are found using the shoulders on both sides of the highway. Planned future signalization at Lone Pine Road.</p>
<p>2C. Lone Pine Road to Llano Road</p> <p>Distance: 0.82 miles (4,314’)</p>  <p>SR 116 looking east to Lone Pine Road.</p>	<p><u>Description:</u> Segment 4 includes a mix commercial businesses and rural residential uses.</p> <p><u>Road Width:</u> 34 - 36’</p> <p><u>Travel Lanes:</u> Two 12-foot wide travel lanes.</p> <p><u>Turn Lanes:</u> No existing turn lanes. Turn lanes are planned at Llano Road. Informal observations of turning movements at Lone Pine Road appear to exceed warrants.</p> <p><u>Shoulders:</u> Variable width shoulders approximately 6-foot wide.</p> <p><u>Speed Limit:</u> 45 mph</p> <p><u>Curb, Gutter, Sidewalk:</u> No curb, gutter, or sidewalks are provided.</p> <p><u>Driveway Count:</u> North Side 21, South Side 24</p> <p><u>Utilities & Infrastructure:</u> Overhead utilities are located on the south side of SR 116 between Lone Pine Road and Hessel Road, at Hessel Road they transition to the north side of SR 116. Overhead street lights are provided at Lone Pine Road and Llano Road. Residential fences.</p> <p><u>Environmental Issues:</u> Overhead utilities, drainage swales, oak trees.</p> <p><u>Observations:</u> Bicyclists and pedestrians are found using the shoulders on both sides of the highway. Planned future signalization at Lone Pine Road.</p>
<p>Llano Road to Stony Point Road</p> <p>Distance: 2.42 miles (12,777’)</p>	<p><u>Description:</u> Segment 3 includes a mix of commercial, industrial, residential, and agricultural uses.</p> <p><u>Road Width:</u> 34 – 48’</p> <p><u>Travel Lanes:</u> Two 12-foot travel lanes are provided through the</p>



	<p>majority of this segment. Approximately 0.6 miles of passing lanes are provided in both directions roughly between Stony Point Road and Gilchrist Road.</p> <p><u>Turn Lanes:</u> A left turn lane is provided at the intersection of Hessel Road/Blank Road/SR 116. Left and right turn lanes are provided at Stony Point Road. A short segment of TWLT lane is provided west of the Stony Point Road intersection.</p> <p><u>Shoulders:</u> Variable width shoulders approximately 6-foot wide are provided through most of the segment, however, no shoulders are provided through the section with passing lanes.</p> <p><u>Speed Limit:</u> 50 – 55 mph</p> <p><u>Curb, Gutter, Sidewalk:</u> No curb, gutter, or sidewalks are provided.</p> <p><u>Driveway Count:</u> North Side 19, South Side 10</p> <p><u>Environmental Issues:</u> Wetlands and riparian area at NW intersection. Llano House historic structure.</p>
Stony Point Road	
<p>SR 116 to Mecham Road</p> <p>Distance: 1.69 miles (8,930')</p>	<p><u>Description:</u> Two travel lanes and striped bicycle lanes.</p> <p><u>Road Width:</u> 60 feet</p> <p><u>Travel Lanes:</u> Two 12-foot wide travel lanes.</p> <p><u>Shoulders:</u> Striped CL II bike lanes, shoulder width varies</p> <p><u>Speed Limit:</u> 45</p> <p><u>Curb, Gutter, Sidewalk:</u> no</p> <p><u>Driveway Count:</u> S/B: 24, N/B: 9</p> <p><u>Utilities & Infrastructure:</u> east side</p> <p><u>Environmental Issues:</u> slopes, CTS habitat areas at creeks and wet areas</p>
<p>Mecham Road to Denman Road (approx. Northern Petaluma City Limit)</p> <p>Distance: 4.1 miles (21,526')</p>	<p><u>Description:</u> Two travel lanes and striped bicycle lanes.</p> <p><u>Road Width:</u> 60 feet</p> <p><u>Travel Lanes:</u> Two 12-foot wide travel lanes.</p> <p><u>Shoulders:</u> Striped CL II bike lanes, shoulder width varies</p> <p><u>Speed Limit:</u> 45</p> <p><u>Curb, Gutter, Sidewalk:</u> no</p> <p><u>Driveway Count:</u> S/B: 14, N/B: 14</p> <p><u>Utilities & Infrastructure:</u> east side</p> <p><u>Environmental Issues:</u> slopes, CTS habitat areas at creeks and wet areas</p>
<p>6. Petaluma City</p> <p>Distance: 1.27 miles (6,730')</p>	<p><u>Description:</u> Two travel lanes and striped bicycle lanes on Stony Point Road, Industrial and portions of Petaluma Blvd. North</p> <p><u>Road Width:</u> varies</p> <p><u>Travel Lanes:</u> Two 12-foot wide travel lanes.</p> <p><u>Shoulders:</u> Striped CL II bike lanes, shoulder width varies</p> <p><u>Speed Limit:</u> varies</p> <p><u>Curb, Gutter, Sidewalk:</u> portions of Industrial Ave (not continuous)</p> <p><u>Environmental Issues:</u> flood prone area adjacent to Petaluma River.</p>

The study team mapped opportunities and constraints to trail implementation, as shown in **Figures 7-2 through 7-8**.



Based on the assessment of existing environmental conditions in the study area, a matrix (**Table 7-2**) was developed to illustrate the degree of environmental constraints with regard to building the Trail. The matrix is organized by potential trail alignment, segment, and environmental issue. Environmental issues as previously discussed reflect the degree of constraints assigned to each segment. Segments shaded green are the least constrained segments.

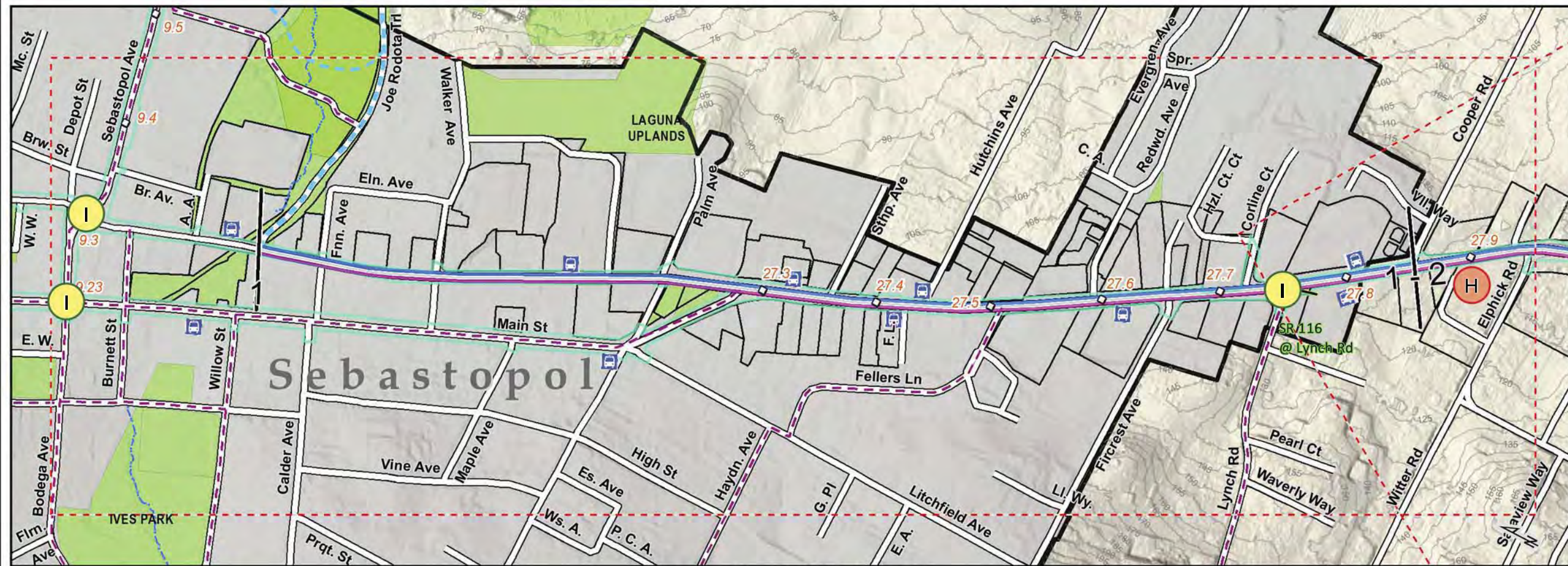
Table 7-2 Environmental, Social and Economic Constraints and Opportunities															
Segment	Planning Consistency			Environmental Constraints and Opportunities							Social and Economic Issues				*Least Constrained Alignment
	Maximum access for users, including pedestrians, bicyclists and equestrians	Connections to existing and planned local trails	User Experience (noise, safety)	Aesthetics/Visual Resources	Agricultural Resources	Biological Resources	Geology, Soils	Hydrology and Water Quality	Land Use (easement or ROW needed)	Transportation/Traffic	Accessibility/ Topography	Health and transit connections	Engineering Complexity/Cost	Compatibility with adjacent uses and community input	
1															
2N															
2S															
3N															
3S															
4W															
4E															
5W															
6															
A															
B															
C															
D															

Key:
Opportunity or minimal issue
Moderate Constraint or issue
Severe Constraint



*These trail segments have the fewest environmental issues, have generally adequate right of way or possess other characteristics that may facilitate trail implementation. Identification of least constrained segments may be useful when determining funding and implementation priorities and is discussed further in **Section 10**.

Petaluma - Sebastopol Trail Feasibility Study



Segment 1. City of Sebastopol



Segment 2. Cooper Rd to Llano Rd (1)

Legend

Opportunities / Constraints

- | | |
|---------------------------|-------------------------------|
| Aesthetics | Hydrology |
| Ag Resources | Land Use |
| Biology | Transportation/Traffic |
| Cultural Resources | |
| Geology / Soils | |
- View/Overlook opportunity
 - Ag resources near road
 - Sensitive bio/wildlife species
 - Creek crossing
 - Historic features (Bridges)
 - Slope or potential erosion
 - Flood prone area
 - Encroachment
 - Narrow ROW
 - Wide ROW
 - Signalized intersection
 - Future signalized intersection or improvement
 - Congested area

- ◆ Traffic Signal
 - Postmiles
 - Tenth Postmiles
 - Named Creeks
 - - - Intermittent Creeks
 - Segment End
 - ▬ City Limits
 - Publicly Owned Land
 - Open Space Easement
 - CalTrans Right of Way
 - Parcels
 - - - Match Line
- 0 200 400 800 Feet
- 1 in = 500 feet Map Date: 12/19/2017

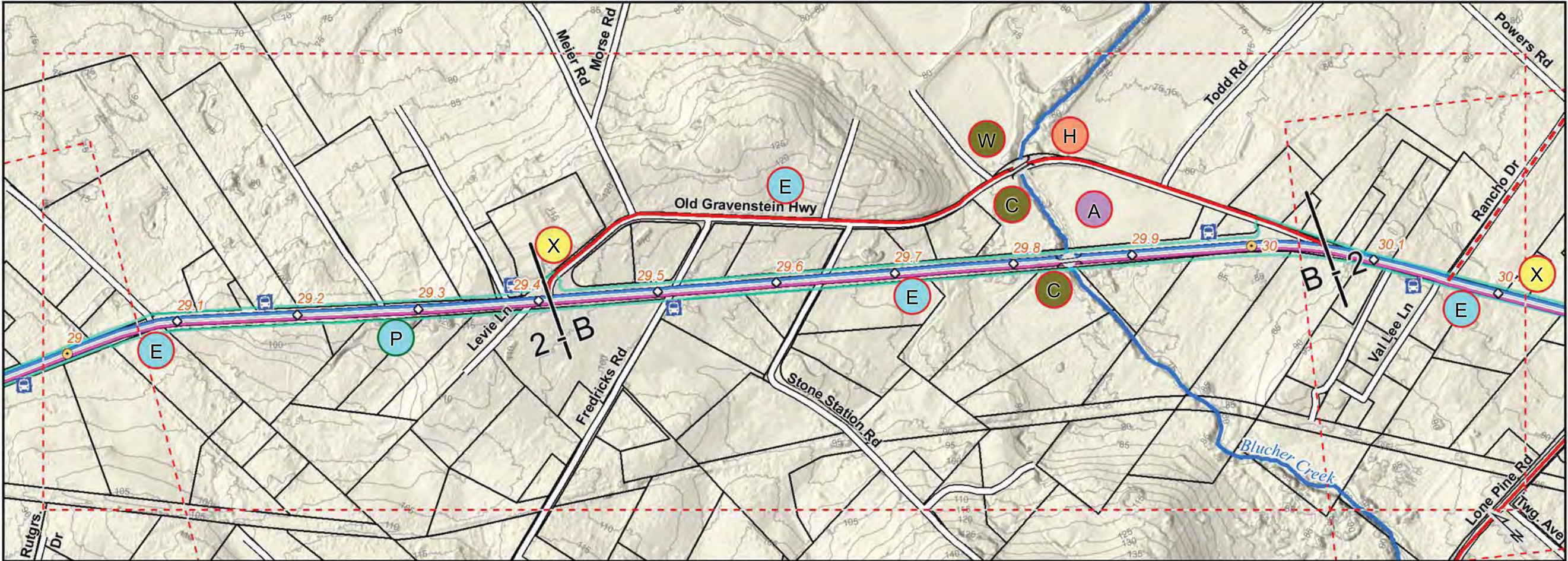
THIS MAP IS NOT A TRAIL GUIDE

This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.

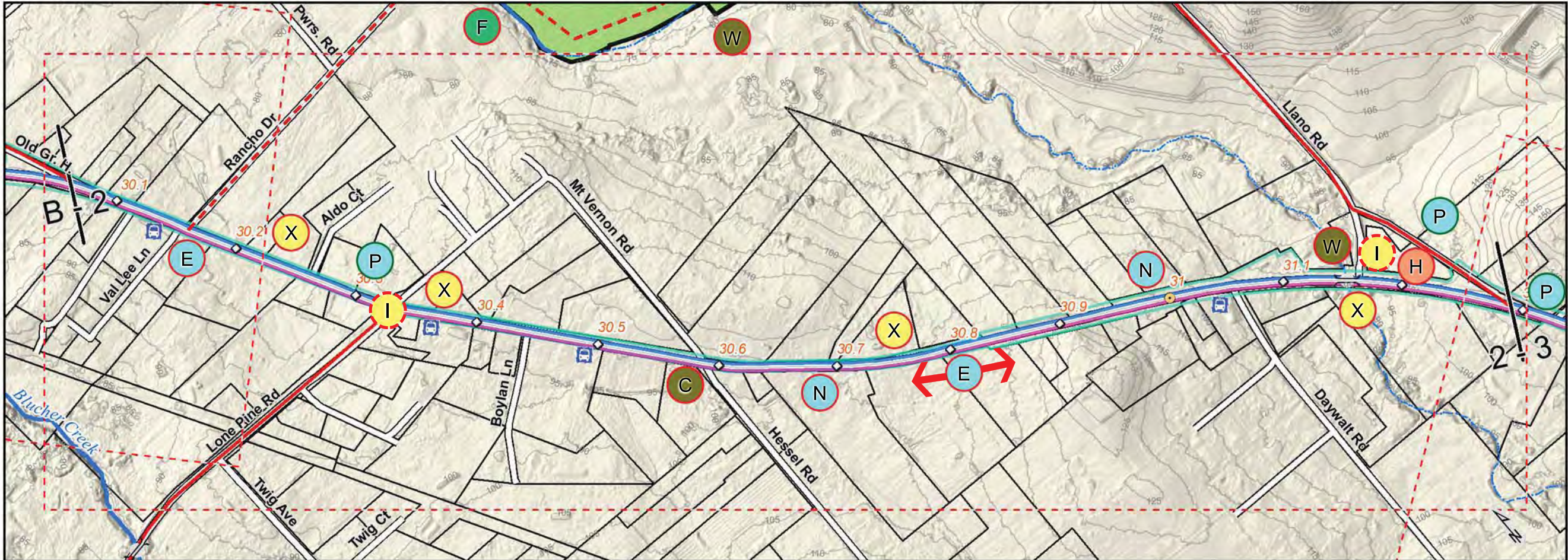


Figure 7-1
Opportunities & Constraints (1)

Petaluma - Sebastopol Trail Feasibility Study



Segment 2. Cooper Rd to Llano Rd (2)



Segment 2. Cooper Rd to Llano Rd (3)

Legend

Opportunities / Constraints

Aesthetics O View/Overlook opportunity	Hydrology F Flood prone area
Ag Resources A Ag resources near road	Land Use E Encroachment
Biology W Sensitive bio/wildlife species C Creek crossing	Land Use N Narrow ROW P Wide ROW
Cultural Resources H Historic features (Bridges)	Transportation/Traffic I Signalized intersection I Future signalized intersection or improvement
Geology / Soils S Slope or potential erosion	X Congested area

Traffic Signal	Bridge
Postmiles	Bus Stop
Tenth Postmiles	

Named Creeks Intermittent Creeks

Segment End

City Limits CalTrans Right of Way

Publicly Owned Land Parcels

Open Space Easement Match Line

0 200 400 800 Feet

1 in = 500 feet Map Date: 12/19/2017

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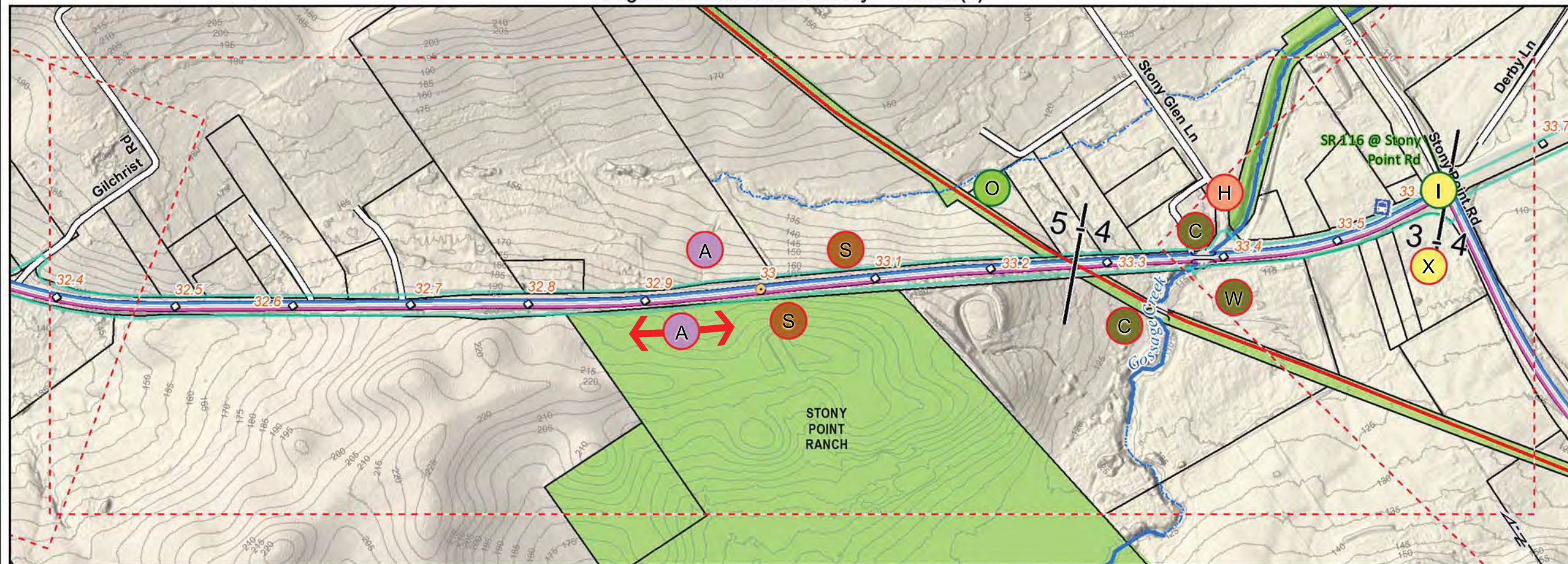


Figure 7-2
Opportunities & Constraints (2)

Petaluma - Sebastopol Trail Feasibility Study



Segment 3. Llano Rd to Stony Point Rd (1)



Segment 3. Llano Rd to Stony Point Rd (2)

Legend

Opportunities / Constraints

- | | |
|---------------------------|-------------------------------|
| Aesthetics | Hydrology |
| Ag Resources | Land Use |
| Biology | Transportation/Traffic |
| Cultural Resources | |
| Geology / Soils | |
- View/Overlook opportunity
 - Ag resources near road
 - Sensitive bio/wildlife species
 - Creek crossing
 - Historic features (Bridges)
 - Slope or potential erosion
 - Flood prone area
 - Encroachment
 - Narrow ROW
 - Wide ROW
 - Signalized intersection
 - Future signalized intersection or improvement
 - Congested area

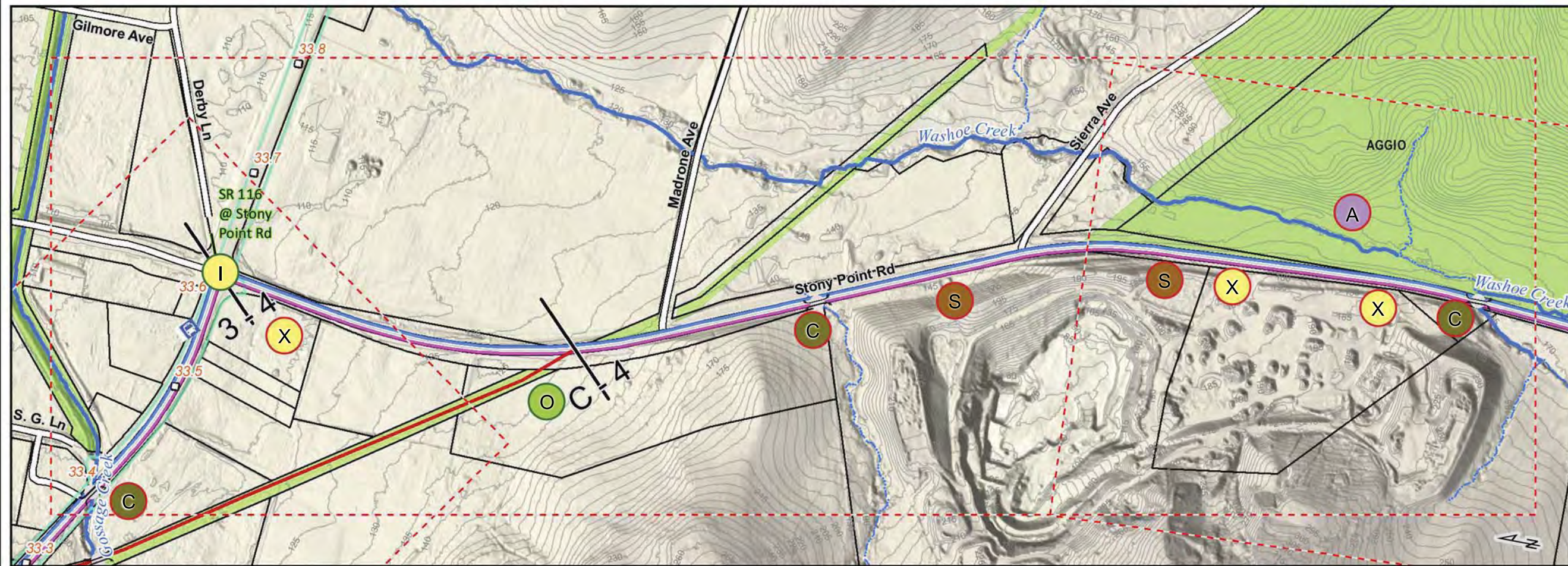
- ◆ Traffic Signal
 - Postmiles
 - Tenth Postmiles
 - Named Creeks
 - Intermittent Creeks
 - Segment End
 - City Limits
 - Publicly Owned Land
 - Open Space Easement
 - CalTrans Right of Way
 - Parcels
 - Match Line
- 0 200 400 800 Feet
- 1 in = 500 feet Map Date: 12/19/2017

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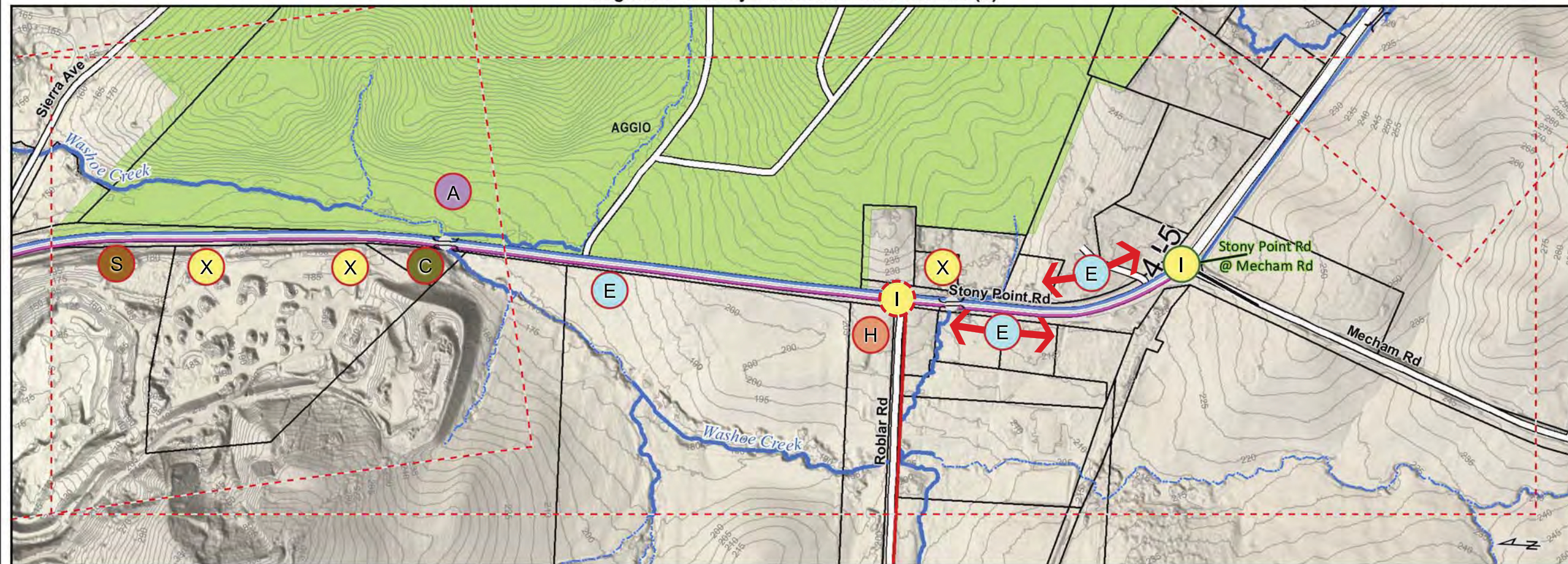
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Figure 7-3
Opportunities & Constraints (3)



Segment 4. Stony Point Rd to Mecham Rd (1)



Segment 4. Stony Point Rd to Mecham Rd (2)

Legend

Opportunities / Constraints

- | | |
|---------------------------|-------------------------------|
| Aesthetics | Hydrology |
| Ag Resources | Land Use |
| Biology | Transportation/Traffic |
| Cultural Resources | |
| Geology / Soils | |
- View/Overlook opportunity
 - Ag resources near road
 - Sensitive bio/ wildlife species
 - Creek crossing
 - Historic features (Bridges)
 - Slope or potential erosion
 - Flood prone area
 - Encroachment
 - Narrow ROW
 - Wide ROW
 - Signalized intersection
 - Future signalized intersection or improvement
 - Congested area

- ◆ Traffic Signal
 - Postmiles
 - Tenth Postmiles
 - Named Creeks
 - Intermittent Creeks
 - Segment End
 - City Limits
 - Publicly Owned Land
 - Open Space Easement
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- 1 in = 500 feet Map Date: 12/19/2017

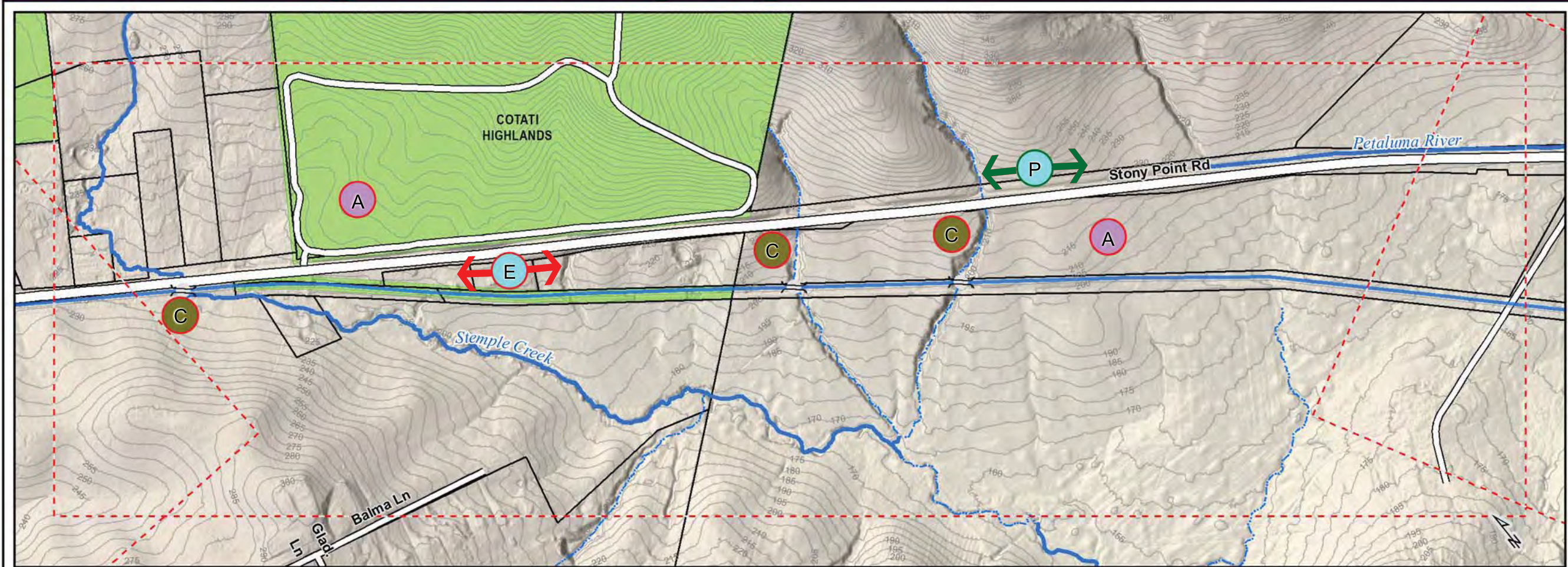
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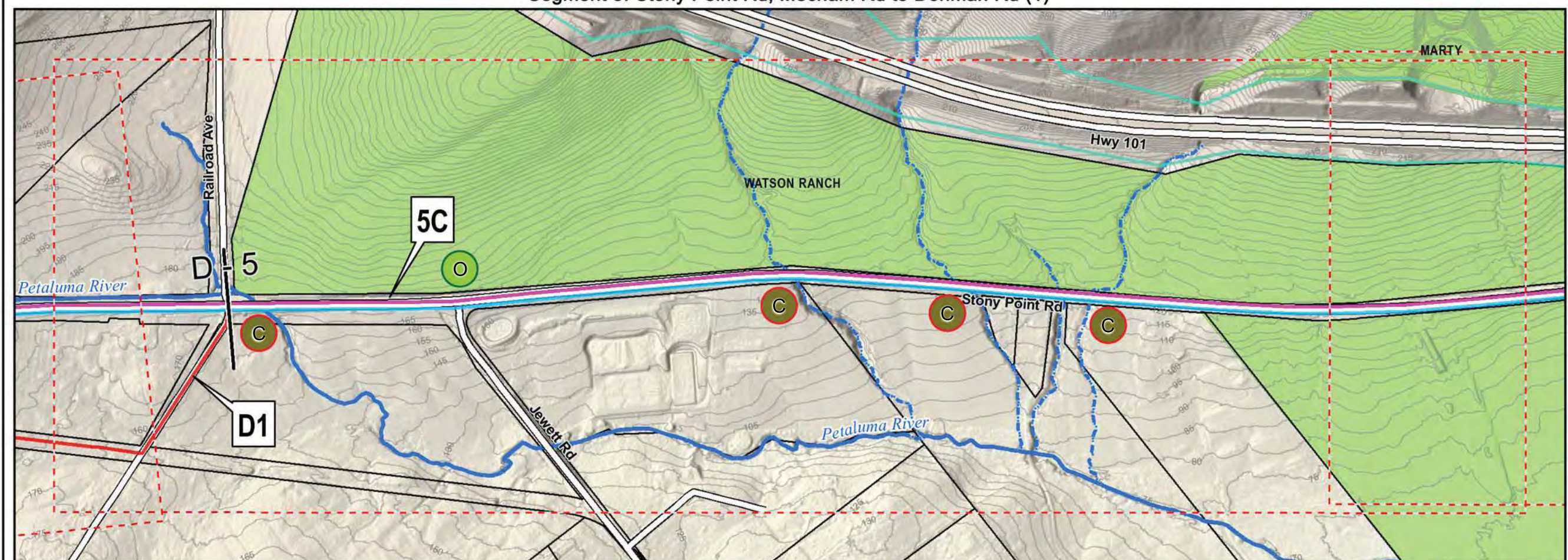


Figure 7-4
Opportunities & Constraints (4)

Petaluma - Sebastopol Trail Feasibility Study



Segment 5. Stony Point Rd, Mecham Rd to Denman Rd (1)



Segment 5. Stony Point Rd, Mecham Rd to Denman Rd (2)

Legend

Opportunities / Constraints

- | | |
|--|--|
| Aesthetics
○ View/Overlook opportunity | Hydrology
○ Flood prone area |
| Ag Resources
○ Ag resources near road | Land Use
○ Encroachment |
| Biology
○ Sensitive bio/wildlife species | ○ Narrow ROW |
| ○ Creek crossing | ○ Wide ROW |
| Cultural Resources
○ Historic features (Bridges) | Transportation/Traffic
○ Signalized intersection |
| Geology / Soils
○ Slope or potential erosion | ○ Future signalized intersection or improvement |
| | ○ Congested area |

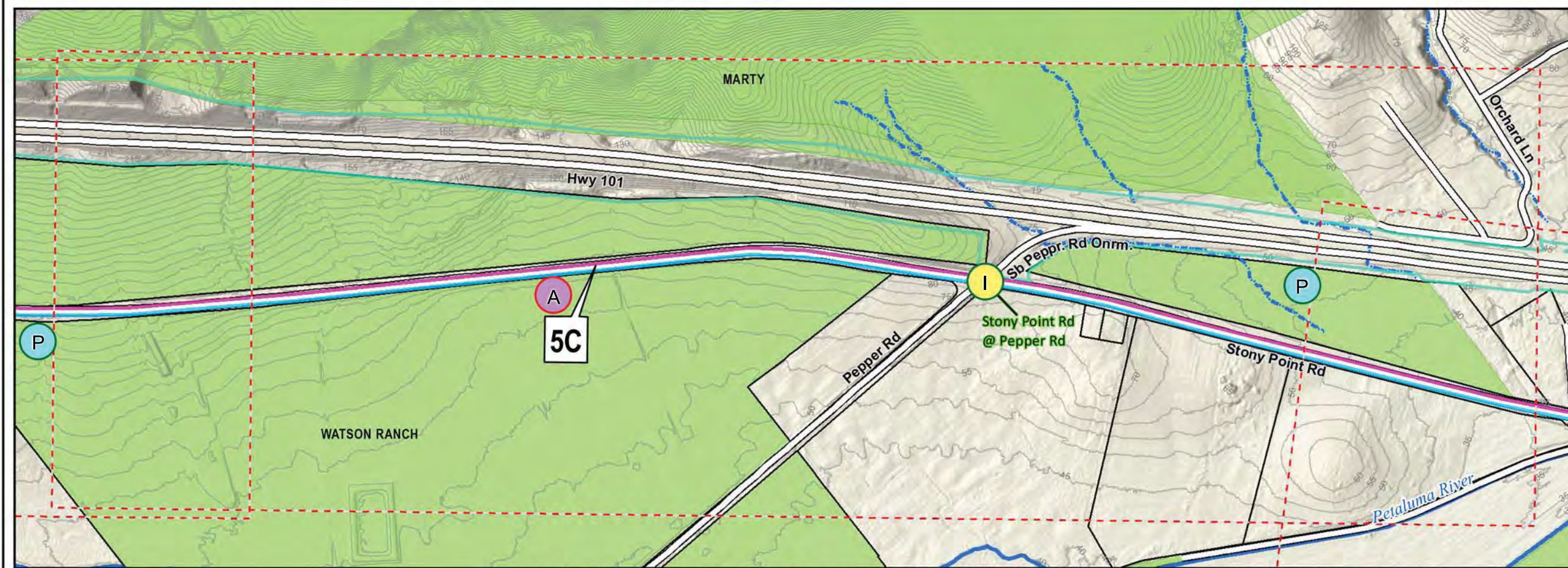
- | | |
|-----------------------|-------------------------|
| ● Traffic Signal | — Bridge |
| ● Postmiles | ● Bus Stop |
| □ Tenth Postmiles | |
| — Named Creeks | — Intermittent Creeks |
| — Segment End | |
| ■ City Limits | — CalTrans Right of Way |
| ■ Publicly Owned Land | □ Parcels |
| ■ Open Space Easement | — Match Line |
- 0 200 400 800 Feet
- 1 in = 500 feet Map Date: 12/19/2017

THIS MAP IS NOT A TRAIL GUIDE

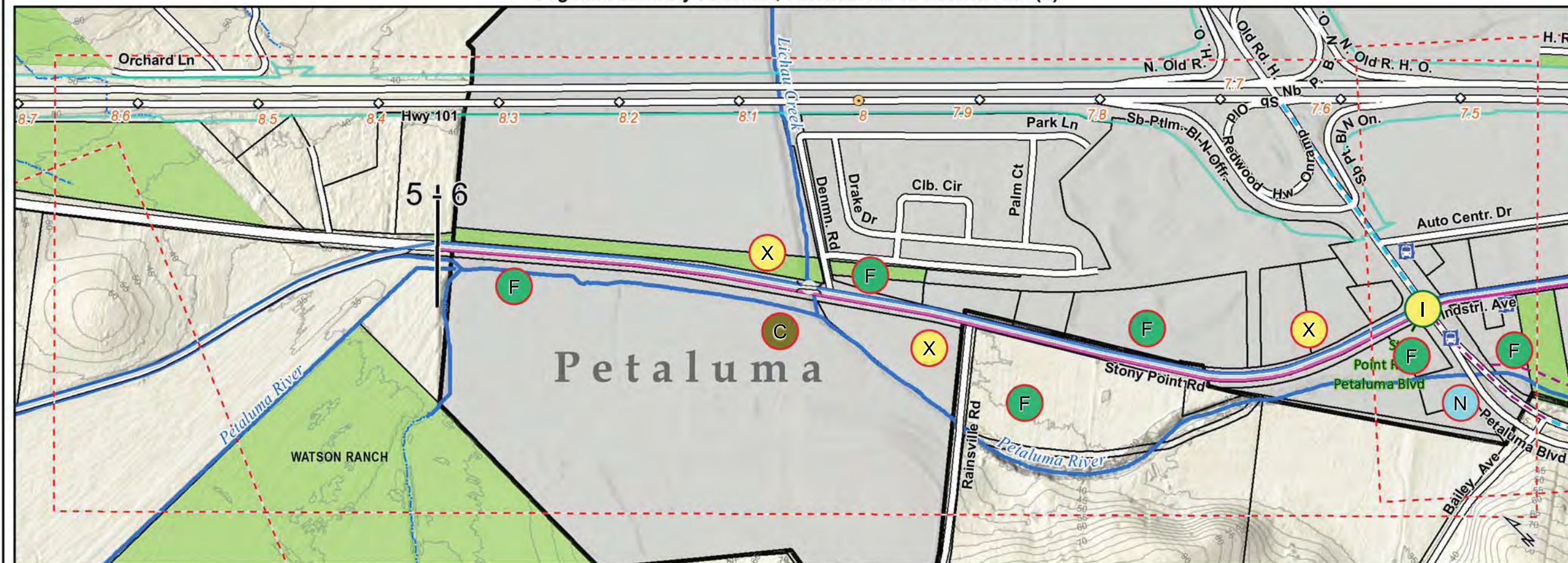
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Figure 7-5
Opportunities & Constraints (5)



Segment 5. Stony Point Rd, Meham Rd to Denman Rd (3)



Segment 6. City of Petaluma (1)

Legend

Opportunities / Constraints

- | | |
|---------------------------|-------------------------------|
| Aesthetics | Hydrology |
| Ag Resources | Land Use |
| Biology | Transportation/Traffic |
| Cultural Resources | |
| Geology / Soils | |
- View/Overlook opportunity
 - Ag resources near road
 - Sensitive bio/wildlife species
 - Creek crossing
 - Historic features (Bridges)
 - Slope or potential erosion
 - Flood prone area
 - Encroachment
 - Narrow ROW
 - Wide ROW
 - Signalized intersection
 - Future signalized intersection or improvement
 - Congested area

- ◆ Traffic Signal
- Postmiles
- Tenth Postmiles
- Bridge
- Bus Stop

- Named Creeks
- - - Intermittent Creeks

- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- - - Match Line

0 200 400 800 Feet

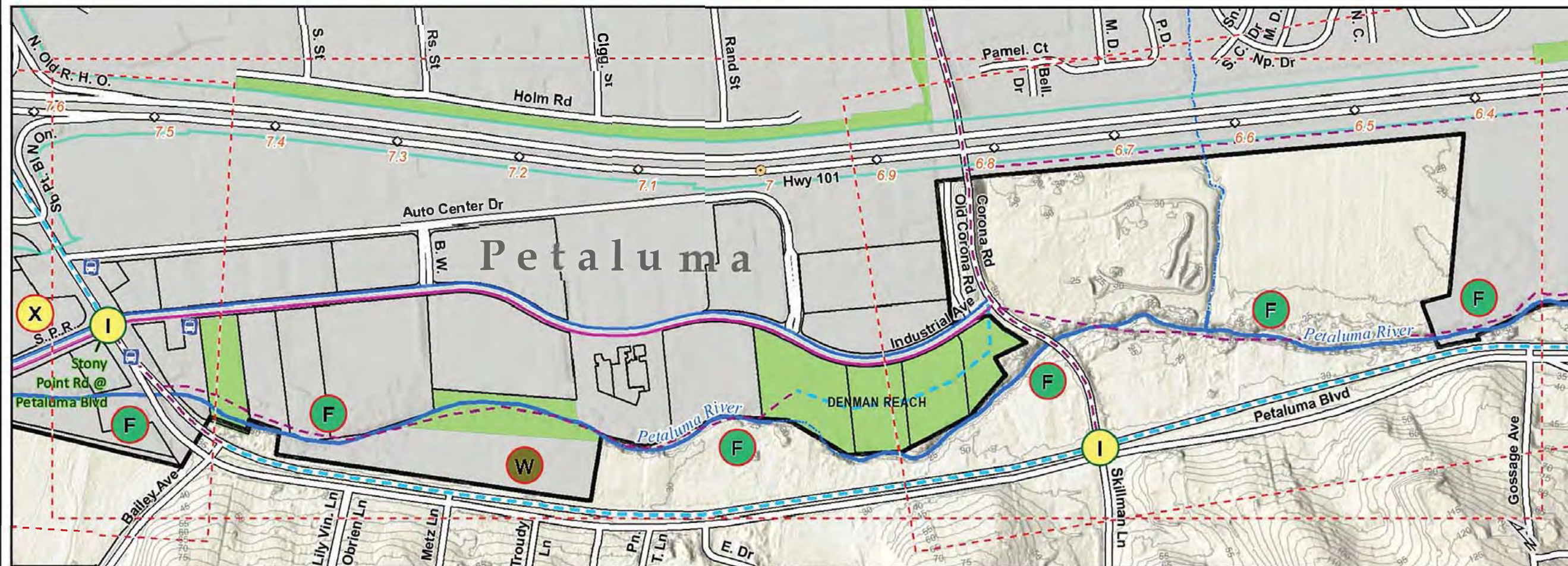
1 in = 500 feet Map Date: 12/19/2017

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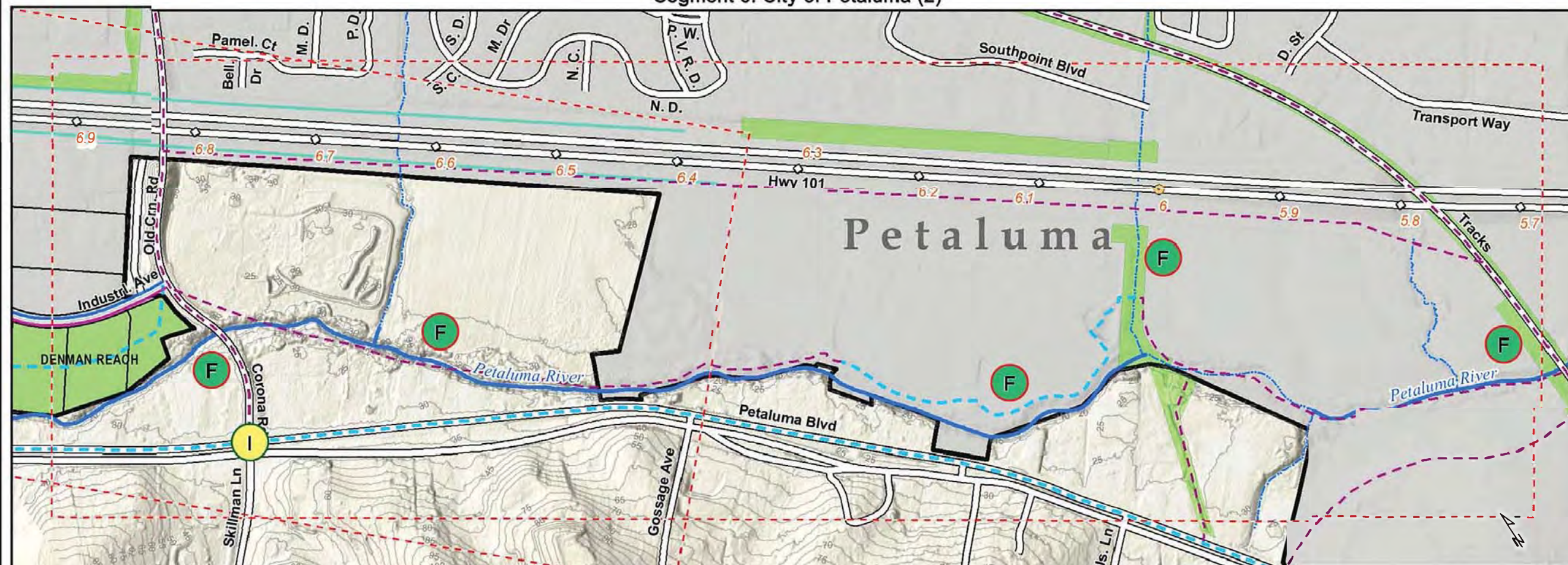
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Figure 7-6
Opportunities & Constraints (6)



Segment 6. City of Petaluma (2)



Segment 6. City of Petaluma (3)

Legend

Opportunities / Constraints

- | | |
|---------------------------------------|--|
| Aesthetics | Hydrology |
| View/Overlook opportunity | Flood prone area |
| Ag Resources | Land Use |
| Ag resources near road | Encroachment |
| Biology | Narrow ROW |
| Sensitive bio/wildlife species | Wide ROW |
| Creek crossing | Transportation/Traffic |
| Cultural Resources | Signalized intersection |
| Historic features (Bridges) | Future signalized intersection or improvement |
| Geology / Soils | Congested area |
| Slope or potential erosion | |

- | | |
|---------------------|-----------------------|
| Traffic Signal | Bridge |
| Postmiles | Bus Stop |
| Tenth Postmiles | |
| Named Creeks | Intermittent Creeks |
| Segment End | |
| City Limits | CalTrans Right of Way |
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Figure 7-7
Opportunities & Constraints (7)



8. PREFERRED ALIGNMENT

Given the lack of continuous, publicly owned lands within the Study Area to connect the communities, the preferred trail alignment must necessarily be accommodated along the primary travel corridors, with several opportunities to implement a trail away from the road. The preferred trail alignment is based on variables such as current site conditions and land ownership which can change over time. There may be opportunities in the future to acquire more public land and trail easements through land dedication and purchases that can improve the trail alignment. There is flexibility to adjust the preferred trail alignment.

There is an opportunity to implement an off-street route along lands owned by SCWA that will link the trail with the trails and roads along the Laguna de Santa Rosa, which, in turn, link to other planned and existing trails along the creeks and waterways in the region. This trail network, when implemented, will provide an opportunity for many modes of active transportation in different locations, including bicycle commuting, relaxed hiking or jogging, equestrian use, and school and destination travel. Up to 28 miles of active transportation improvements may be implemented over time, including trails within each community as well as within county unincorporated areas:

Location	Miles
City of Sebastopol	3.2
City of Petaluma	4.4
Unincorporated	20.4
Total	28

The overall concept is to provide a rapid/commute route for cyclists and others primarily transit oriented along 116 and Stony Point Road, and a relaxed/recreational route to provide opportunities for slower paced bicycle, pedestrian and equestrian use along the Laguna Connector Trail, Old Gravenstein Highway, and Stony Point Road. When implemented, the trail network could include both active transportation improvements for bicyclists and pedestrians associated with the transportation network along SR 116, Stony Point Road, and local roads, as well as recreational trail improvements that are off-street and afford opportunities for low-speed bicycle, pedestrian and equestrian use:

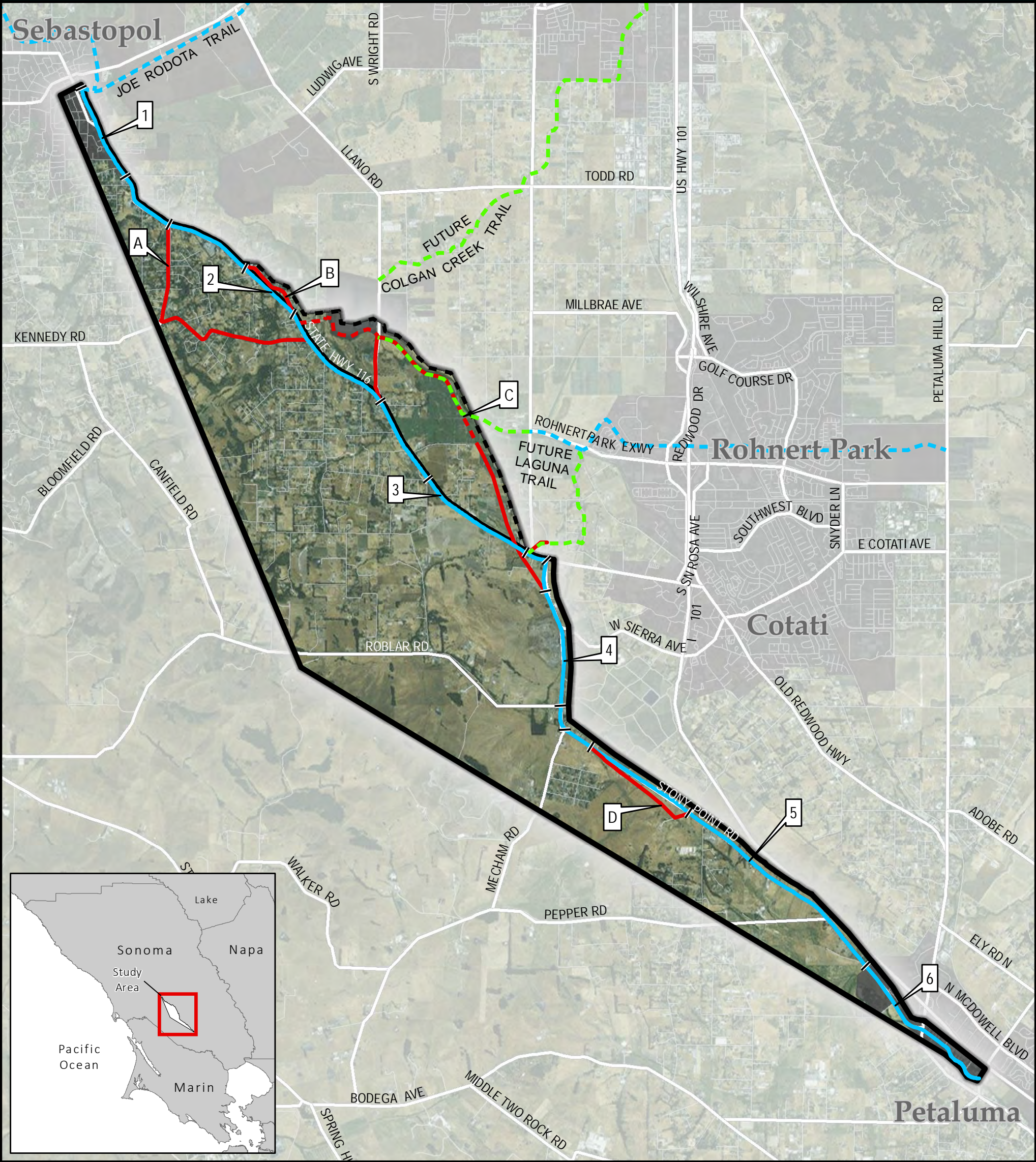
Trail Types	
Type	Miles
Class I Relaxed Route, separate from road	5.6
Class I /Class IV, Rapid Route, near adjacent road	15.9
Class II/III Improvements	6.5
Total	28

The Preferred Trail Alignment Overview is shown in **Figure 8-1**.

8.1 BIKEWAY FACILITY OVERVIEW

The bicycle/pedestrian facilities proposed for the Petaluma-Sebastopol Trail (Trail) are comprised of Class I Bikeways (Multiuse Paths) and Class IV Separated Bikeways (Cycle Tracks). The proposed

Petaluma - Sebastopol Trail Feasibility Study



Trail Alignment

- 1 - Sebastopol City Trails
- 2 - SR 116 City limits to Llano Road
- 3 - SR 116 Llano Road to Stony Point Rd
- 4 - Stony Point Road SR 116 to Mecham Road
- 5 - Mecham Road to Petaluma City Limits
- 6 - Petaluma City Trails

Connecting Trails

- A - Bloomfield Road Spur
- B - Old Gravenstein Hwy
- C - Laguna Trail Connection
- D - Stony Point Byway

Map Date: January 12, 2018

- Existing Trails
- Future Trails
- Precise Alignment TBD

- Study Area
- Laguna Connection Study Area

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0 0.5 1 Miles
0 0.5 1 Kilometers





conceptual design for the Class I Multiuse Path segments are consistent with the California Highway Design Manual Chapter Section 1003.1, which dictates the facility widths, cross slopes and side slope details.¹⁵ The proposed conceptual design for the Class IV Cycle Track segments are consistent with Caltrans Design Information Bulletin (DIB) 89, which similarly dictates facility widths, lateral and vertical separation, and barriers.¹⁶ All bikeway facilities proposed for the Trail are designed for two-way bicycle/pedestrian travel.

Class I Bikeways (Multiuse Paths)

The multiuse paths proposed in this study include an eight to ten foot wide travel way, two-foot shoulders on both sides of the path, and a minimum five-foot buffer from the roadway shoulder. The trail shoulder could be reduced to one-foot on one side and increased to three-foot on the other side to accommodate equestrian use on the three-foot shoulder. The proposed paved path is intended for both bicycles and pedestrians, although a parallel pedestrian facility may be constructed in areas where significant pedestrian traffic is expected. The proposed design recommends a guardrail within the buffer area to protect path users from vehicle traffic on State Route 116 and Stony Point Road. There are sections where existing slopes may require retaining walls to accommodate the path.

Class IV Separated Bikeways (Cycle Tracks)

The cycle track proposed in this study include an eight to 12 foot traveled way, a two to three-foot buffer separating the bikeway from the roadway shoulder, and a four to six foot sidewalk running parallel to the bikeway. Cycle tracks were recommended in areas with existing sidewalks, existing or anticipated development adjacent to the path, and built-up areas where a raised curb and narrower shoulder could provide adequate separation from adjacent vehicle traffic (versus a buffer and guardrail).

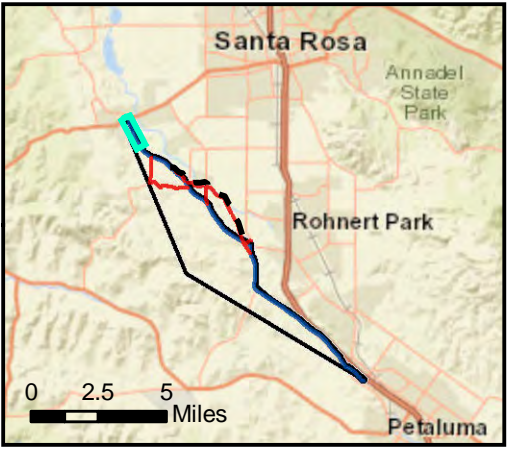
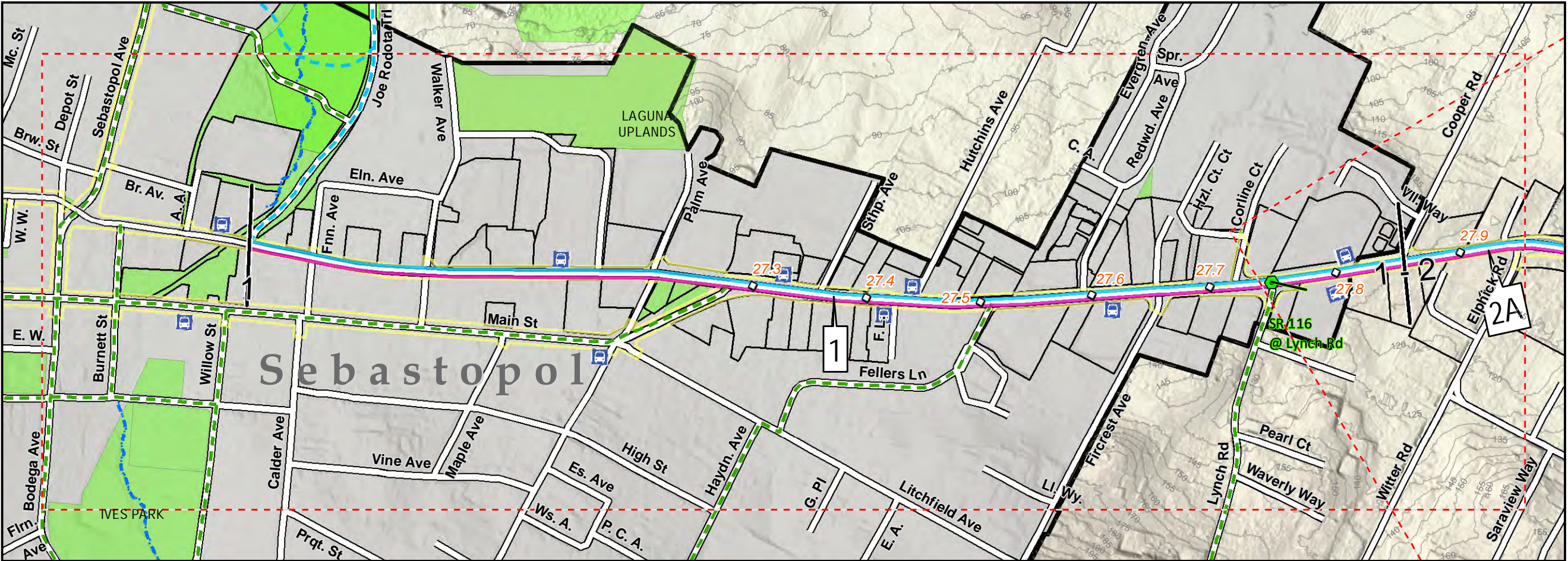
8.2 ALIGNMENT SEGMENTS

The alignment has been divided into six segments, including the segments within the cities of Petaluma and Sebastopol, as well as segments along SR 116 and Stony Point Road. Connecting routes are proposed, including bike lane improvements along Bloomfield and Lone Pine Roads to support school and neighborhood access, as well as off street connecting trails along Old Gravenstein Highway, a Laguna Connector Trail, and an off street trail segment on former railroad land (in public ownership) between Meham Road and West Railroad Avenue. The Laguna Connector Trail would be constructed along a portion of the existing Cotati Intertie ROW, and includes a connection and improvements to the existing access road along the Laguna de Santa Rosa (portions also known as the Laguna Discovery Trail). **Figures 8-1 through 8-14** show the proposed alignment. **Tables 8-1 to 8-6** provides a description of segment components, and **Table 8-7** describes proposed connecting trails.

¹⁵ <http://www.dot.ca.gov/design/manuals/hdm/chp1000.pdf>

¹⁶ <http://www.dot.ca.gov/design/stp/dib/dib89.pdf>

Petaluma - Sebastopol Trail Feasibility Study



Legend

- Preferred Trail Alignment
- Alternate Trail Alignment
- Connecting Trail
- Precise Alignment TBD
- Existing CL I Bicycle Lane
- Existing CL II Bicycle Lane
- Proposed CL II Bicycle Lane
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Named Creeks
- Intermittent Creeks
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

0 200 400 800 Feet

1 in = 500 feet Map Date: January 12, 2018

Sheet 8-1

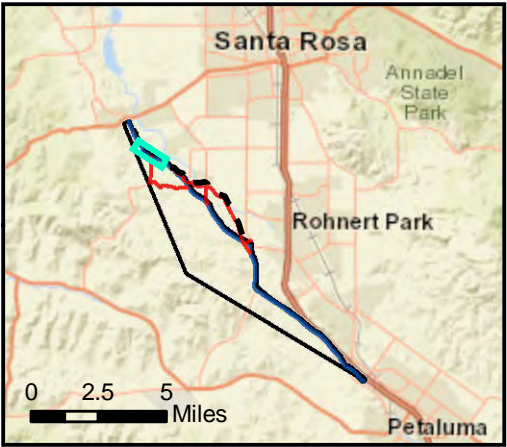
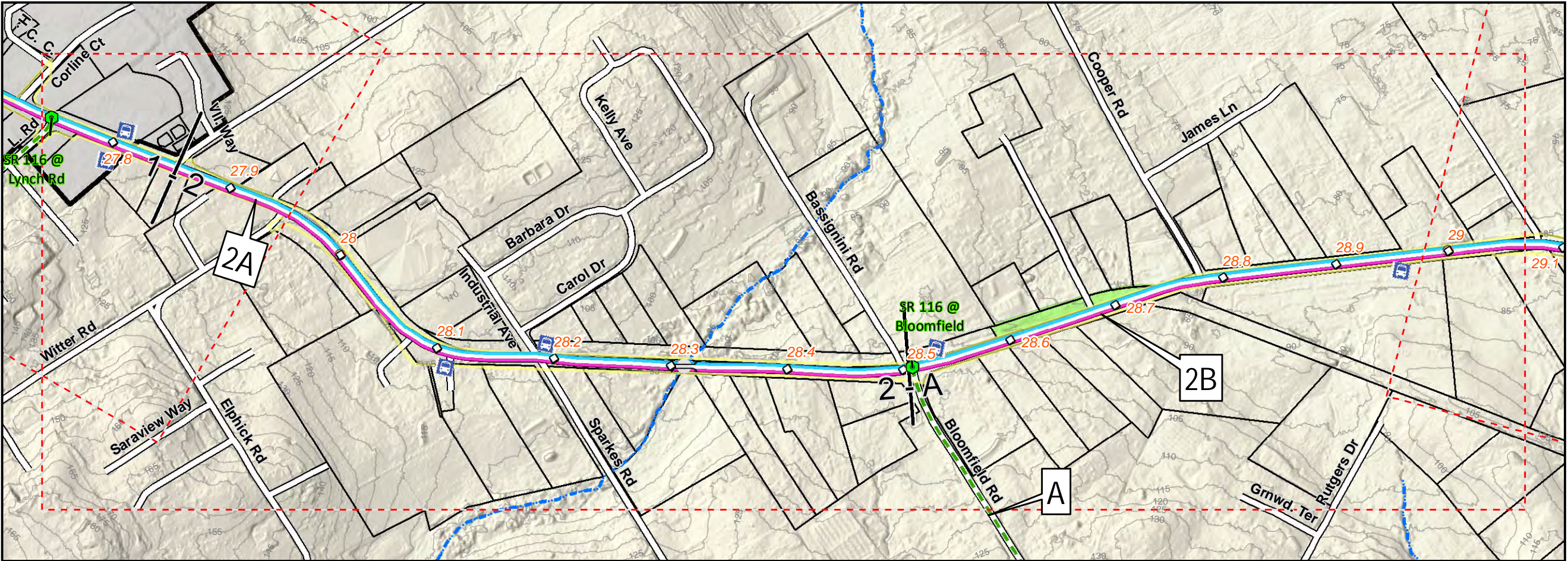
Projects				
Number	Name	Description	Length feet	Length miles
1	SR116 Sebastopol City	Class II	16,900	3.2
2A	SR116 Cooper Road-Bloomfield	Class I, Class IV	3,300	0.6

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8-1: Segment 1. SR 116 City of Sebastopol



Legend

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- Alternate Trail Alignment
- Connecting Trail
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- Existing CL I Bicycle Lane
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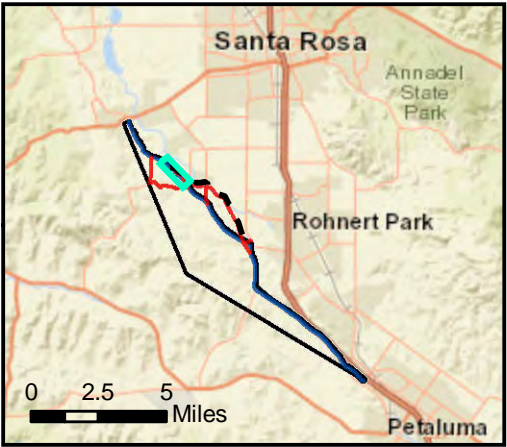
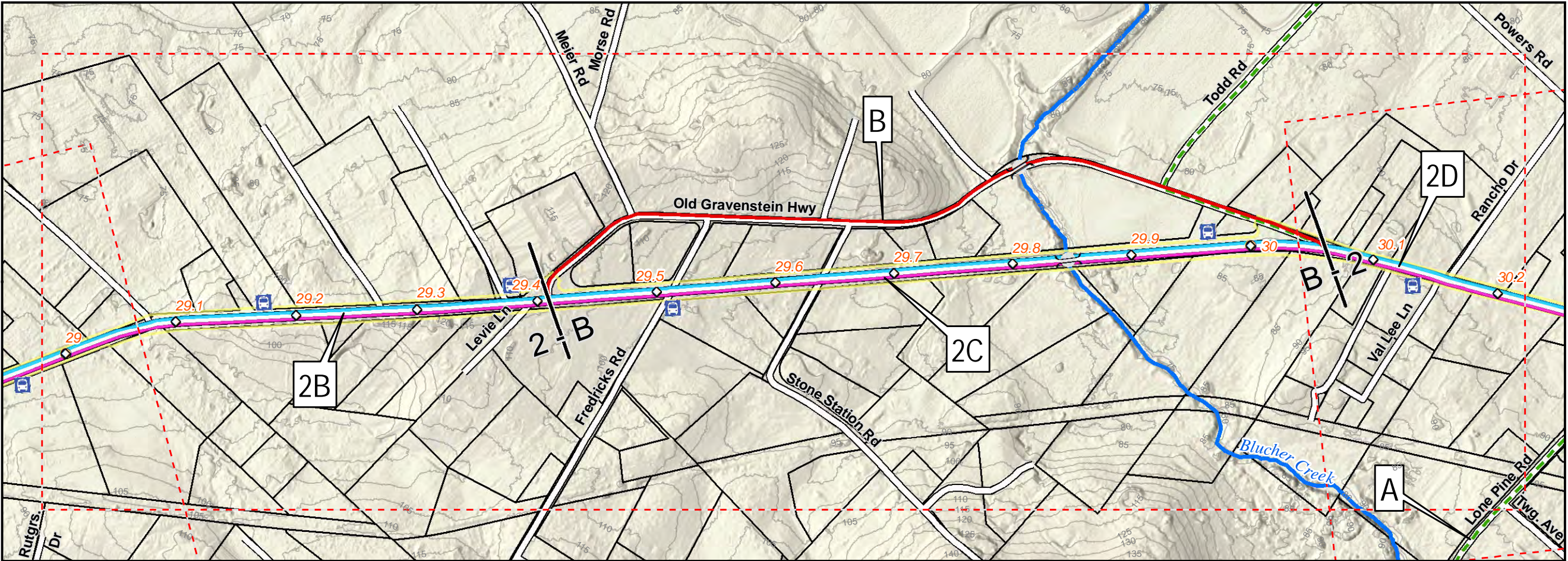
Sheet 8-2:

Projects				
Number	Name	Description	Length feet	Length miles
2A	Sr 116 Cooper Road-Bloomfield	Class I, Class IV	3,300	0.6
2B	SR 116 Bloomfield-Old Gravenstein	Class I	4,500	0.9
A	Bloomfield/Lone Pine Bike/Ped Improvements	Class II Class III	13,100	2.5

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0 200 400 800 Feet

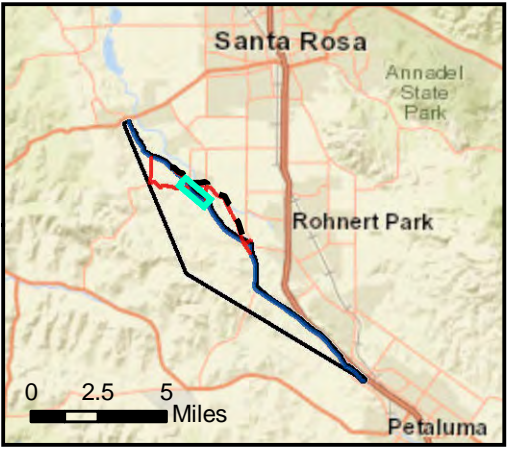
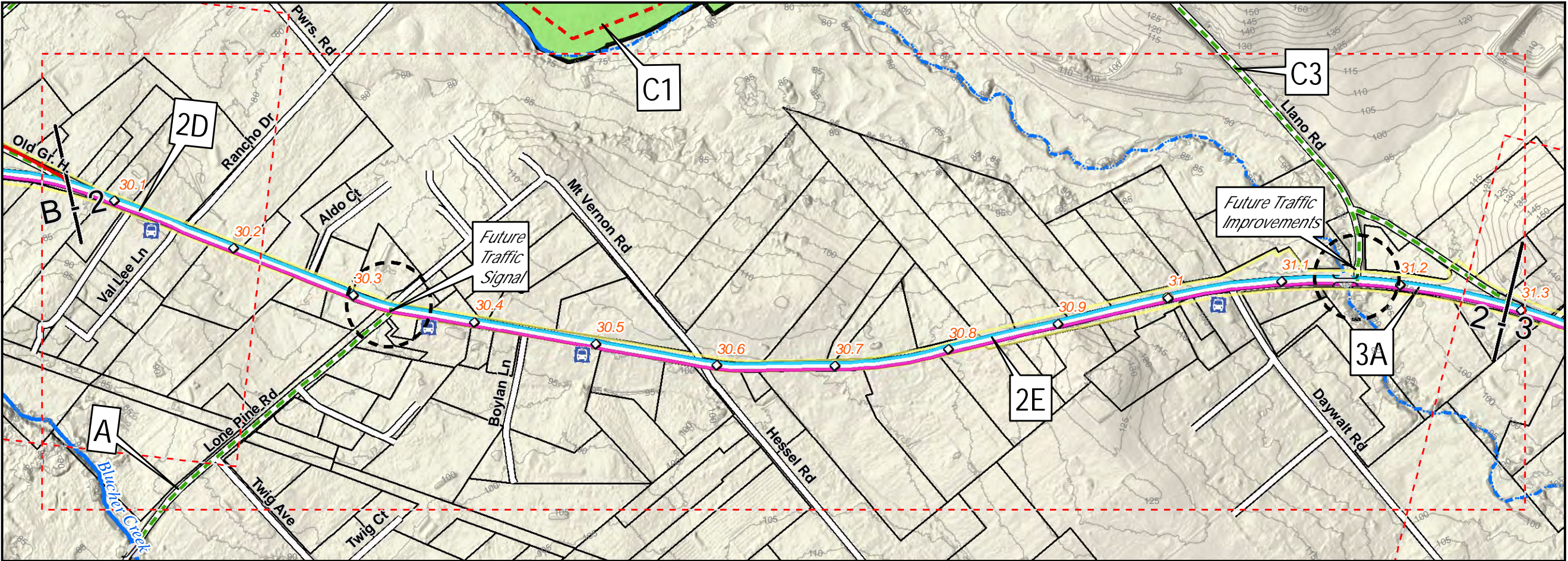
Sheet 8- 3:

Projects				
Number	Name	Description	Length feet	Length miles
2B	SR 116 Bloomfield-Old Gravenstein	Class I	4,500	0.9
2C	SR116 Old Gravenstein N – Old Gravenstein S	Class I	3,400	0.7
2D	SR116 Old Gravenstein S - Lone Pine	Class I	1,600	0.3
A	Bloomfield/Lone Pine Bike/Ped Improvements	Class II Class III	13,100	2.5
B	Old Gravenstein loop	Class I	3,700	0.7

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0 200 400 800 Feet

8-4:

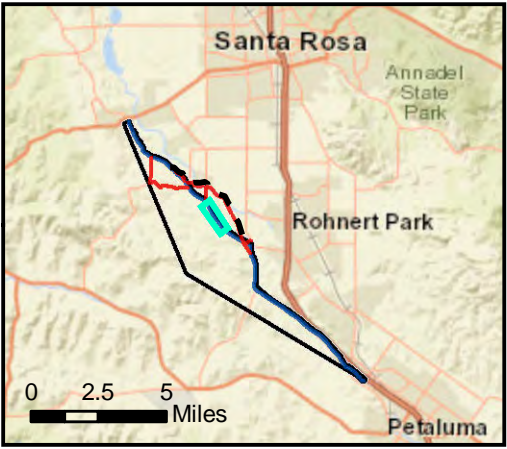
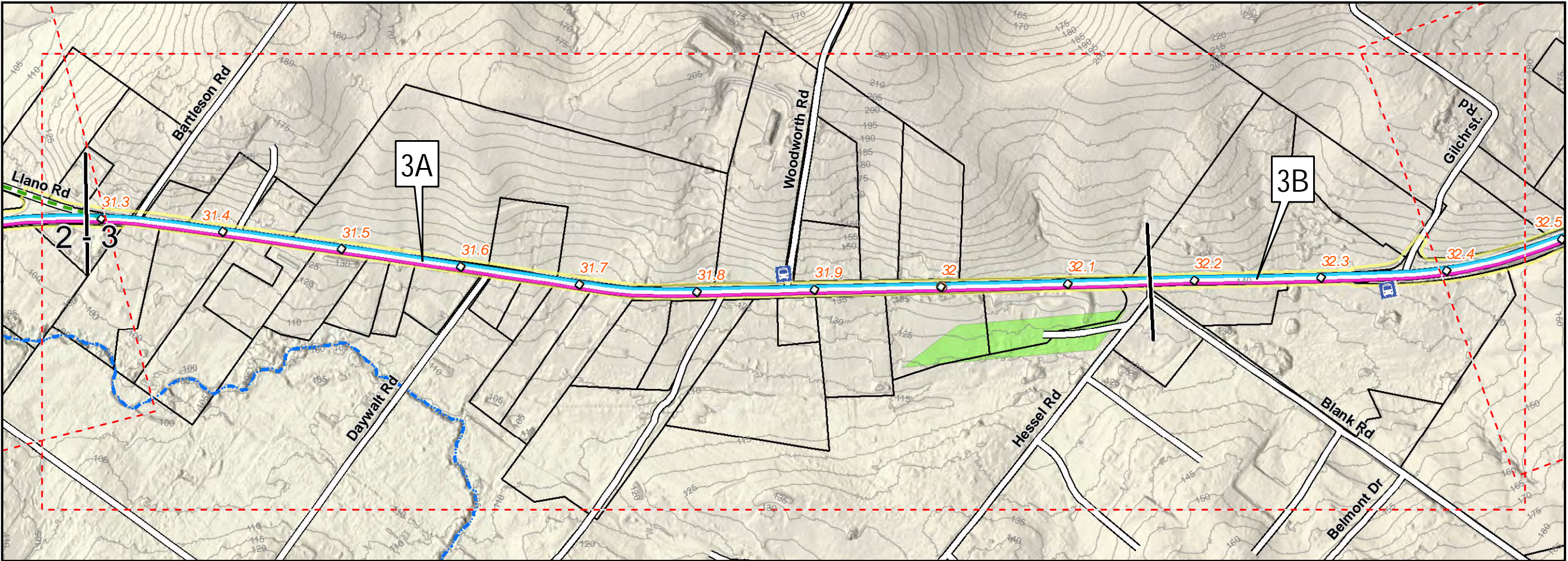
Projects				
Number	Name	Description	Length feet	Length miles
2D	SR116 Old Gravenstein S - Lone Pine	Class I	1,600	0.3
2E	SR 116 Lone Pine - Llano	Class I	6,600	1.3
3A	SR116 Llano - Hessel	Class I	4,600	0.9
A	Bloomfield/Lone Pine Bike/Ped Improvements	Class II Class III	13,100	2.5
C1	Laguna Trail West	Class I	3,800	0.7
C3	Llano bike lanes	Class II	4,200	0.8

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8-4: Segment 2. SR 116 Cooper Rd to Llano Rd (3)



Legend

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- Proposed CL II Bicycle Lane
- Traffic Signal
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- Tenth Postmiles
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- Intermittent Creeks
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- Parcels
- Match Line

0 200 400 800 Feet

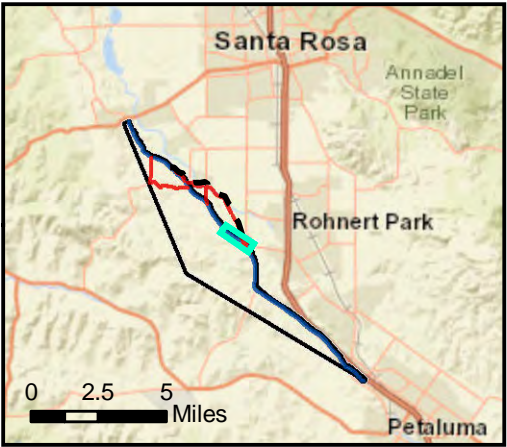
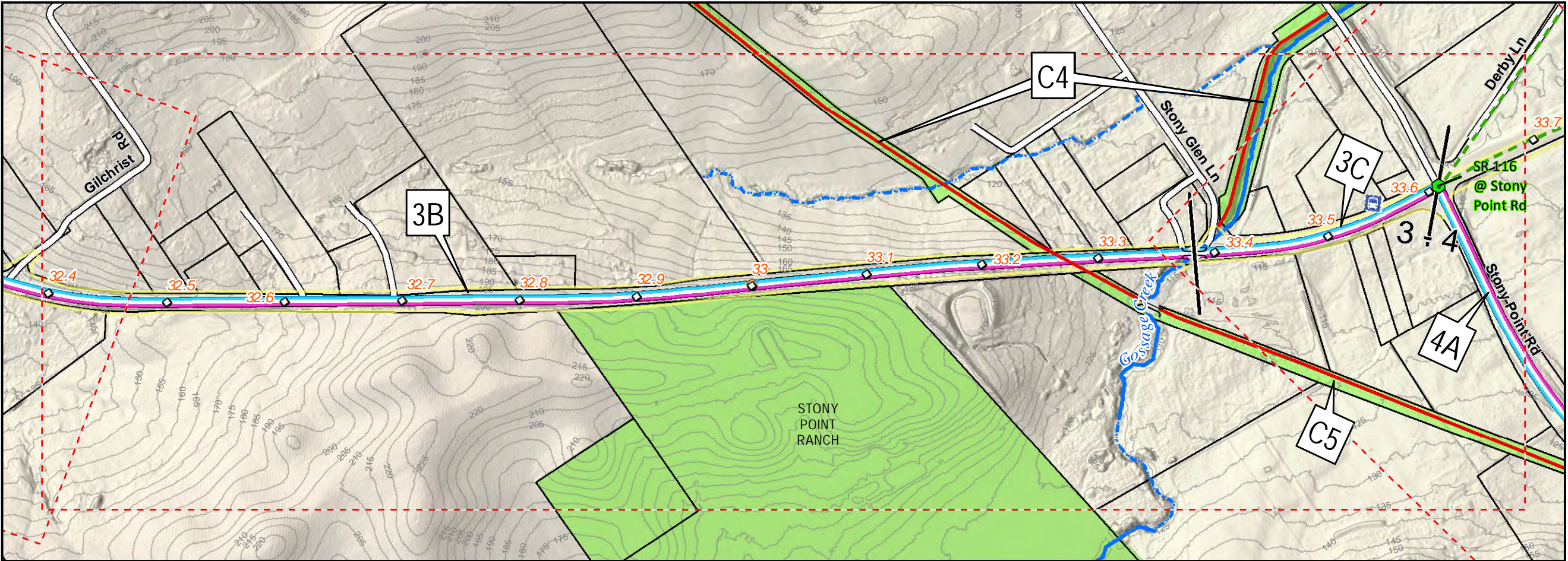
8-5

Projects				
Number	Name	Description	Length feet	Length miles
3A	SR116	Class I	4,600	0.9
	Llano - Hessel			
3B	SR116	Class I	6,500	1.2
	Hessel – Laguna Connector			

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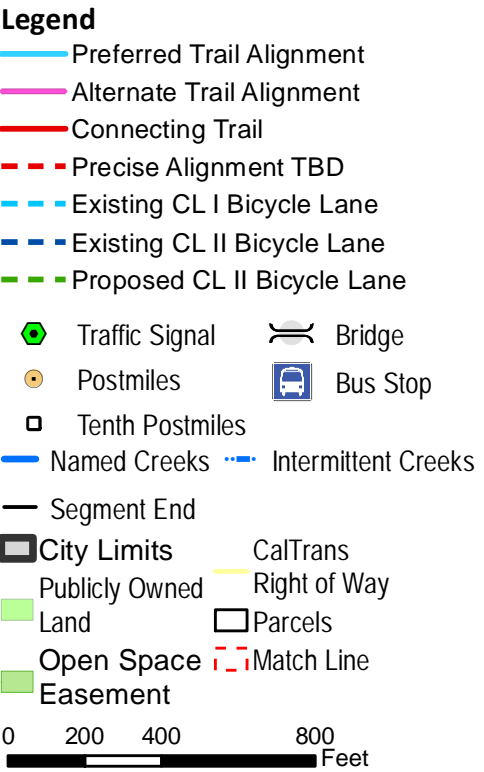
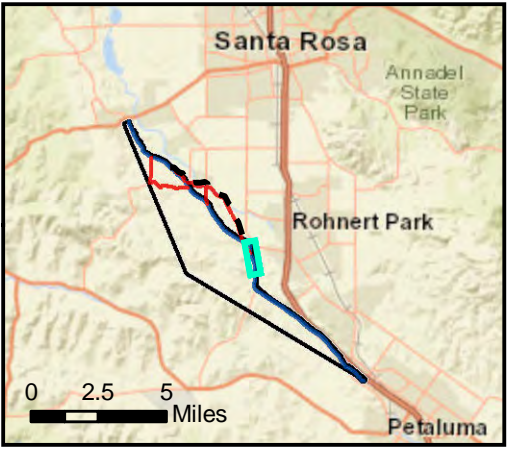
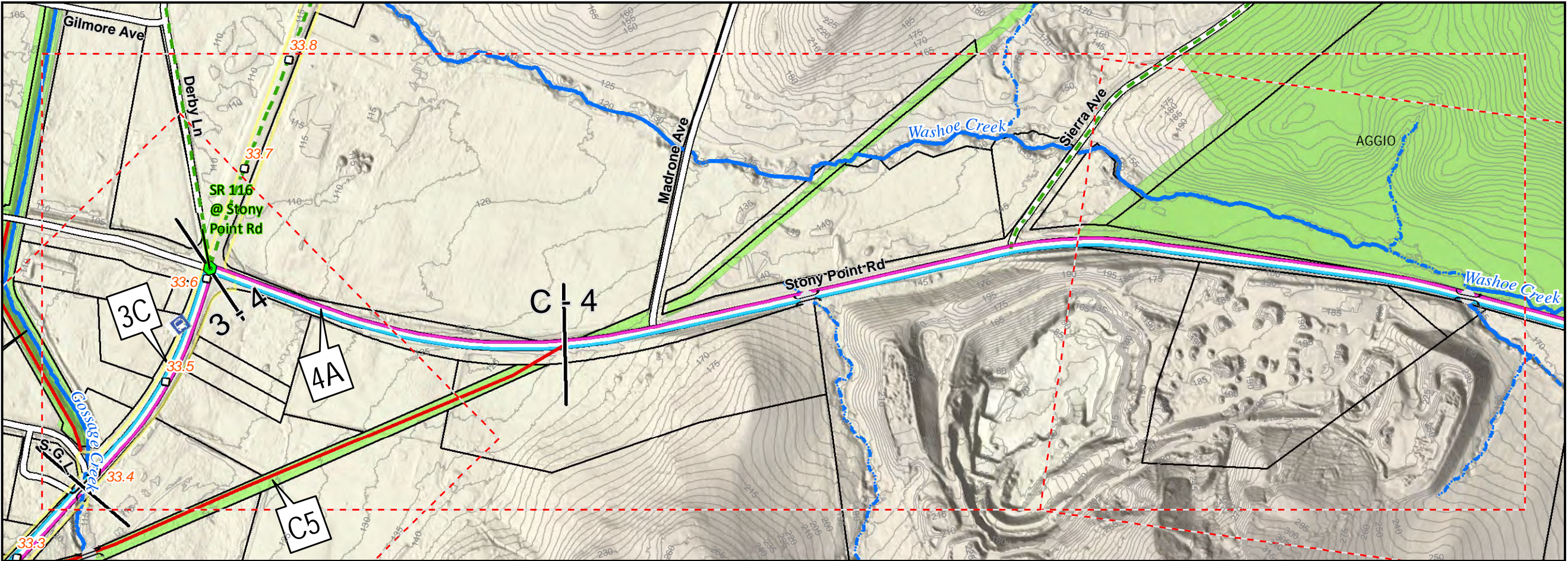
8-6

Projects				
Number	Name	Description	Length feet	Length miles
3B	SR116 Hessel – Laguna Connector	Class I	6,500	1.2
3C	SR116 Laguna Connector – Stony Point	Class I Class IV	1000	0.2
4A	Stony Point Road SR 116-Roblar	Class I	7,700	1.5
C4	SCWA Laguna Connector North Gossage Creek	Class I	9,300	1.8
C5	SCWA Laguna Connector South	Class I	2,700	0.5
Note: Existing Class II bicycle lanes on Stony Point Road not shown.				

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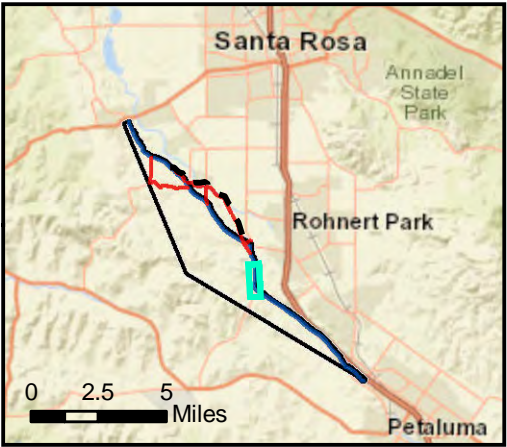
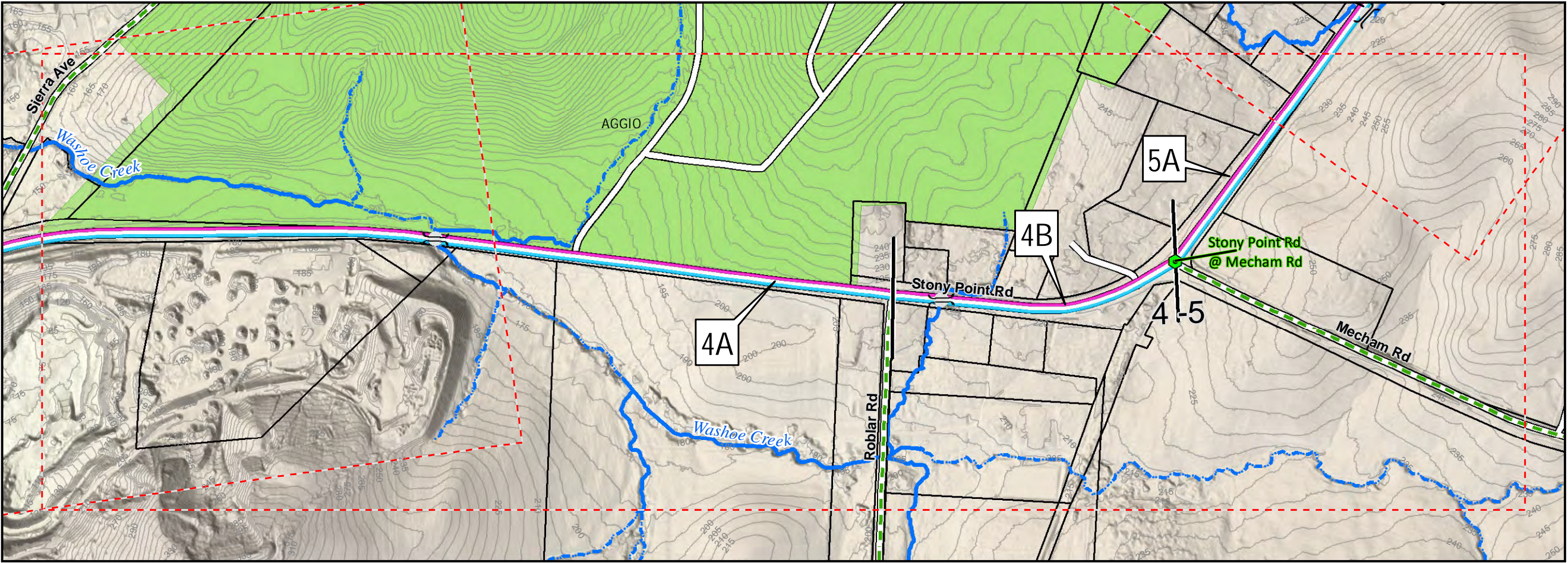
8-7

Projects				
Number	Name	Description	Length feet	Length miles
3C	SR116 Laguna Connector – Stony Point	Class I Class IV	1,000	0.2
4A	Stony Point Road SR 116-Roblar	Class I	7,700	1.5
C5	SCWA Laguna Connector South	Class I	2,700	0.5
Note: Existing Class II bicycle lanes on Stony Point Road not shown.				

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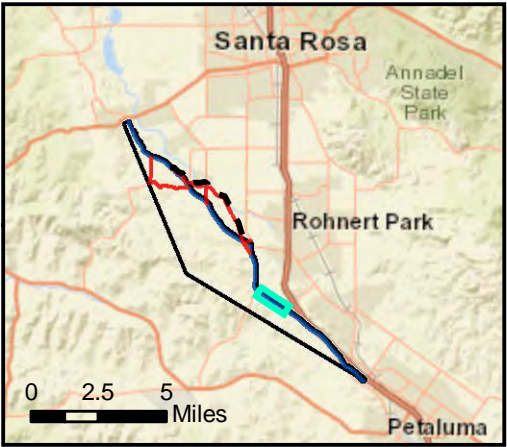
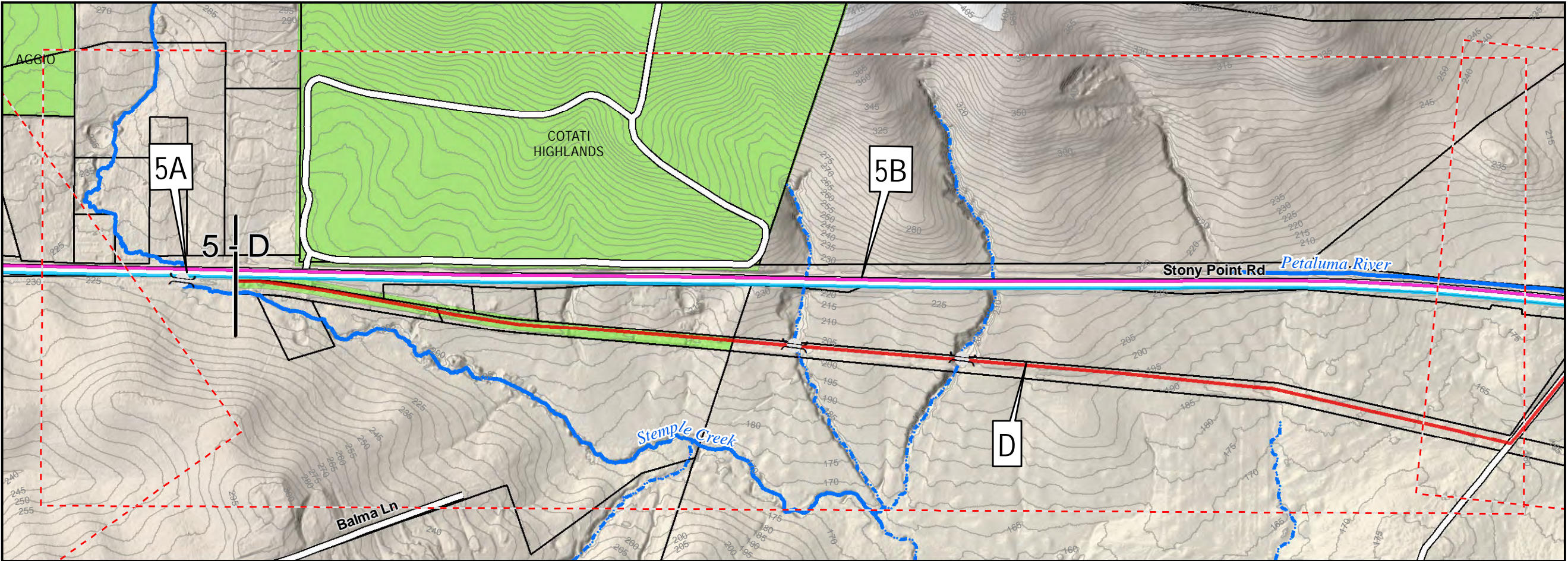
8-8

Projects				
Number	Name	Description	Length feet	Length miles
4A	Stony Point Road SR 116-Roblar	Class I	7,700	1.5
4B	Stony Point Road Roblar - Mecham	Class I	1,300	0.3
5A	Stony Point Road Mecham – Stony Point Byway	Class I	1,600	0.3
Note: Existing Class II bicycle lanes on Stony Point Road not shown.				

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- Match Line

0 200 400 800 Feet

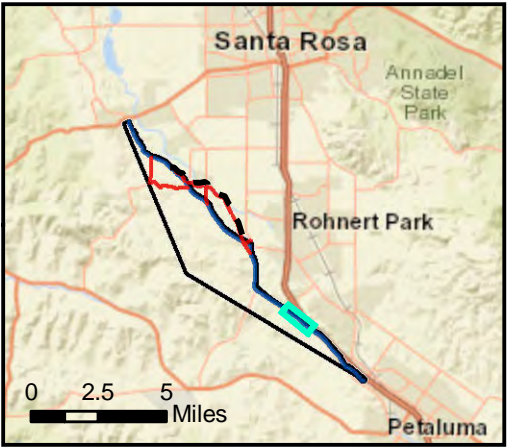
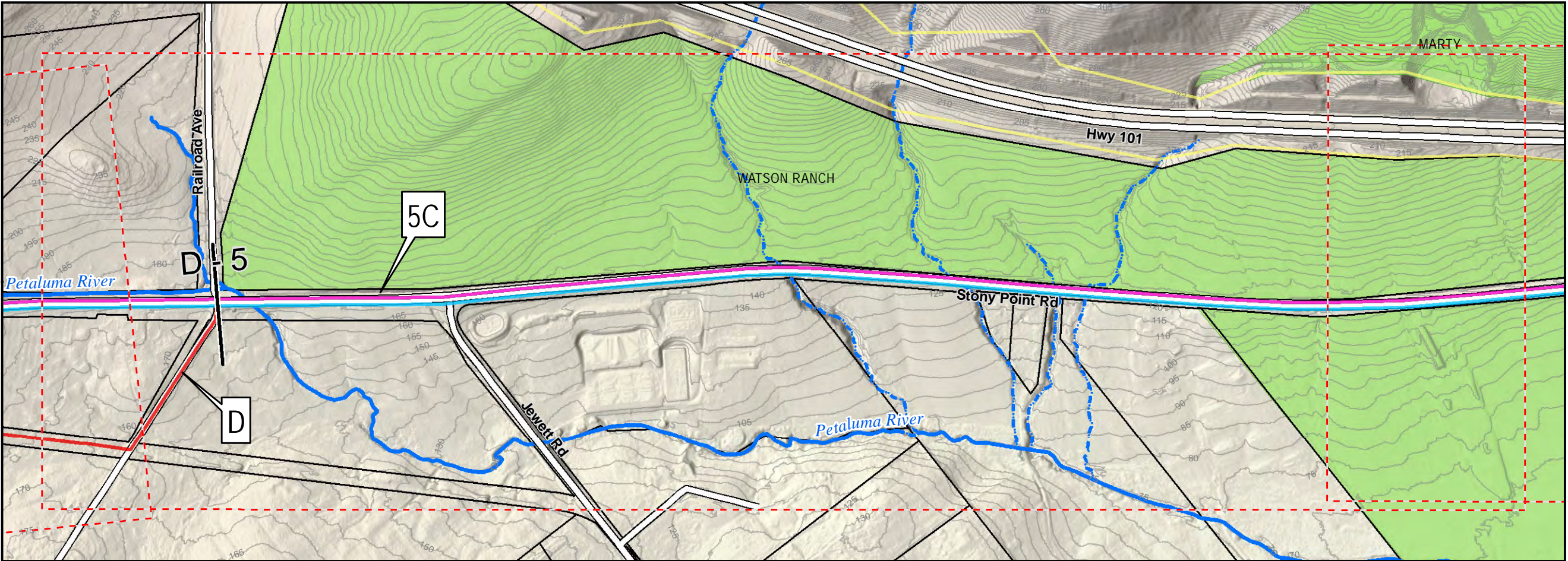
8-9

Projects				
Number	Name	Description	Length feet	Length miles
5A	Stony Point Road Mecham – Stony Point Byway	Class I	1,600	0.3
5B	Stony Point Road Stony Point Byway – Railroad Avenue	Class I	6,000	1.1
D	Stony Point Byway	Class I	6,400	1.2
Note: Existing Class II bicycle lanes on Stony Point Road not shown.				

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Legend

- Preferred Trail Alignment
- Alternate Trail Alignment
- Connecting Trail
- Precise Alignment TBD
- Existing CL I Bicycle Lane
- Existing CL II Bicycle Lane
- Proposed CL II Bicycle Lane
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Named Creeks
- Intermittent Creeks
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

0 200 400 800 Feet

8-10

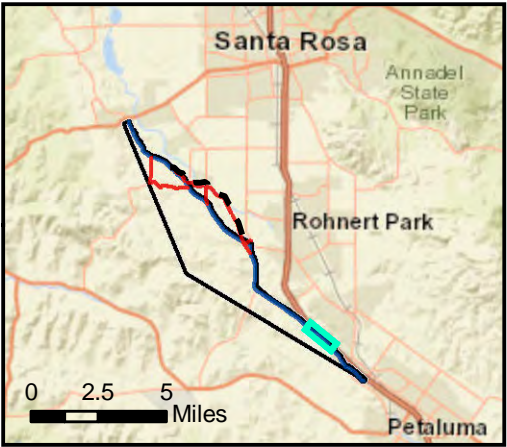
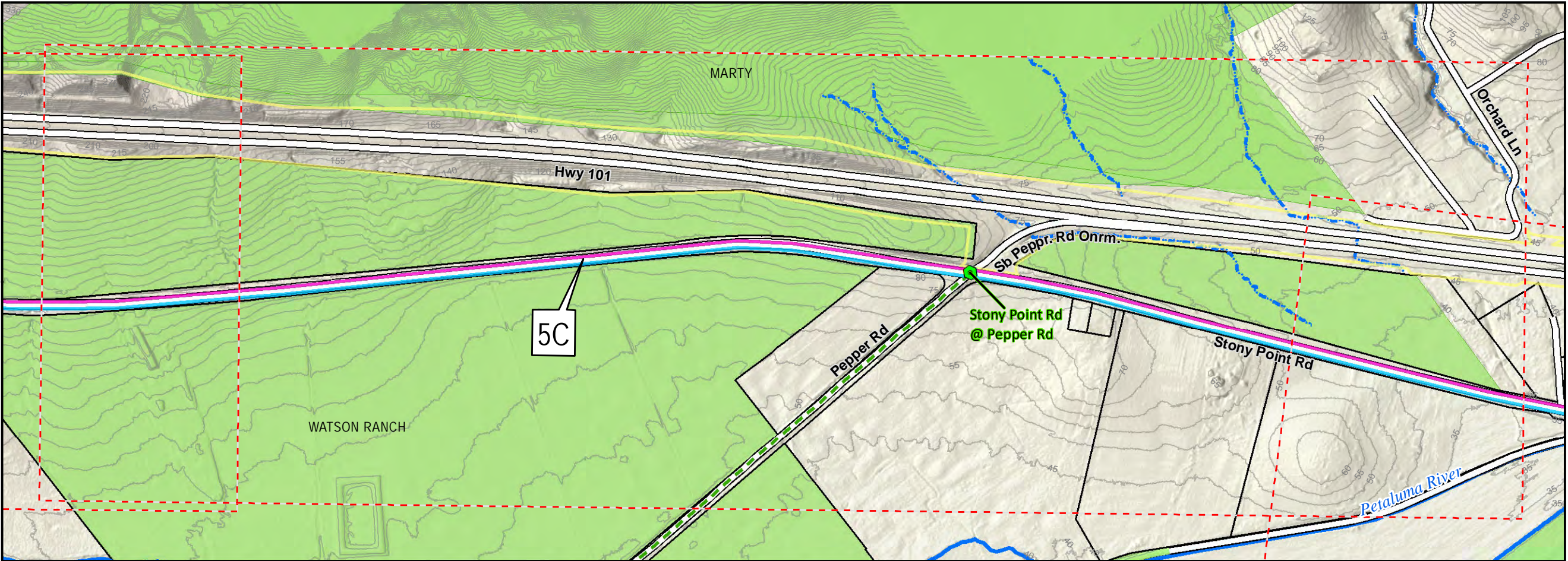
Projects				
Number	Name	Description	Length feet	Length miles
5C	Stony Point Road Railroad Avenue – Petaluma City Limits	Class I	11,900	2.2
D	Stony Point Byway	Class I	6,400	1.2

Note: Existing Class II bicycle lanes on Stony Point Road not shown.

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- Proposed CL II Bicycle Lane
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Named Creeks
- Intermittent Creeks
- Bridge
- Bus Stop
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

0 200 400 800 Feet

8-11

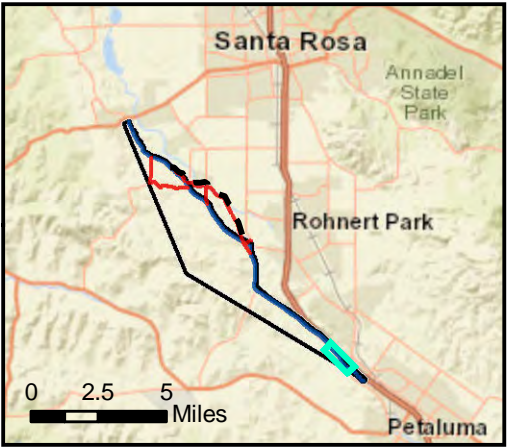
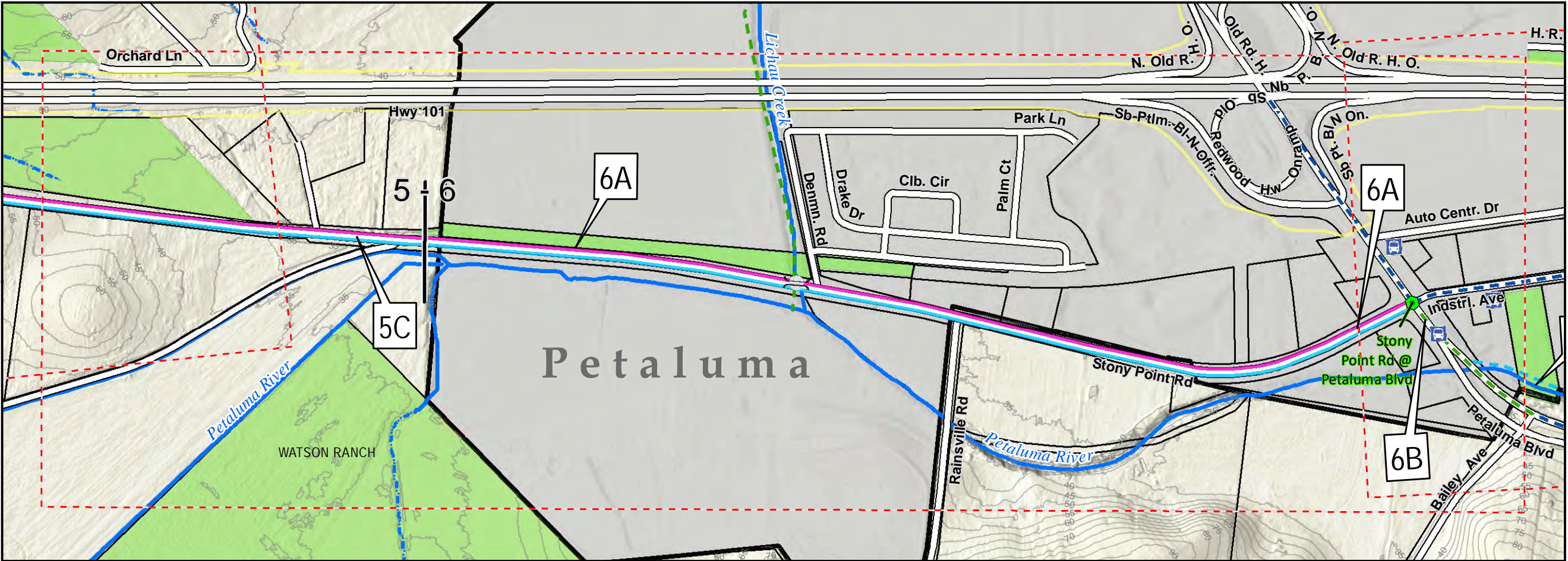
Projects				
Number	Name	Description	Length feet	Length miles
5C	Stony Point Road Railroad Avenue – Petaluma City Limits	Class I	11,900	2.2

Note: Existing Class II bicycle lanes on Stony Point Road not shown.

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- Proposed CL II Bicycle Lane
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Named Creeks
- Intermittent Creeks
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

0 200 400 800 Feet

8-12

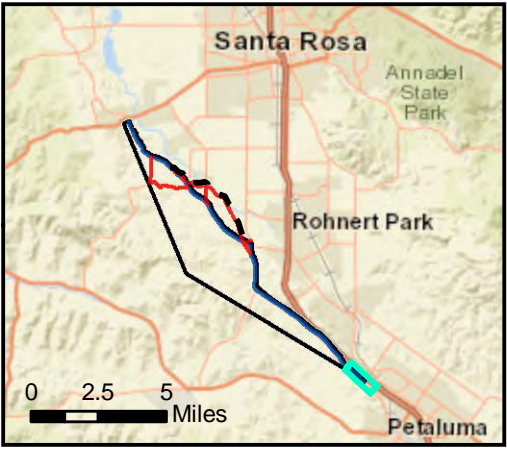
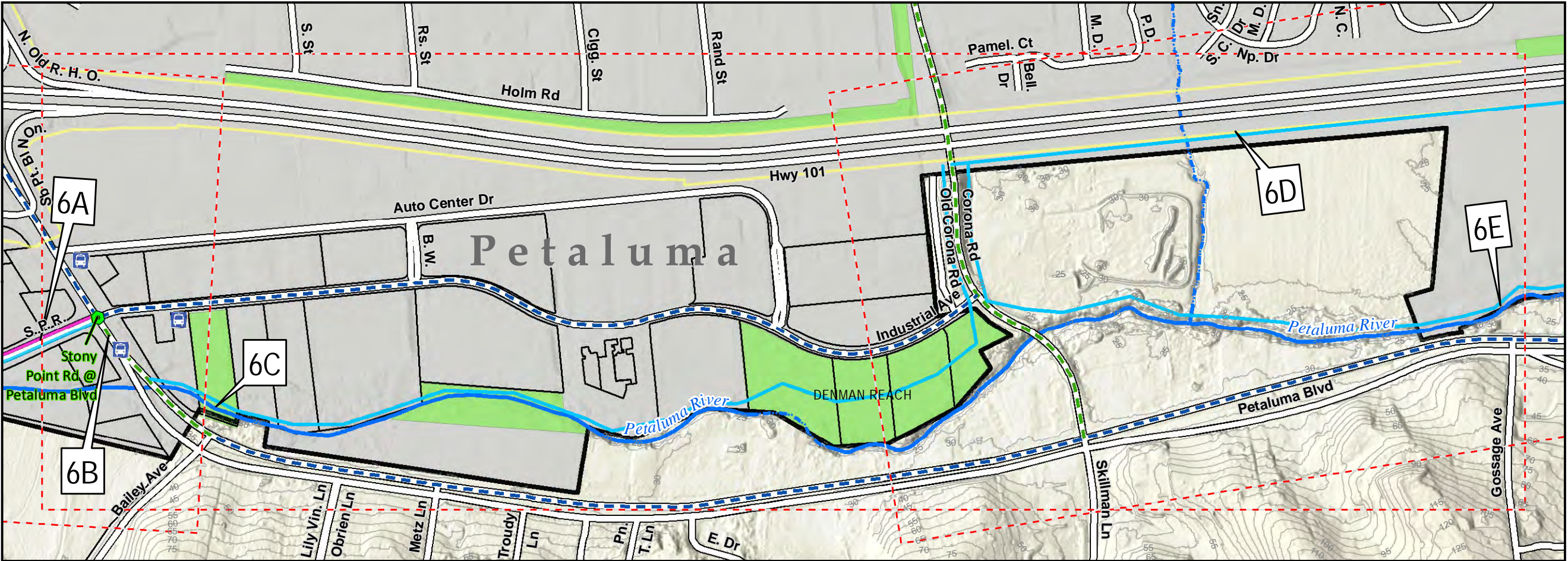
Projects				
Number	Name	Description	Length feet	Length miles
5C	Stony Point Road Railroad Avenue – Petaluma City Limits	Class I	11,900	2.2
6A	Stony Point Road Petaluma City Limits - Petaluma Blvd N	Class I	4,700	0.9
6B	Petaluma Blvd N Unincorporated	Class I Class IV	700	0.1
6C	Petaluma River Trail Denman Reach	Class I	3,600	0.7

Note: Existing Class II bicycle lanes on Stony Point Road not shown.

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- Existing CL II Bicycle Lane
- Proposed CL II Bicycle Lane;
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Bridge
- Bus Stop
- Named Creeks
- Intermittent Creeks
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

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8-13

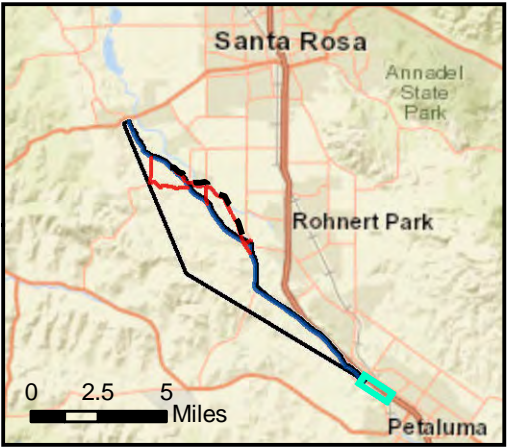
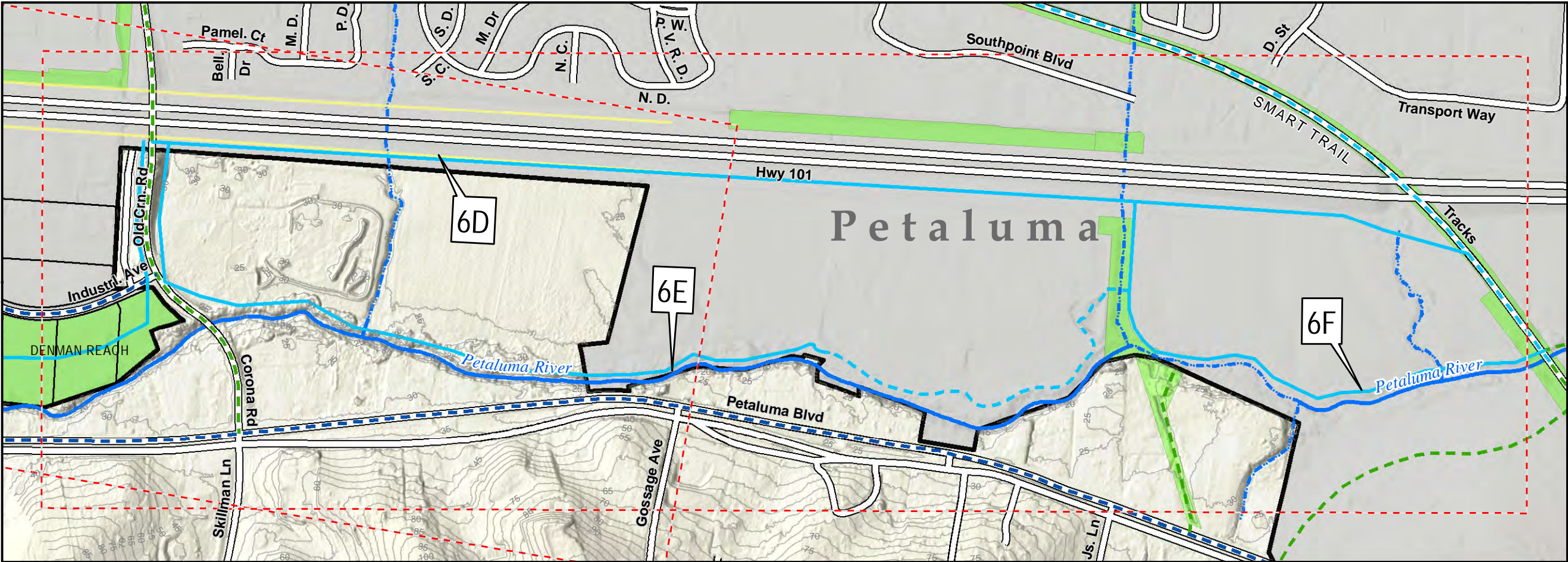
Projects				
Number	Name	Description	Length feet	Length miles
6A	Stony Point Road Petaluma City Limits - Petaluma Blvd N	Class I	4,700	0.9
6B	Petaluma Blvd N Unincorporated	Class I Class IV	700	0.1
6C	Petaluma River Trail Denman Reach	Class I	3,600	0.7
6D	Old Corona Road - Former railroad parcel -SMART	Class I	6,900	1.3
6E	Petaluma River Trail Corona to Outlet Mall	Class I	3,600	0.7
6F	Petaluma River Trail Capri Creek to SMART	Class I	3,900	0.7

Note: Existing Class II bicycle lanes on Stony Point Road not shown.

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- Proposed CL II Bicycle Lane;
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Bridge
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- Segment End
- City Limits
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- CalTrans Right of Way
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- Match Line

0 200 400 800 Feet

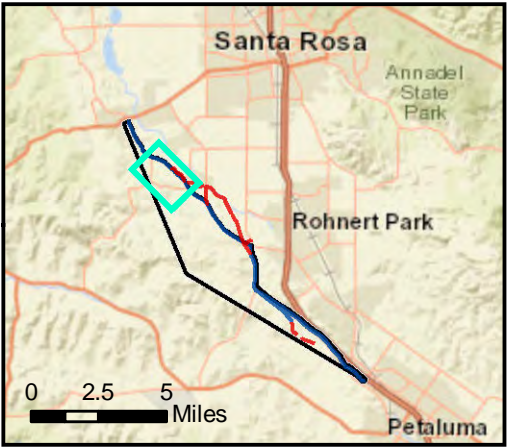
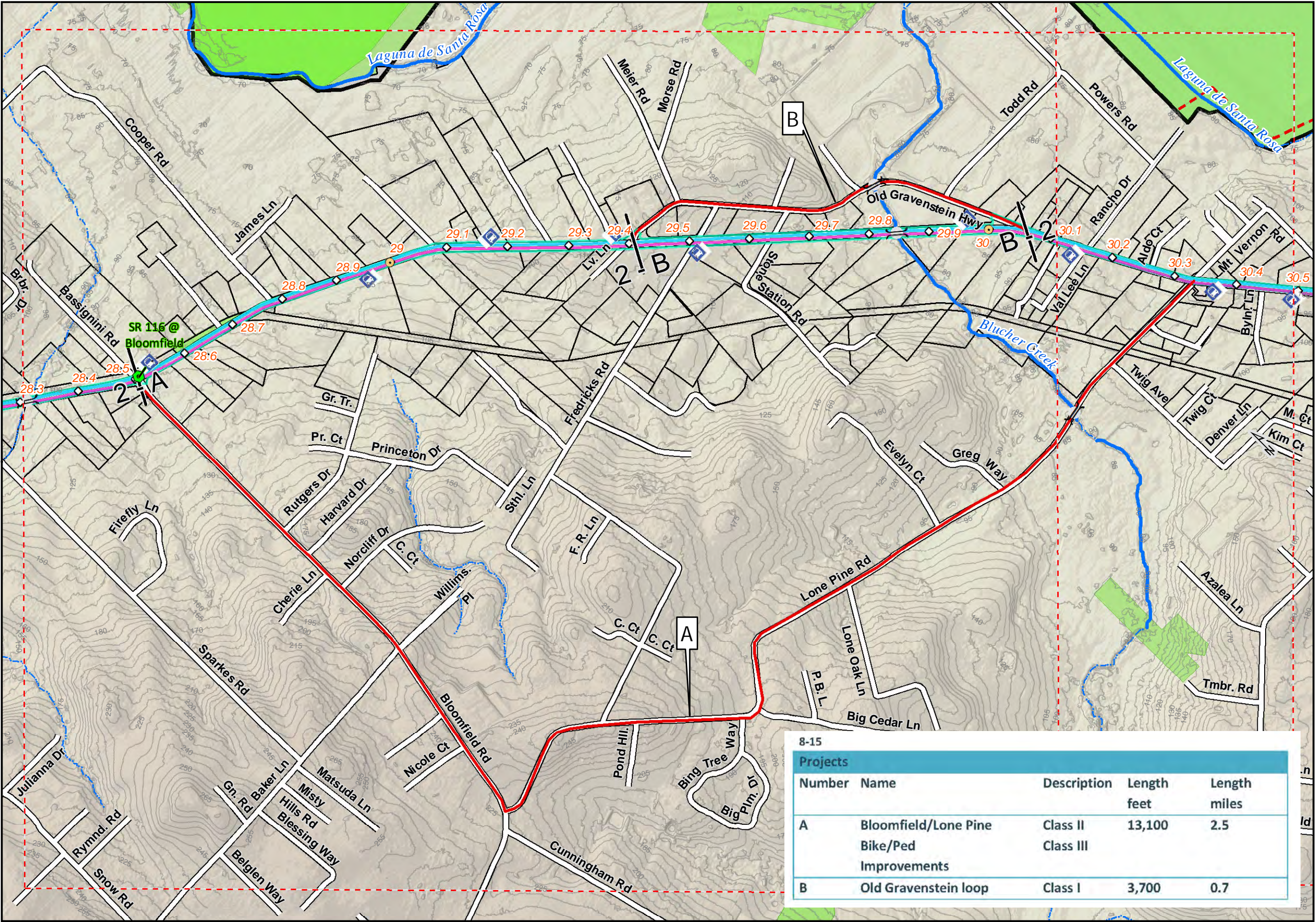
8-14

Projects				
Number	Name	Description	Length feet	Length miles
6D	Old Corona Road - Former railroad parcel -SMART	Class I	6,900	1.3
6E	Petaluma River Trail Corona to Outlet Mall	Class I	3,600	0.7
6F	Petaluma River Trail Capri Creek to SMART	Class I	3,900	0.7

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Legend

- Preferred Trail Alignment
- Alternate Trail Alignment
- Connecting Trail
- Precise Alignment TBD
- Existing CL 1 Trail
- Proposed Bike Route
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Bridge
- Bus Stop
- Named Creeks
- Intermittent Creeks
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

0 200 400 800 Feet
1 in = 833 feet Map Date: 12/29/2017

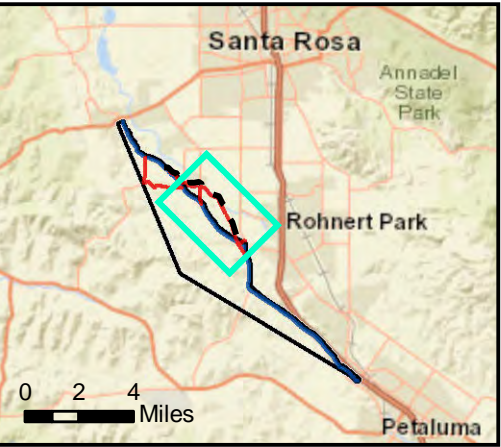
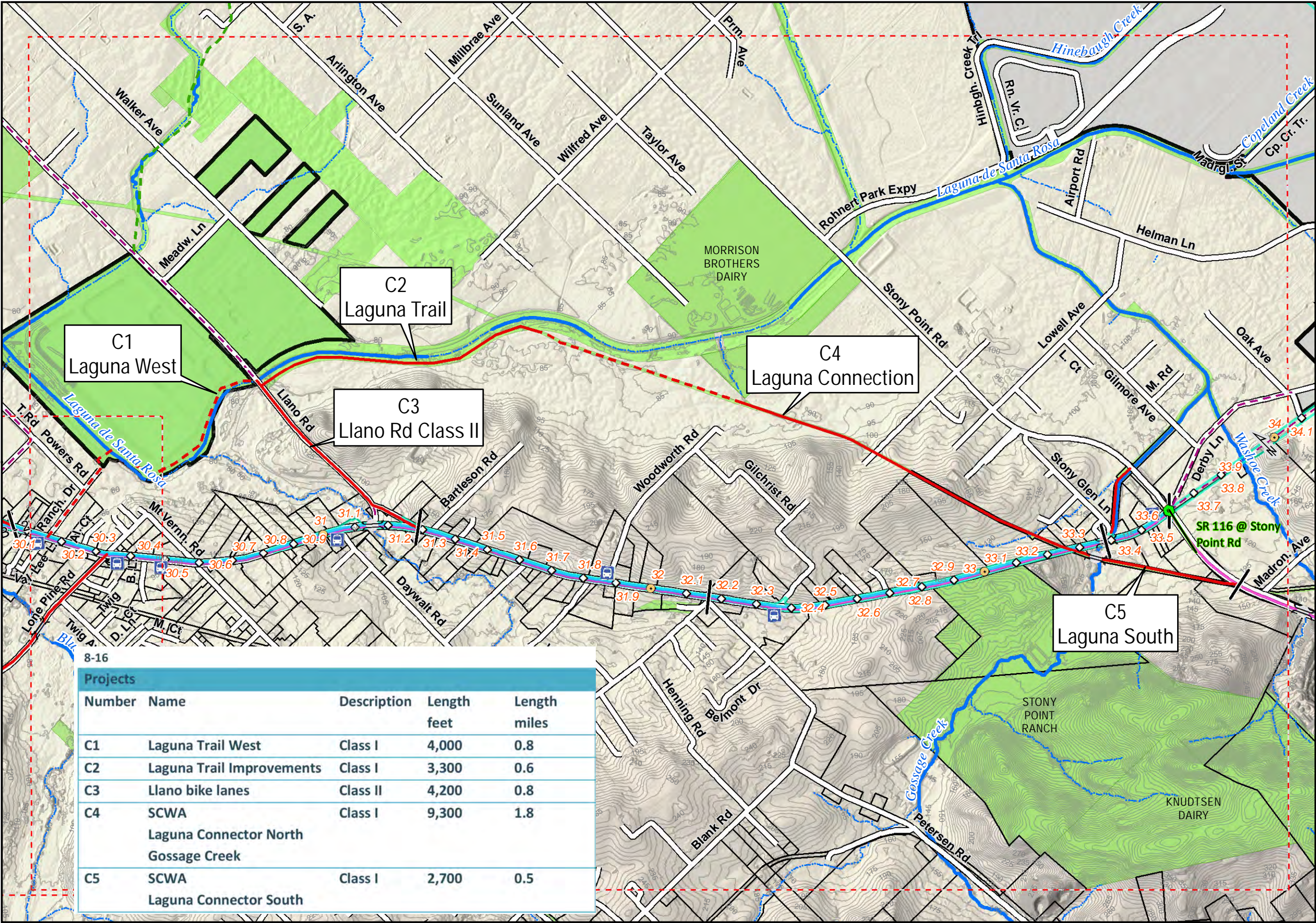
8-15 Projects				
Number	Name	Description	Length feet	Length miles
A	Bloomfield/Lone Pine Bike/Ped Improvements	Class II Class III	13,100	2.5
B	Old Gravenstein loop	Class I	3,700	0.7

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8.15 Connecting Trails A - Bloomfield - Lone Pine Rd & B - Old Gravenstein Hwy



Legend

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- Alternate Trail Alignment
- Connecting Trail
- Precise Alignment TBD
- Existing CL 1 Trail
- Proposed Bike Route
- Traffic Signal
- Postmiles
- Tenth Postmiles
- Bridge
- Bus Stop
- Named Creeks
- Intermittent Creeks
- Segment End
- City Limits
- Publicly Owned Land
- Open Space Easement
- CalTrans Right of Way
- Parcels
- Match Line

020000 800 Feet
1 in = 1,500 feet
Map Date: 12/29/2017

THIS MAP IS NOT A TRAIL GUIDE

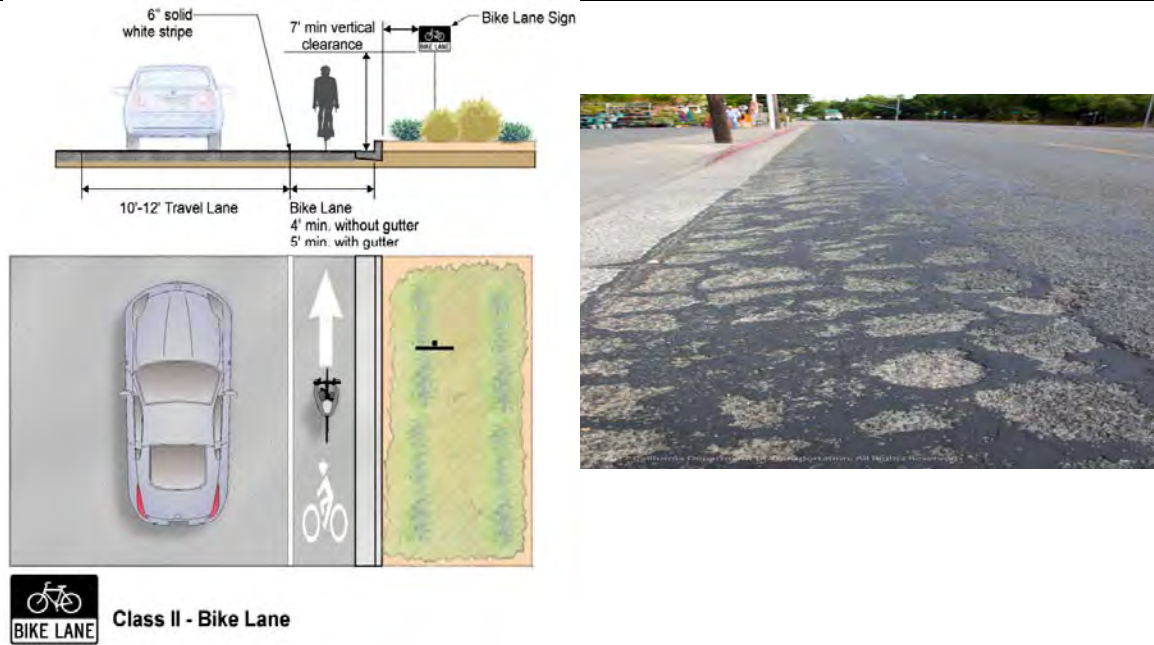
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**Table 8-1: Segment 1****Segment 1** SR 116, City of Sebastopol. Sidewalks and bicycle lanes

Length: 3.2 miles

Name: SR 116 City of Sebastopol

Type: Class II Bicycle lanes, sidewalks and pedestrian improvements**Typical Section:****Details:**

Work in Sebastopol has been funded by Caltrans as part of SB1, and includes three phases:

1. Digouts Project.

This consists of pavement repair on SR 116 scheduled to begin January 2018, and lasts for thirty days.

2. Paving project & Bike Lane striping

The project proposes to pave the pavement along Sonoma 116 on Petaluma Ave and Main Street from Cooper Road to Mill Station. The project will also provide bike lane striping along this stretch. The project is in design phase and is anticipated to begin construction in Summer 2018 and is estimated to take approximately 30 days.

3. ADA Curb ramps and sidewalk project

The project proposes to upgrade the curb ramps and sidewalks to meet ADA standards in downtown Sebastopol. This ADA project will upgrade facilities along Petaluma Ave and Main Street from Willow Street to Keating Ave. Caltrans will coordinate with the City to address design changes.

4. Planned ADA projects

SR 116 and Danmar Drive intersection –Pedestrian Hybrid Beacons at the crosswalk –Fall 2022

SR 116 and Dufranc Avenue intersection – Install ADA curb ramps – Future project

**Table 8-2: Segment 2**

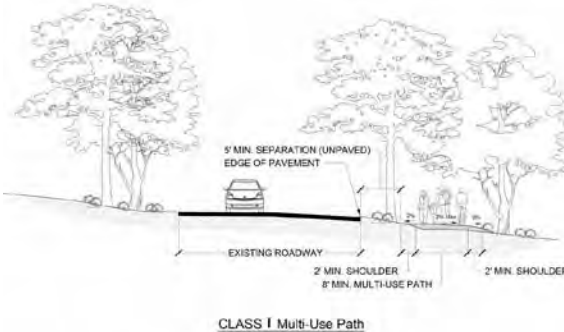

Length: 3.8 miles	Name: SR 116 Cooper Road to Llano Road
	Type: Class I Rapid Route adjacent to SR116
Description: SR 116, Sebastopol City limits to Llano Road. Preferred alignment on north side of SR116, providing connection to Old Gravenstein Highway. Alternate alignment: south side of SR116.	
Typical Section	Photo
 <p>5' MIN. SEPARATION (UNPAVED) EDGE OF PAVEMENT</p> <p>EXISTING ROADWAY</p> <p>2' MIN. SHOULDER</p> <p>8' MIN. MULTI-USE PATH</p> <p>2' MIN. SHOULDER</p> <p>CLASS I Multi-Use Path</p>	
<p>Details:</p> <p>Class I trail improvements would be implemented along the north side of the highway. Class IV Cycle track could be constructed at transitions to intersections and locations where there is a sidewalk. Pedestrian and bicycle facilities to be integrated into planned intersection improvements at Lone Pine and Llano Roads, and other intersections along the corridor. Where additional right of way is unavailable to provide sufficient buffer between the bikeway and adjacent travel lane, a positive barrier may be needed (See Section 9). Separated boardwalks and bridge may be needed at Blucher Creek and other drainages.</p> <p>Trail connections in this area include Bloomfield/Lone Pine Class II facilities (Project A), Old Gravenstein Highway Class I (Project 2C) and potential connection to Laguna de Santa Rosa Trail (Project C1, subject to further study).</p>	



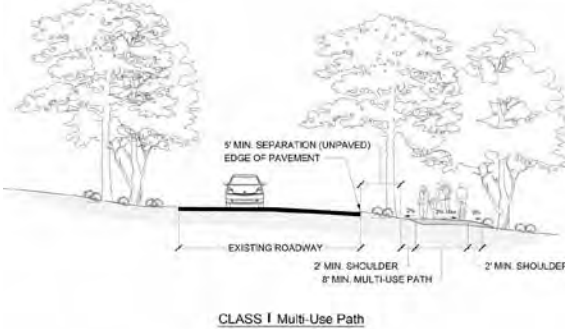

Table 8-3: Segment 3	
Length: 2.3 miles	Name: SR 116 Llano Road to Stony Point Road
	Type: Class I Rapid Route adjacent to SR116
<p>Description: SR 116, Llano Road to Stony Point Road. Preferred alignment on north side of SR116, with link to Laguna Connector Trail. Alternate alignment on south side of SR 116.</p> <p>Class I trail improvements would be implemented along the north side of the highway. Class IV Cycle track could be constructed at transitions to intersections and locations where there is a sidewalk, such as future improvements at the Stony Point Road intersection. Pedestrian and bicycle facilities to be integrated into planned intersection improvements at Llano Road and Stony Point Road, and other intersections along the corridor. A transition to SCWA Laguna Connector Trail (Segment C) would be constructed. Consider alignment shift of roadway acceleration/deceleration lanes to accommodate bicycle and pedestrian facilities when roadway improvements are implemented. Where additional right of way is unavailable to provide sufficient buffer between the bikeway and adjacent travel lane, a positive barrier may be needed (See Section 9). Separated boardwalks and bridge may be needed in the vicinity of Llano Road, Gossage Creek and other drainages.</p> <p>Trail connections in this area include Laguna Connector Trail (Project C).</p>	
Typical Section	Photo
	



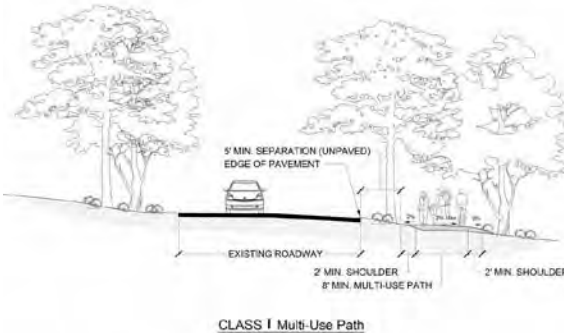

Table 8-4: Segment 4	
Length: 1.8 miles	Name: Stony Point Road, SR 116 to Mecham Road
	Type: Class I Rapid Route adjacent to Stony Point Road
Description: Stony Point Road, SR 116 to Mecham Road. Preferred alignment on west side, with potential off road connection on Laguna Connector Trail. Alternate alignment on east side.	
Trail would provide connection to Laguna Connector Trail, Segment C5. Depending on available right of way, trail alignment could be shifted to east side of Stony Point Road to avoid truck traffic at adjacent quarry, or trail located mid-slope to minimize turning conflicts. Shifting alignment to east side would necessitate two additional crossings of Stony Point Road, at SR 116 and at Roblar Road.	
Typical Section	Photo
	



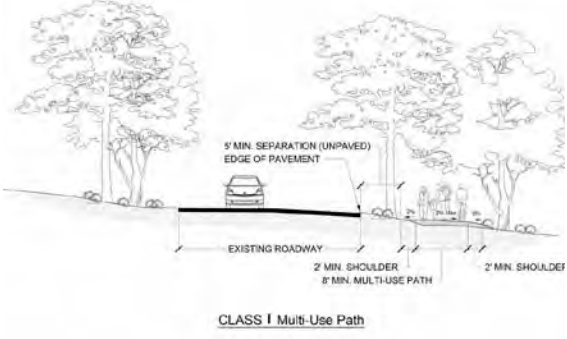

Table 8-5: Segment 5	
Length: 3.6 miles	Name: Stony Point Road, Mecham Road to Petaluma City Limits
	Type: Class I Rapid Route adjacent to Stony Point Road
Description: Stony Point Road, Mecham Road to Petaluma City limits. Preferred alignment on west side, with potential off road connection on Stony Point Byway (Segment D). Alternate alignment on east side.	
Trail would provide connection to Stony Point Byway (Segment D). Retaining walls may be needed in this area due to adjacent slopes.	
Typical Section	Photo
	



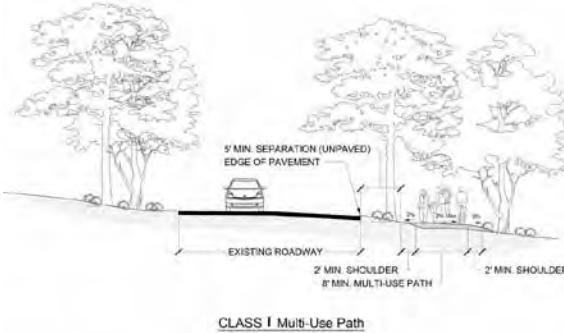
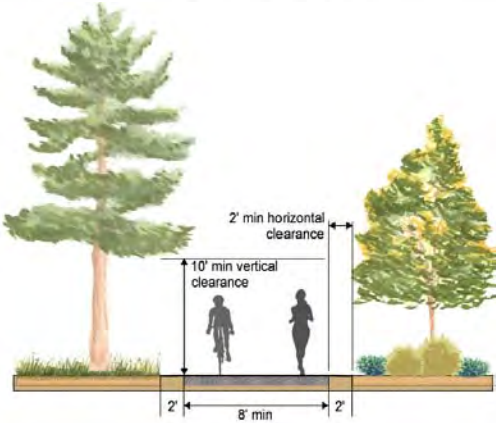
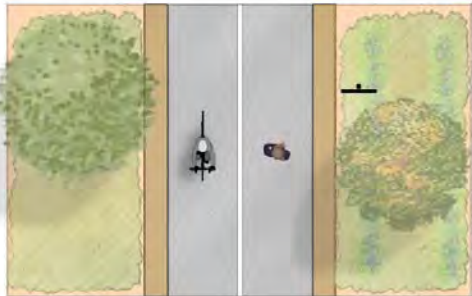


Table 8-6: Segment 6	
Length: 4.4 miles	Name: Petaluma City Limits
	Type: Class I rapid route, Stony Point Road, Class I relaxed, Petaluma River and former Railroad trail; Class IV along Petaluma Blvd. North
Description: Petaluma City trails. Close gap in Petaluma River Trail at Denman Reach, and north and south sides of Factory Outlet mall. Connect to SMART Trail via trail on Old Corona Road and former railroad right of way. Complete sidewalk improvements and bicycle lanes on Petaluma Blvd. North, north of Bailey Road to Industrial Avenue.	
Typical Section	Photo
 <p>CLASS I Multi-Use Path</p>  	 <p>Denman Reach – Petaluma River Trail</p> 



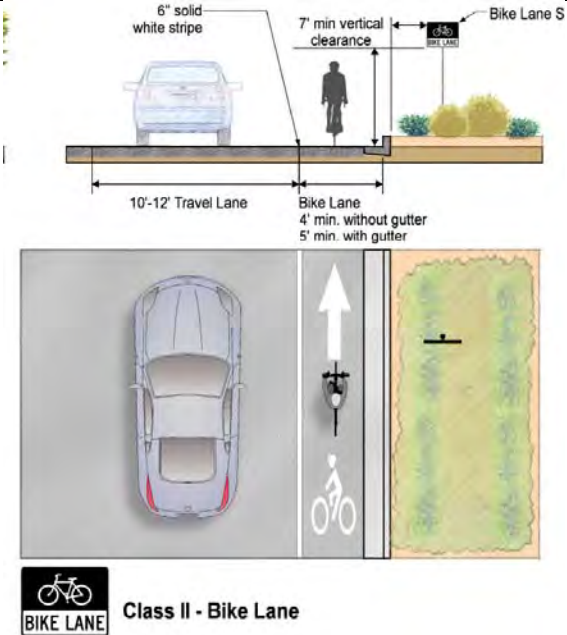

Table 8-7: Connecting Trails	
Map Number: A	Name: Bloomfield Road-Lone Pine
	Type: Class II
Length: 2.5 miles	
Typical Section	Photo
 <p>6" solid white stripe</p> <p>7' min vertical clearance</p> <p>Bike Lane S</p> <p>10'-12' Travel Lane</p> <p>Bike Lane 4' min. without gutter 5' min. with gutter</p> <p>Class II - Bike Lane</p>	
<p>Details: Bicycle and pedestrian improvements such as bike lanes, signage, striping and/or delineated path for pedestrians to facilitate school/neighborhood use. Not a Class I trail. This segment, as well as local road improvements would likely be completed as part of Public Works roadway improvements.</p>	



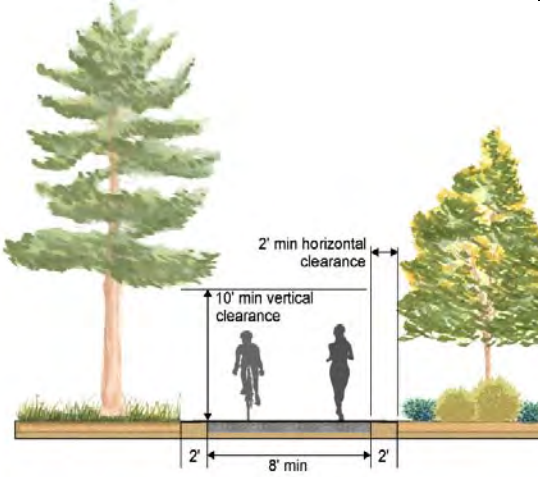
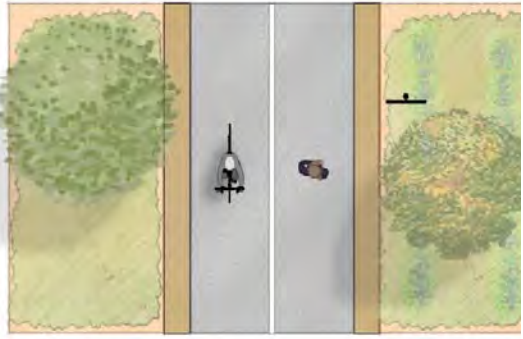


Table 8-7: Connecting Trails	
Map Number: B	Name: Old Gravenstein Highway Byway
	Type: Class I
Length: 0.7 miles	
Typical Section	Photo
   <p>Class I - Bike Path</p>	
Details: Class I path along northeast side of Old Gravenstein Highway to bypass SR 116. New bridge crossing or improvements to be provided at Blucher Creek.	



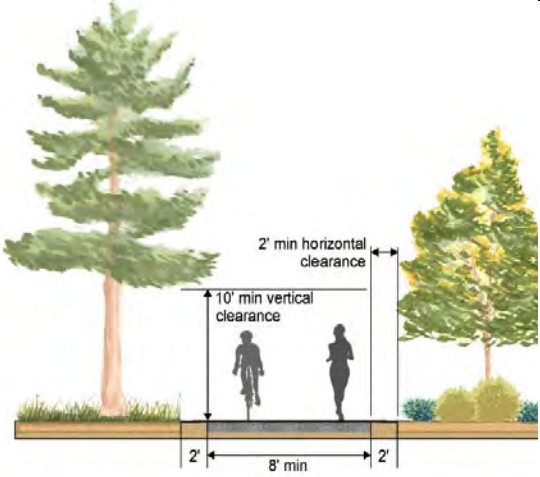
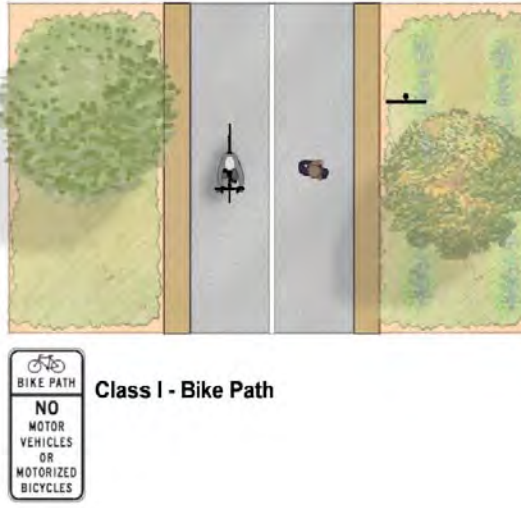


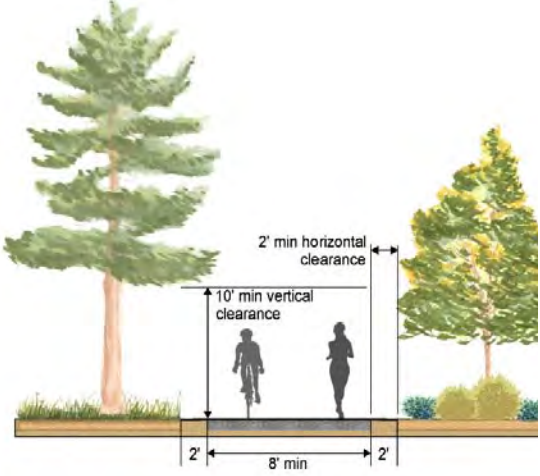




Table 8-7: Connecting Trails	
Map Number: C	Name: Laguna Connector Trail
	Type: Class I
Length: 4.5 miles	
Typical Section	Photo
 	 
Details: Class I Path on SCWA ROW to connect to Laguna de Santa Rosa Trail. Trail improvements needed to Laguna de Santa Rosa Trail. Precise alignment TBD on SCWA lands subject to owner agreement, as well as City of Santa Rosa lands, and precise route west of Llano Road to Old Gravenstein Highway. If agreement with landowners is not obtained, the alternate alignment for this segment is to connect at Llano Road and/or Stony Point Road and along Gossage Creek.	



Table 8-7: Connecting Trails	
Map Number: D	Name: Stony Point Byway
	Type: Class I
Length: 1.2 miles	
Typical Section	Photo
   <p>Class I - Bike Path</p>	 
Details: Former rail corridor, owned by County and SMART. Trail along publicly-owned former railroad line (including lands owned by SMART) between Mecham Road and extension of West Railroad Avenue.	



Staging Areas



As part of a complete regional trails network, staging areas may be provided to serve area visitors and to supplement existing staging areas within the City of Petaluma at the Petaluma River Trail, Denman Reach, and at Stony Point Road at the Laguna Discovery Trail. Potential improvements to be provided at staging areas would include parking facilities, accessible parking, trash receptacles, restroom, drinking fountain, interpretive signage, and/or staging for equestrians or school groups.



Potential staging areas include:

- Old Gravenstein Highway at SR 116
- Llano Road at City of Santa Rosa Water Reuse Operations Laguna Treatment Plant, or Old Llano Road (former ROW) at SR 116
- Petaluma River at Stony Point Road



8.3 BIKEWAY DESIGN AT STUDY INTERSECTIONS

The following section provides a narrative of design features and design considerations at each of the 10 study intersections, including the proposed bikeway design adjacent to the intersections and safety features at the intersection crossings. **Figures P-1** through **P-10** illustrate potential intersection improvements to serve pedestrians and bicyclists.

State Route 116 / Lynch Road



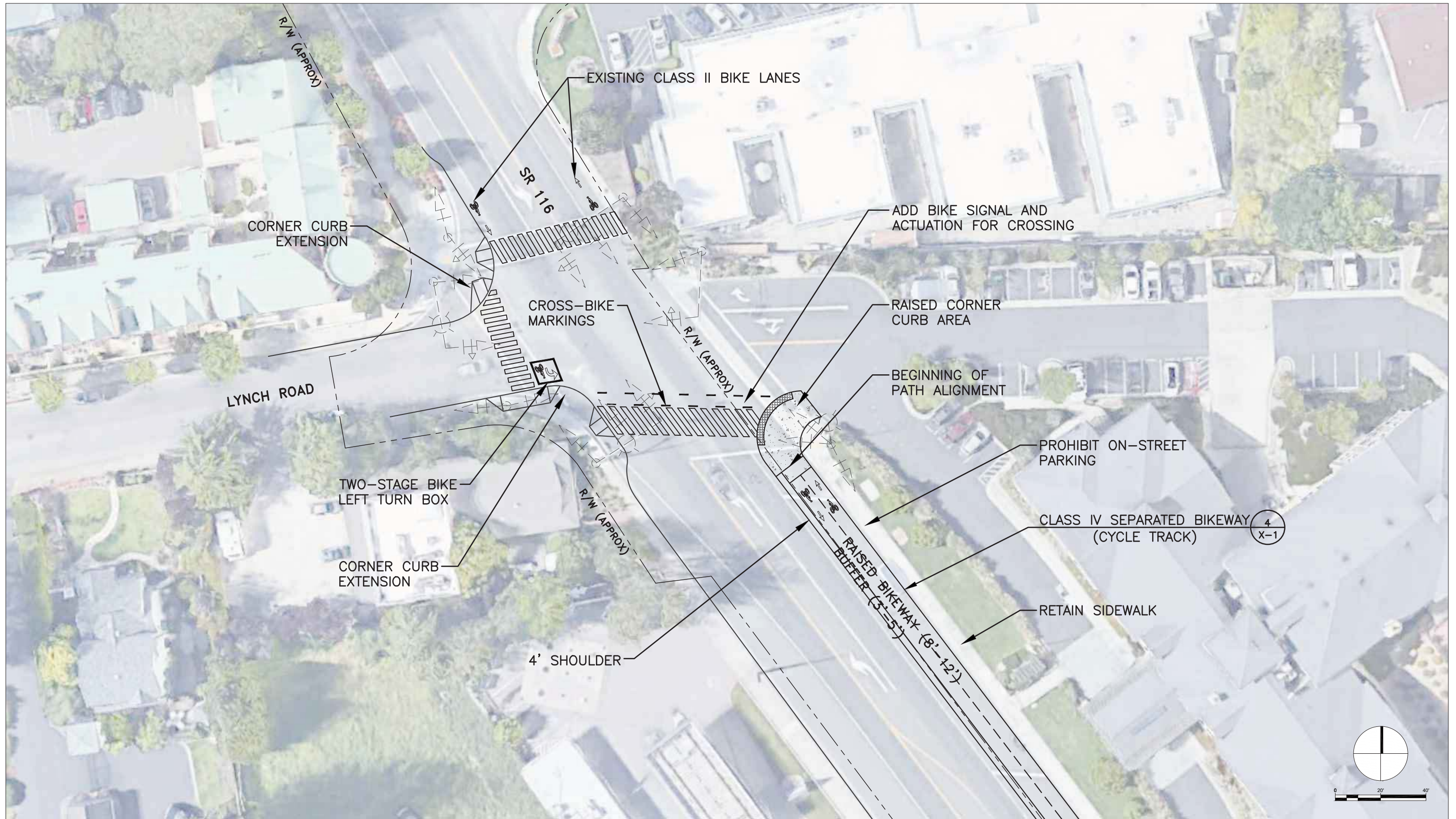
Lynch Road is a proposed transition point from the existing Class II Bike Lanes to a proposed two-way bikeway on the east side of State Route (SR) 116. The existing traffic signal would afford bicyclists the opportunity to transition from one-way travel on each side of the highway to a two-way facility. Modifications to the corner curb ramps (bulb-outs), traffic signal equipment, and pavement striping would be needed to accommodate the bicycle crossing. The paved shoulder area on the east (northbound) side of SR 116 would be reconstructed as a Class IV Separated Bikeway; the existing sidewalk would remain in place for pedestrian travel.

State Route 116 / Bloomfield Road

Depending on available right of way, the Class IV Separated Bikeway would transition to a Class I Multiuse Path between Lynch Road and Bloomfield Road, potentially south of Cooper Road. The multiuse path is proposed with a shoulder and buffer with guardrail to protect bicyclists from adjacent vehicle traffic. The bike path would remain on the north side of SR 116 through the Bloomfield Road intersection. Improvements at the intersection include new raised corner curb areas and curb ramps to facilitate bicycle and pedestrian crossings across SR 116.

State Route 116 / Lone Pine Road

A Class IV Separated Bikeway is proposed north and south of the Lone Pine Road intersection. The raised bikeway and parallel sidewalk would be designed to minimize impacts to adjacent land uses on the



Parisi
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Sausalito, CA 94965
(415) 649-6000

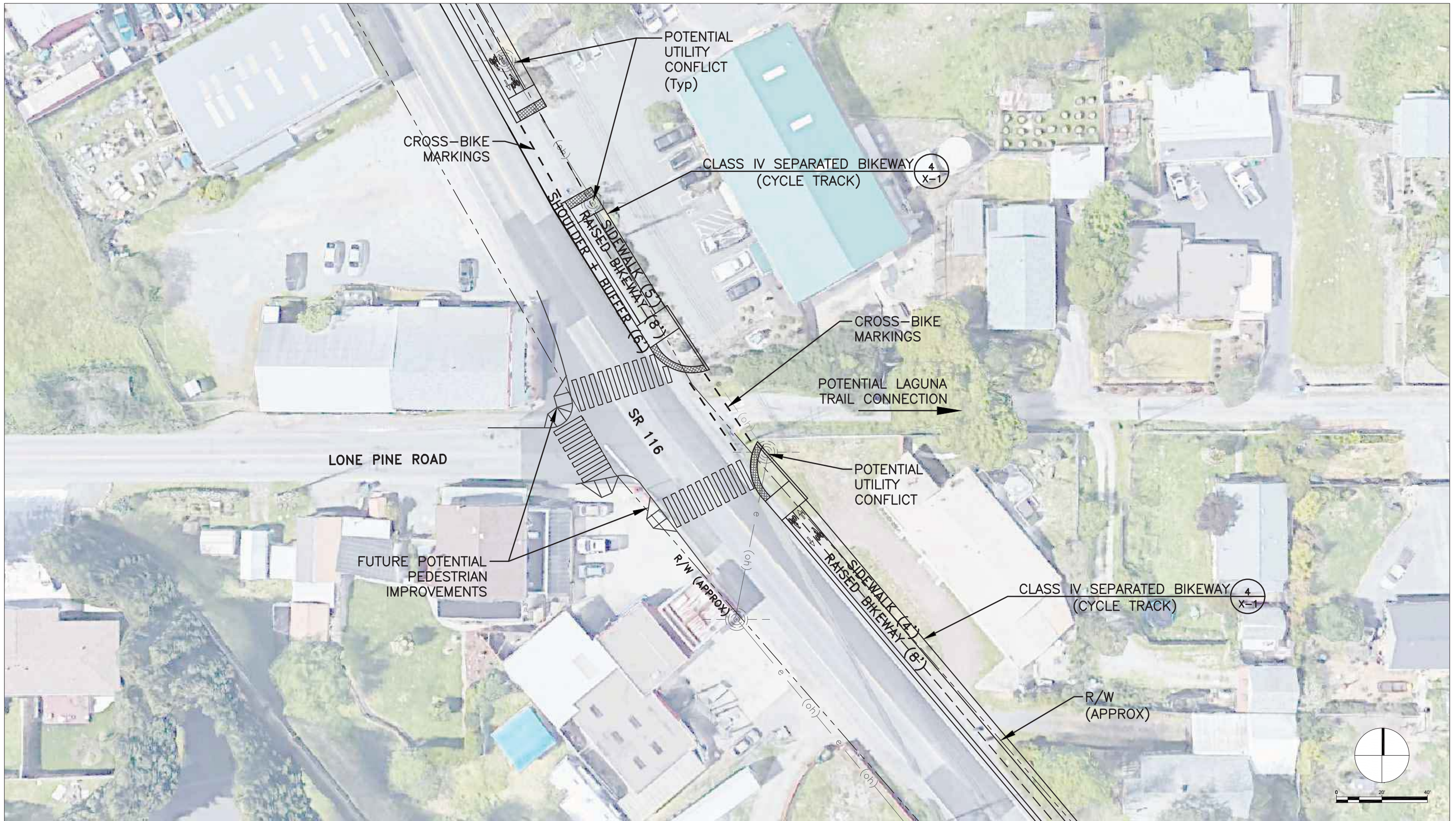
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DESIGNED: RN, HA	APPROVED: DP

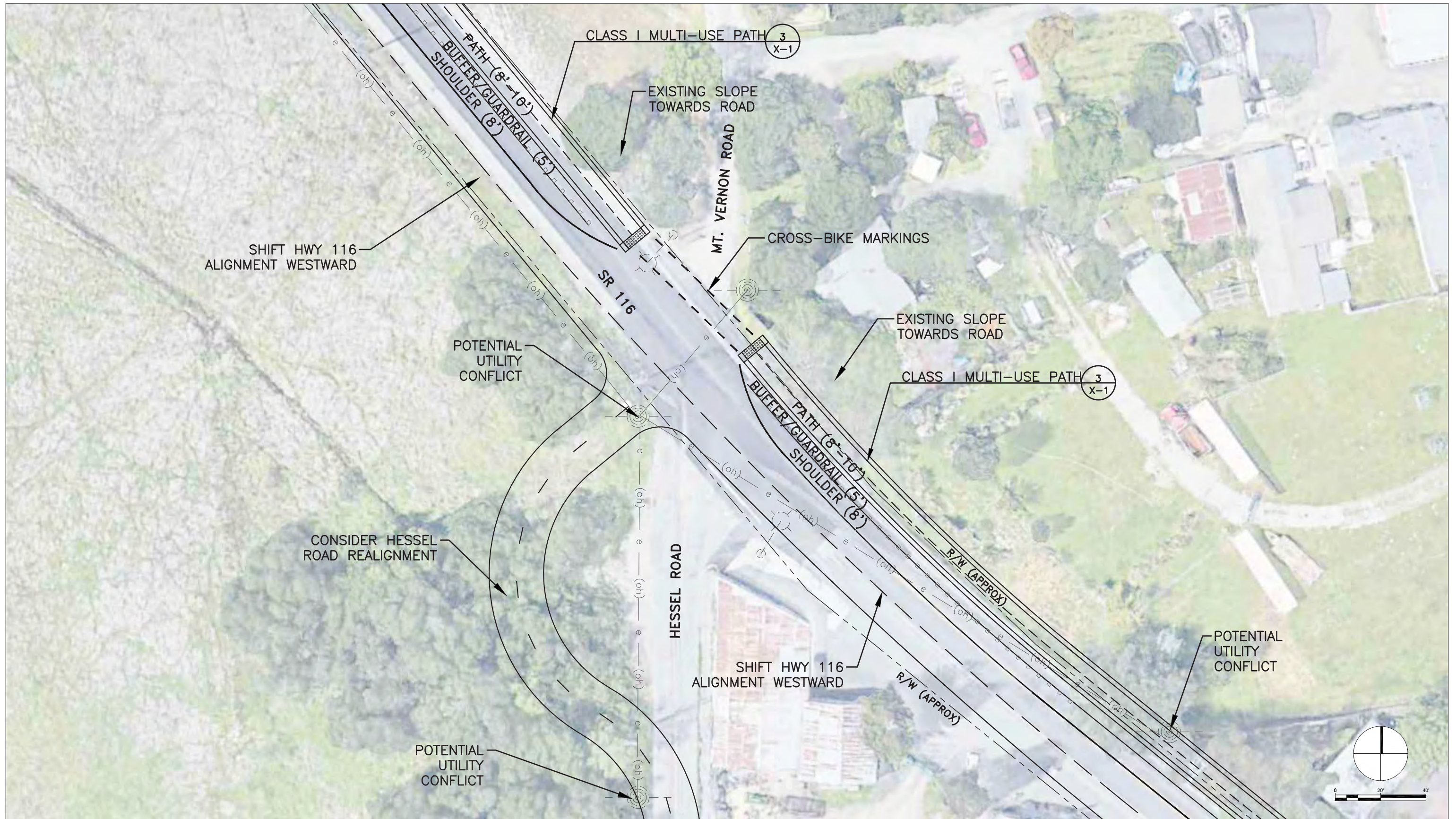


COUNTY OF SONOMA
PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY
STATE ROUTE 116 - LYNCH ROAD CONCEPTUAL PATH ALIGNMENT



REVISIONS		DATE	SCALE
		01/11/2018	1" = 20'
		PTC PROJECT NO.	16030
		DRAWING	P-1
		SHEET NO.	1 OF 11
NO.	DESCRIPTION		





Parisi
TRANSPORTATION CONSULTING

1750 Bridgeway, Suite B208
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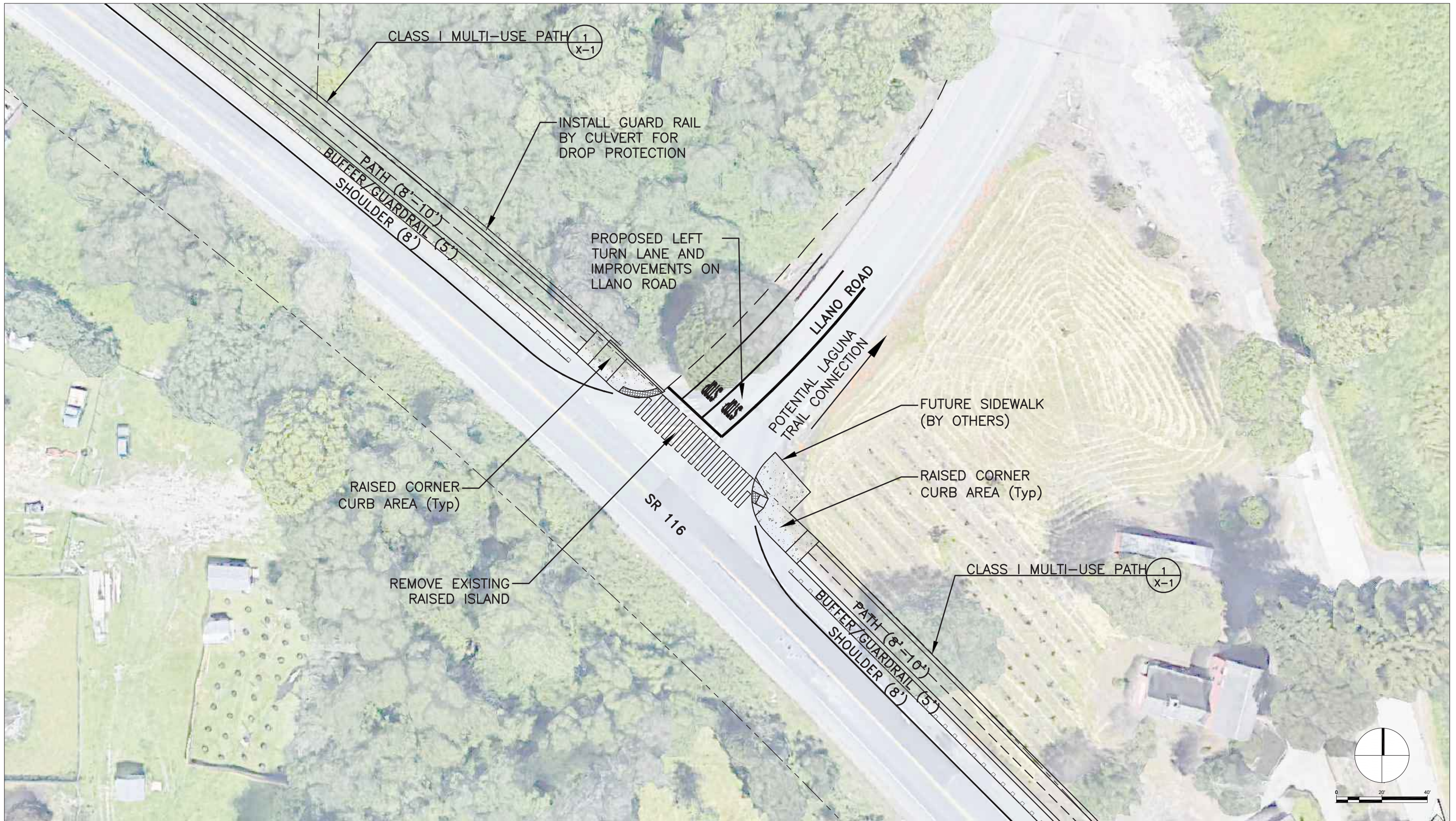
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DESIGNED: RN, HA	APPROVED: DP

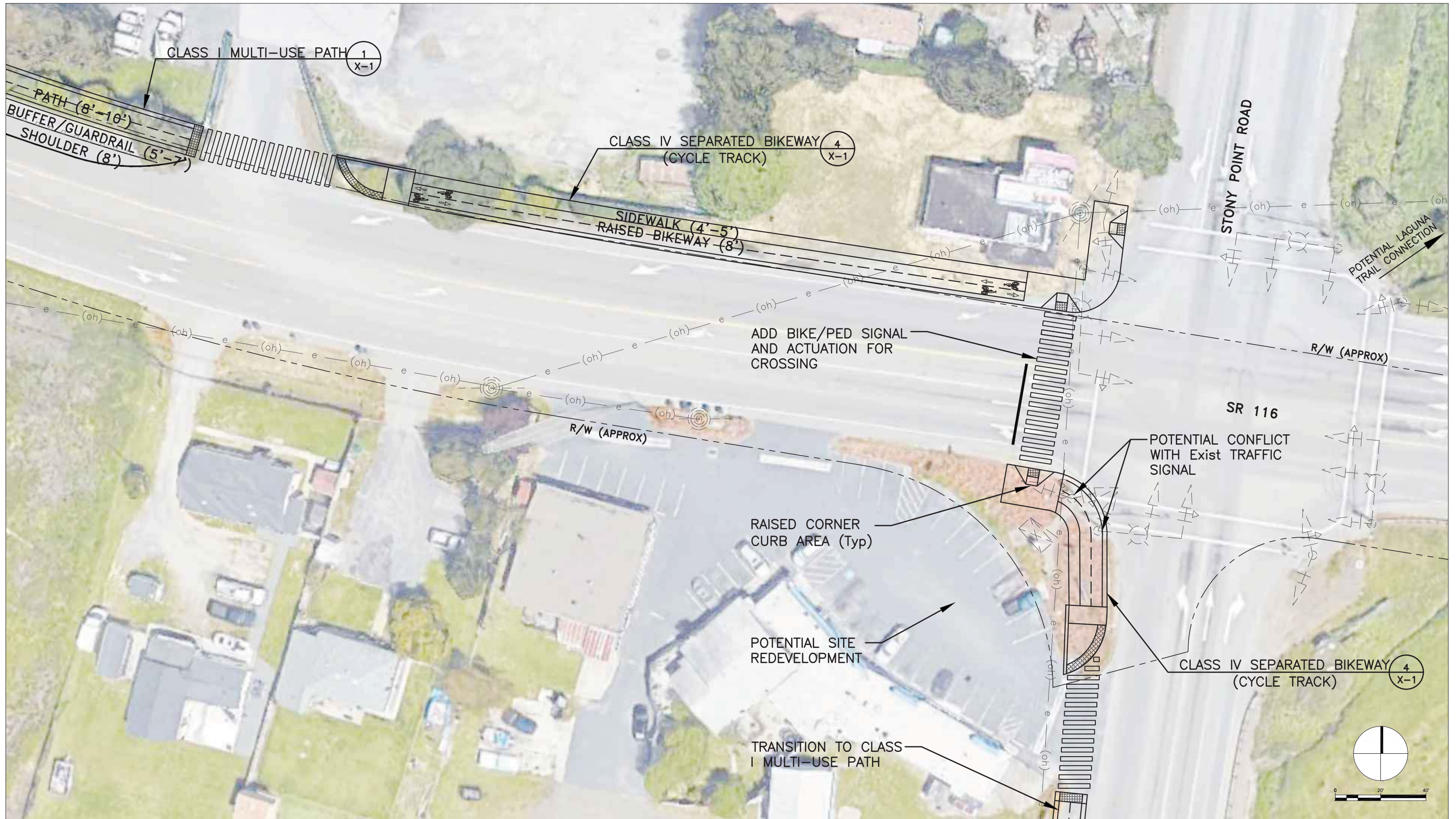


COUNTY OF SONOMA
PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY
STATE ROUTE 116 - MT. VERNON ROAD CONCEPTUAL PATH ALIGNMENT



REVISIONS		DATE	SCALE
<div><div></div><div></div><div></div><div></div></div>		01/11/2018	1" = 20'
		PTC PROJECT NO.	16030
		DRAWING	P-4
		SHEET NO.	4 OF 11
NO.	DESCRIPTION		





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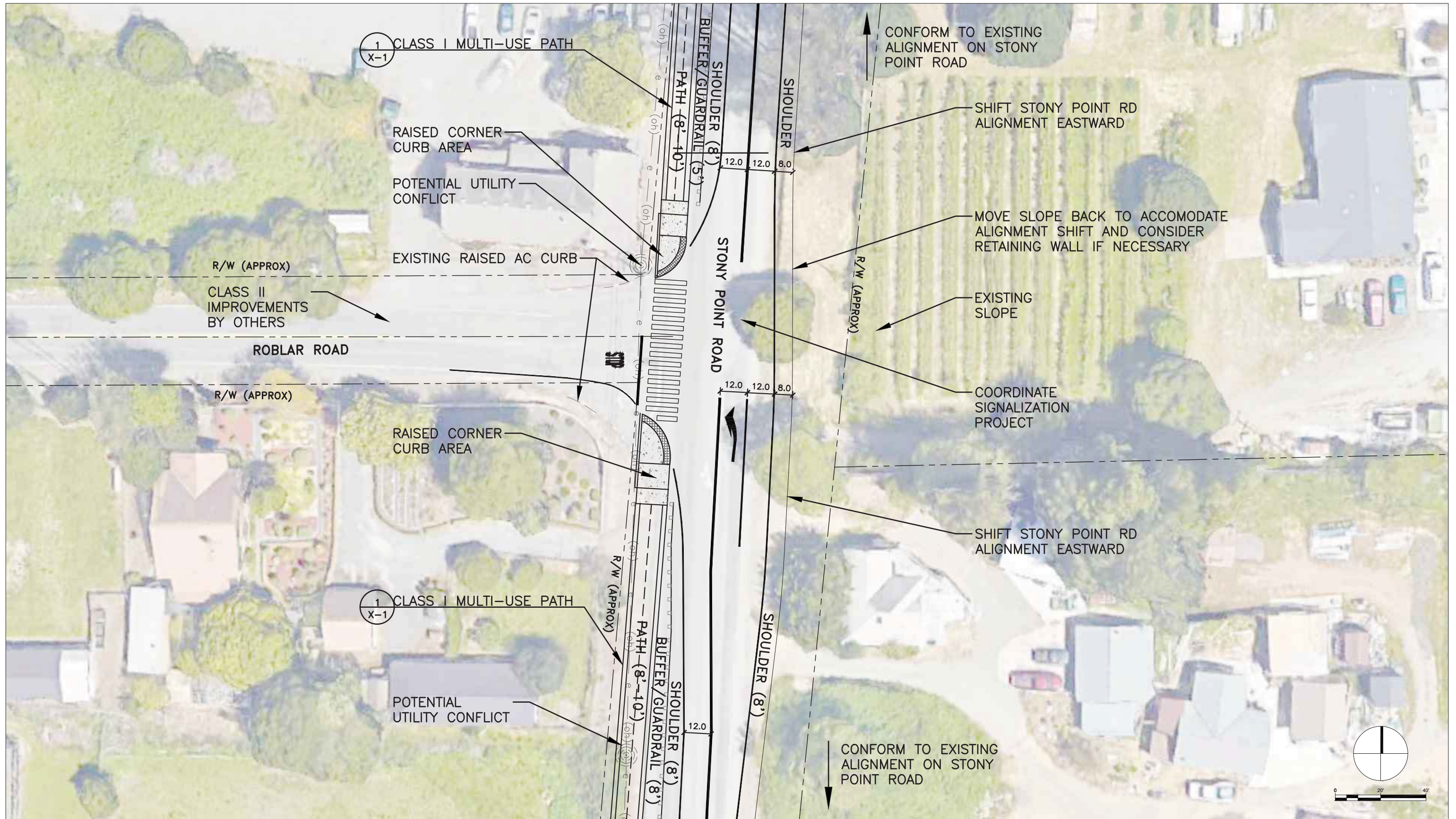
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DESIGNED: RN	APPROVED: DP



COUNTY OF SONOMA
PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY
STATE ROUTE 116 - STONY POINT ROAD CONCEPTUAL PATH ALIGNMENT



REVISIONS		DATE	SCALE
		01/11/2018	1" = 20'
		PTC PROJECT NO.	16030
		DRAWING	P-6
		SHEET NO.	6 OF 11
NO.	DESCRIPTION		



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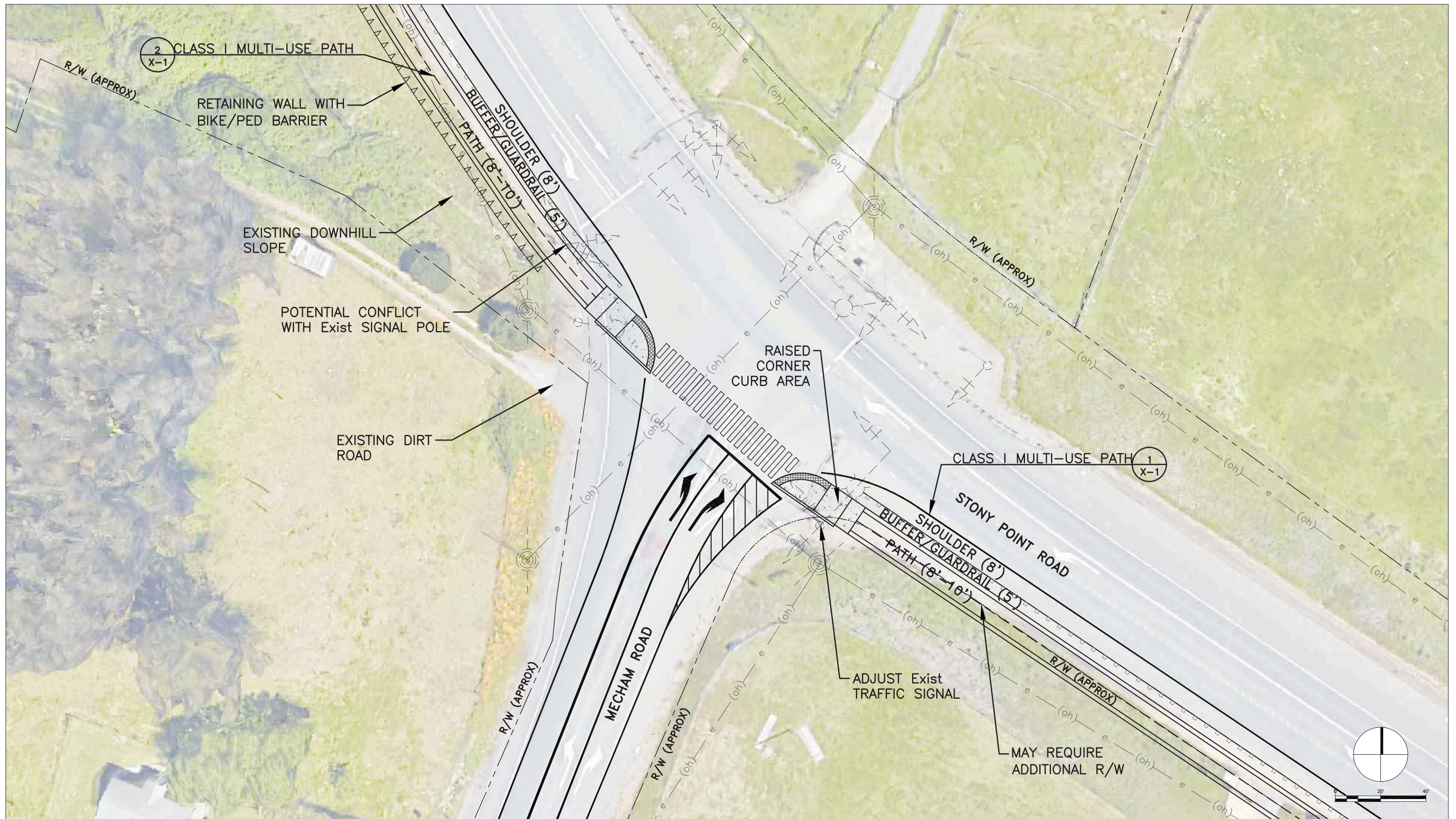
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DESIGNED: RN	APPROVED: DP



COUNTY OF SONOMA
PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY
STONY POINT ROAD - ROBLAR ROAD CONCEPTUAL PATH ALIGNMENT



REVISIONS		DATE	SCALE
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		PTC PROJECT NO.	16030
		DRAWING	P-7
		SHEET NO.	7 OF 11
NO.	DESCRIPTION		



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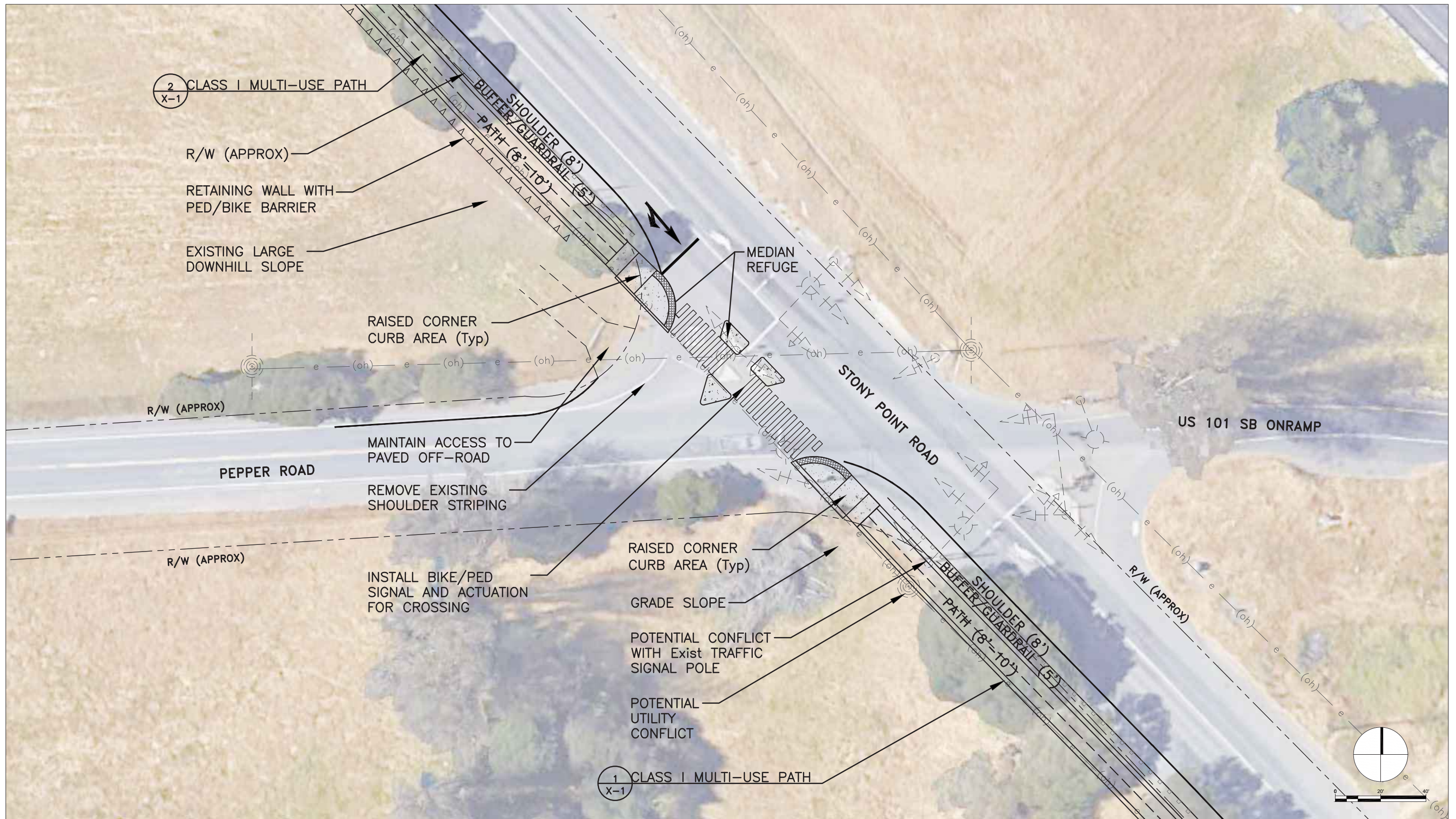
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DESIGNED: RN	APPROVED: DP



COUNTY OF SONOMA
PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY
STONY POINT ROAD - MECHAM ROAD CONCEPTUAL PATH ALIGNMENT



REVISIONS		DATE	SCALE
		01/11/2018	1" = 20'
		PTC PROJECT NO.	16030
		DRAWING	P-8
		SHEET NO.	8 OF 11
NO.	DESCRIPTION		



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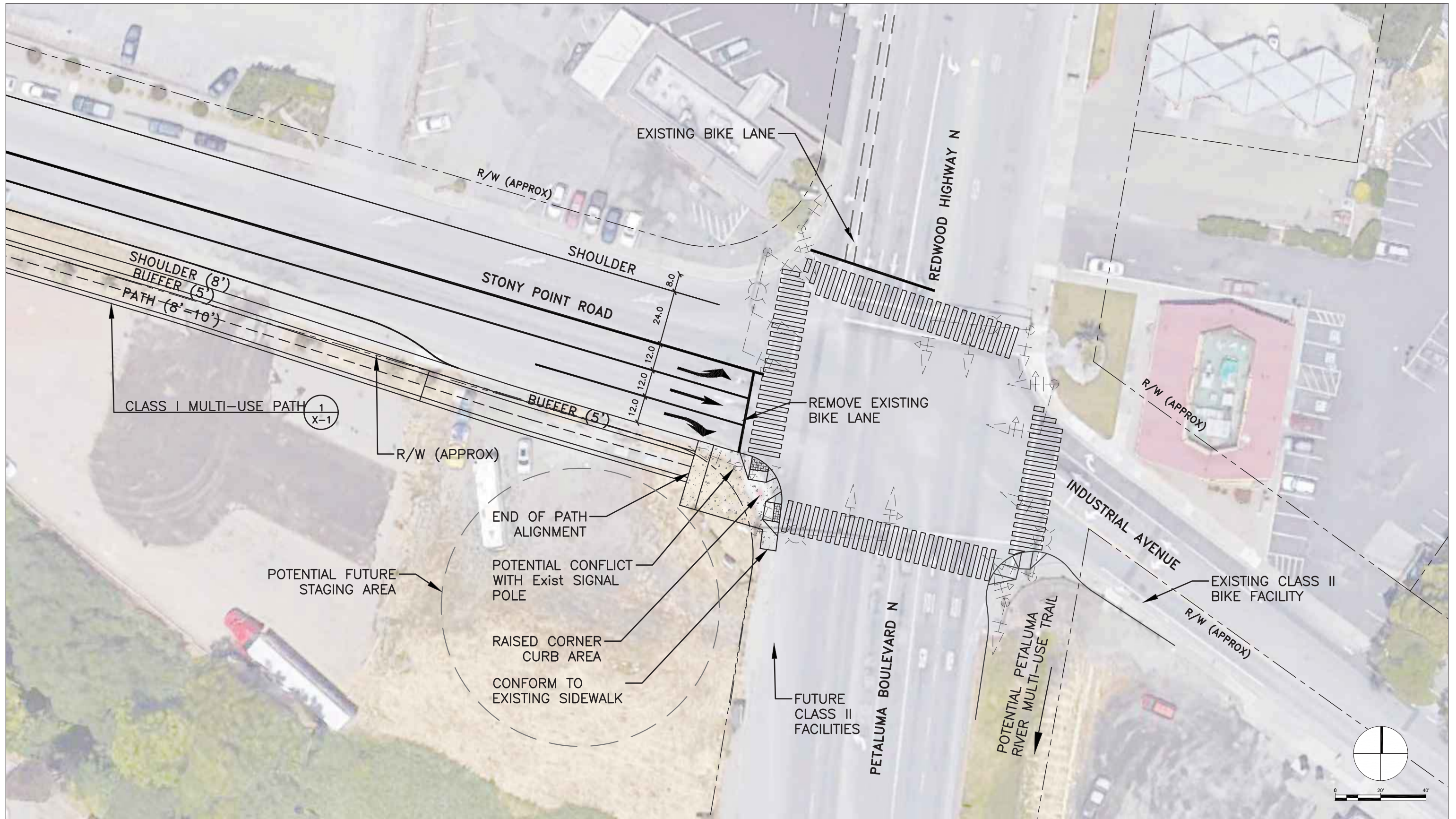


COUNTY OF SONOMA
PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY
STONY POINT ROAD - PEPPER ROAD CONCEPTUAL PATH ALIGNMENT



REVISIONS		DATE	SCALE
1		01/11/2018	1" = 20'
2			
3			
4			
5			
NO.	DESCRIPTION		

PTC PROJECT NO.	16030
DRAWING	P-9
SHEET NO.	9 OF 11



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DESIGNED: RN	APPROVED: DP



COUNTY OF SONOMA

PETALUMA - SEBASTOPOL TRAIL FEASIBILITY STUDY

STONY POINT ROAD - PETALUMA BOULEVARD CONCEPTUAL PATH ALIGNMENT



REVISIONS	
NO.	DESCRIPTION

DATE	01/11/2018	SCALE	1" = 20'
PTC PROJECT NO.	16030		
DRAWING	P-10		
SHEET NO.	10	OF	11



north / east side of SR 116. The bikeway would transition back to a Class I Bike Path as allowed by available right-of-way and as the intensity of adjacent uses decreases. The intersection is a potential connection to the Laguna de Santa Rosa Trail.

State Route 116 / Hessel Road / Mt. Vernon Road

A Class I Bike Path is proposed in the vicinity of Hessel Road and Mt. Vernon Road. The alignment of SR 116 may need to shift westward to keep the path within the public right-of-way. The County should consider realigning Hessel Road to reduce the skew angle of approach, which could improve driver sight distance and vehicle traffic safety.

State Route 116 / Llano Road

A Class I Bike Path is proposed in the vicinity of Llano Road. The path would remain on the north side of SR 116. The intersection is a potential connection to the Laguna de Santa Rosa Trail. Improvements proposed by others for the Llano Road approach would add a separate turn lane and a future sidewalk.

State Route 116 / Stony Point Road

The SR 116 / Stony Point Road intersection is proposed as the transition point for the path alignment, from the north side of SR 116 to the west side of Stony Point Road. Class IV Separated Bikeways with a parallel sidewalk are proposed near the intersection to minimize the impact to adjacent land uses. The raised bikeway would provide protection to bicyclists from turning vehicles, which would be traveling at lower speeds than other segments of SR 116 and Stony Point Road. Modifications to the existing traffic signal and new corner curbs would be needed to facilitate the proposed bicycle crossing. The intersection is a potential connection to the Laguna de Santa Rosa Trail.

Stony Point Road / Roblar Road

Class I Bike Path is proposed on the west side of Stony Point Road near Roblar Road. The roadway alignment may need to be shifted eastward to avoid conflicting with the Washoe House. There is an existing slope on the east side of Stony Point Road that may require a retaining wall to accommodate the roadway realignment. There are separate proposals to add a traffic signal to the intersection, and Class II Bike Lanes to Roblar Road.

Stony Point Road / Mecham Road

The proposed path would continue as a Class I multiuse path with shoulder and guardrail on the west side of Stony Point Road through the Mecham Road intersection. The existing downhill slope on the west side of Stony Point Road may require a retaining wall to accommodate the proposed path. Raised corner curbs are proposed at the intersection to provide a protected staging area for path users when crossing the intersection.

Stony Point Road / Pepper Road

The proposed path design at Stony Point Road / Pepper Road is similar to the Mecham Road area, with the path continuing as a Class I multiuse path with shoulder and guardrail on the west side of Stony Point Road. Like Mecham Road, the west side of Stony Point Road may need to be widened with a retaining wall to accommodate the proposed path where there is an existing downhill slope. Raised corner curbs and signal modifications are proposed to accommodate path users when crossing the intersection.



Stony Point Road / Petaluma Boulevard / Redwood Highway N

The Stony Point Road / Petaluma Boulevard / Redwood Highway intersection is the proposed southern terminus of the Petaluma Sebastopol Trail. The path would transition into a raised bikeway as it enters Petaluma. A staging area could be sited at the southwest corner of the intersection. The intersection is a potential connection to the proposed Petaluma River Multiuse Trail. Bicyclists could continue easterly via existing Class II bike lanes on Industrial Avenue and southerly via future bike lanes proposed for Petaluma Boulevard.



9. DESIGN GUIDELINES



This section provides guidelines for the design of the Petaluma Sebastopol Trail. The design guidelines reflect the management needs, operational responsibilities and regulatory authority of project stakeholders, as well as community concerns regarding the trail expressed at the community workshops and comments received regarding the Trail.

It is likely that the ultimate trail will be a braided network of trail segments, including separated, off-street segments that are suitable for pedestrian, equestrian, and “relaxed” (low speed) bicycle use; separated street/highway segments that support “rapid” transit-oriented bicycle use; and improvements to local rural roads to facilitate bicycling and walking connections to schools, churches, stores and other destinations. Where routes cross roads, crossing improvements or grade separation structures will be needed to minimize trail user conflicts; bridges or boardwalks may be needed at creeks, wetlands and other sensitive areas.

The Design Guidelines form the basis for decision-making regarding trail alignment, type and amenities, including trail use and type of user; compliance with accessibility standards; aesthetic considerations, and associated traffic improvements that may be needed to provide safe crossings or to buffer trail users from adjacent vehicular use.

Implementation of the trail will require a precise design that complies with a variety of local, state and federal guidelines for pedestrian and bicycle facilities. This section is organized as follows:

- Regulatory Standards
- Caltrans Bikeway and Pedestrian Facilities Guidelines



- Trail Accessibility
- Aesthetic Considerations
- Trail Components
- Trail Surface
- Trail Width
- Trail Structures
- Fencing and Barriers
- Signage and Wayfinding
- Site Furnishings, Trailheads and Staging Areas
- Trail Operations and Use Guidelines

9.1 CALTRANS STANDARDS

Portions of the trail will likely cross or be within Caltrans ROW along SR116; in addition, Caltrans requires project review and coordination when there is funding from state or federal sources administered by them. Trail implementation within Caltrans ROW would likely need to comply with Caltrans Highway Design Manual, discussed below.

Caltrans Bikeway and Pedestrian Facilities Guidelines

The following documents provide general direction regarding design standards for non-motorized facilities within Caltrans ROW:

- Caltrans Highway Design Manual (HDM): Bicycle Transportation Design, Chapter 1000, last updated December 16, 2016
- Caltrans Design Information Bulletin (DIB) 82-05 Pedestrian Accessibility Guidelines For Highway Projects, October 2013
- Caltrans Project Development Procedures Manual, July 1999. Chapter 17, Encroachments in Caltrans Right of Way
- Caltrans Project Development Procedures Manual, July 1999. Chapter 31, Nonmotorized Transportation Facilities

Caltrans Highway Design Manual (HDM), Bicycle Transportation Design

The Caltrans Highway Design Manual contains the policies and procedures for design of all facilities that are part of the state's transportation system. Shared-use trails, bicycle lanes, and other pedestrian and bicycle facilities also fall under the regulatory requirements of the Caltrans Highway Design Manual, Chapter 1000, Bicycle Transportation Design. Where possible, the trail will be designed to comply with both federal guidelines as well as Caltrans standards for shared use, which are contained in the Highway Design Manual. This is especially important where the trail is within Caltrans' ROW, subject to Caltrans-administered funding, or where a Caltrans Design Exception will be needed.

The goal of the Petaluma Sebastopol Trail is to provide a separated, shared use facility where possible, with design to comply with Caltrans requirements for bikeway systems. This is defined by Caltrans as Class I bikeways (bike paths): facilities with exclusive right of way, with cross flows by vehicles minimized. It is likely that portions of the route, such as connecting on-street segments (with low traffic volumes) might be designed as bicycle lanes or designated routes (Class II or Class III facilities), with corresponding requirements for width, striping and signage. It should also be noted that any trail segments proposed in Caltrans ROW would need to comply with requirements of the federal Americans with Disabilities Act.



Caltrans policies have recently shifted to allow for more flexible accommodation of bicycle and pedestrian facilities within the state roadway system, with a special emphasis on safety. This includes issuance of Deputy Directive 64-R2: Complete Streets - Integrating the Transportation System, to allow greater flexibility in design as it relates to the provision of multimodal facilities. The memorandum states that Caltrans is continually improving its standards and processes to provide flexibility while maintaining the safety and integrity of the state's transportation system, including a recent update to the Highway Design Manual (HDM) to facilitate the design of Complete Streets, recognizing that the State Highway system needs to be multimodal, not just for cars and trucks.

Chapter 1000: Bicycle Transportation Design

Chapter 1000 of the HDM (as revised November 2017) specifies the requirements for design of bikeway and pedestrian facilities. Caltrans has five categories of facilities:

Shared Roadway (No Bikeway Designation). This is the current condition for most of the Study area, including all of the rural roads. No separate bicycle or pedestrian facilities are provided. Chapter 1000 notes that providing 4-foot paved roadway shoulders with a standard 4 inch edge line can significantly improve the safety and convenience for bicyclists and motorists along such routes.

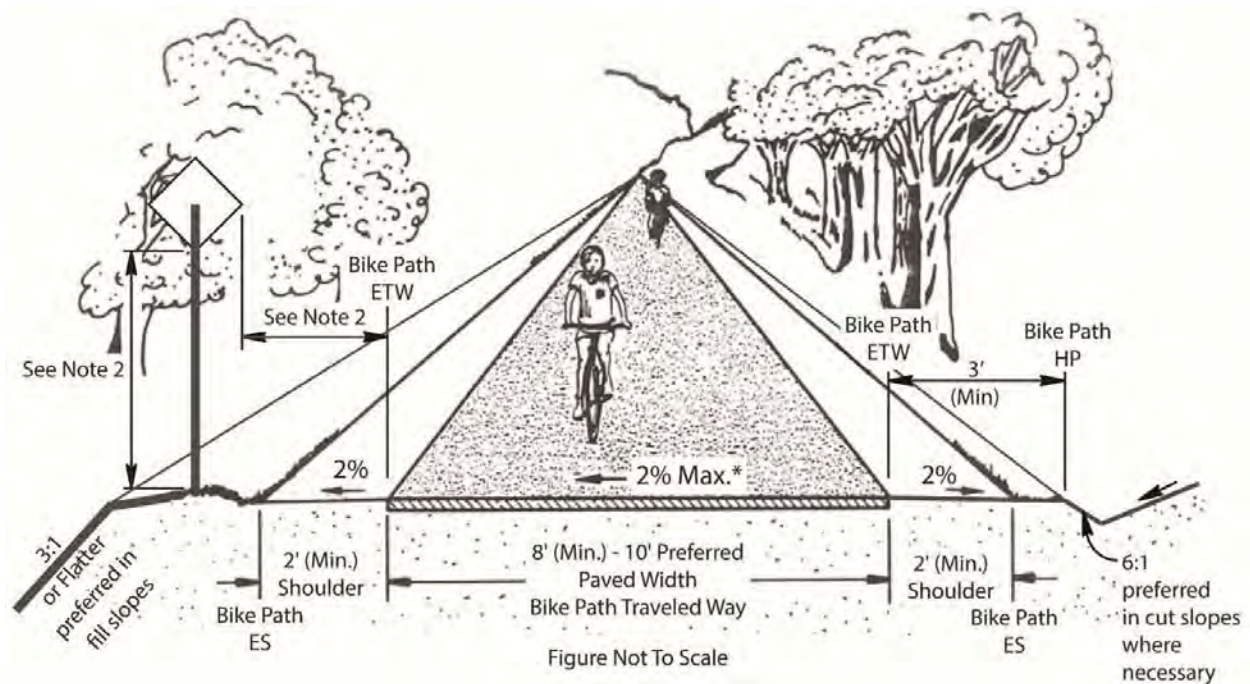
Class I Bikeway (Bike Path). Class I bikeways (bike paths) are facilities with exclusive ROW by bicycles and pedestrians, with cross flows by vehicles minimized. Class I bikeways, unless adjacent to an adequate pedestrian facility, are for the exclusive use of bicycles and pedestrians, therefore any facility serving pedestrians must meet accessibility requirements. Class I facilities are required to have a minimum 8 foot width (10 ft. preferred), with a minimum 2 foot (3 foot preferred) shoulder (16 feet total), as well as 5 foot separation from a travel way (road or street). The maximum elevation/grade for Class I facilities is 5%. Within a structure such as a bridge, the minimum clear width is ten feet.

The HDM states:

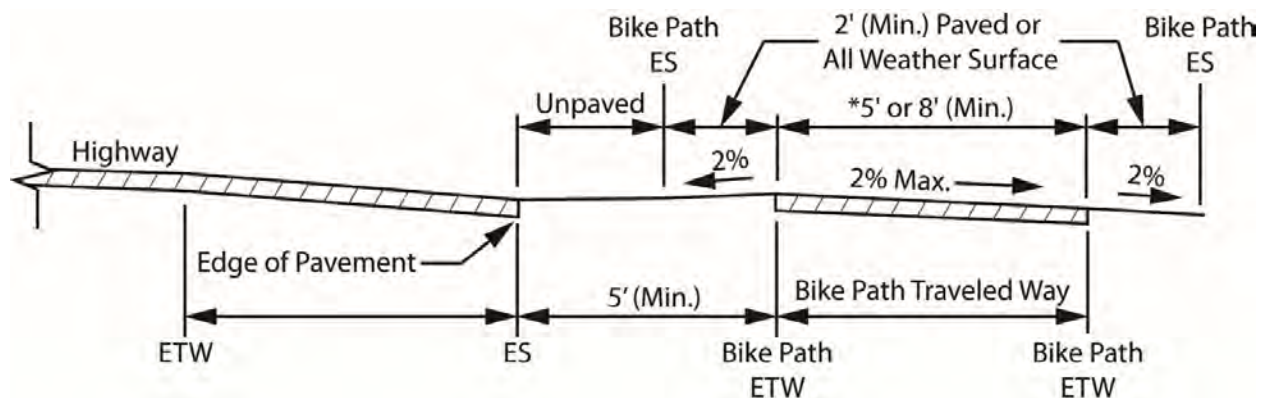
*Bike Paths Parallel and Adjacent to Streets and Highways. A wide separation is recommended between bike paths and adjacent highways (see Figure 1003.1B). **The minimum separation between the edge of traveled way of a one-way or a two-way bicycle path and the edge of traveled way of a parallel road or street shall be 5 feet plus the standard shoulder widths. Bike paths within the clear recovery zone of freeways shall include a physical barrier separation.** The separation is unpaved and does not include curbs or sidewalks. Separations less than 10 feet from the edge of the shoulder are to include landscaping or other features that provide a continuous barrier to prevent bicyclists from encroaching onto the highway. Suitable barriers may include fences or dense shrubs if design speeds are less than or equal to 45 miles per hour. Obstacles low to the ground or intermittent obstacles (e.g., curbs, dikes, raised traffic bars, posts connected by cable or wire, flexible channelizers, etc.) are not to be used because bicyclists could fall over these obstacles and into the roadway.*



Caltrans Figure 1003.1A
Two-Way Class I Bikeway (Bike Path)¹⁷



Caltrans Figure 1003.1B
Typical Cross Section of Class I Bikeway (Bike Path) Parallel to Highway



Class II Bikeway (Bike Lane). Bike lanes are facilities that are usually provided along roads with significant bicycle demand. They are delineated by a stripe along the edge of the traveled way, and are a minimum of 4 feet wide when no gutter is present, 5 feet with a gutter, and 11-12 feet where parking is allowed. Bike lanes can be painted or striped to increase visibility, and are often used in urban areas adjacent to sidewalks. A Class II facility alone does not accommodate pedestrian use. In some areas, bike lanes are co-located within 8 foot roadway shoulders and shared with motor vehicles.

¹⁷ ETW is Edge of Traveled Way; ES is Edge of Shoulder



Class III Bikeway (Bike Route). Class III bikeways are designated routes that are shared with motor vehicles on the street. They are intended to connect discontinuous sections of bikeways, and established by placing bike route signs along the roadways. They may also be equipped with shared pavement markings, (“sharrows”), to inform the user of the route designation. These routes do not have designated bicycle or pedestrian improvements.

Class IV Separated Bikeway (Cycle Track). A Class IV Bikeway (separated bikeway) is a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking¹⁸. Separated bikeways are differentiated from Class I bikeways by their more proximate relationship to the adjacent roadway, and are not intended for pedestrian use; and from Class II bikeways by a vertical element. Separated bikeways can operate as one-way or two-way facilities (FHWA 2015, p. 13). The preferred combined width of a two-way separated bikeway is 12 feet (FHWA 2015, p. 81), with a three foot horizontal buffer area. Separated bikeway design typically follows the standards of design for the adjacent roadway facility.

Since pedestrian use within the cycle track is prohibited, use of cycle tracks would be a potential consideration only in urban sections of the trail where there is an adjacent sidewalk. Typically, a barrier separates the cycle track from adjacent motor vehicles unless it is protected by parking spaces, with a striped 3-foot clear space to allow vehicle access. Cycle tracks could be considered within the urban portions of Sebastopol or Petaluma, with additional analysis needed.

Caltrans Design Information Bulletin (DIB) 82-05 Pedestrian Accessibility Guidelines for Highway Projects, October 2013

This Design Information Bulletin provides guidance for the placement of pedestrian facilities within Caltrans ROW. Trails within the State Highway ROW are considered to be pedestrian facilities if pedestrians may traverse the path, either for their exclusive use or shared with other users.

Every highway within the State Highway right-of-way, regardless of the project sponsor, that proposes to construct pedestrian facilities must be designed in accordance with these policies and standards. There is a design exception process for structural or technical infeasibility. This applies to all work, including facilities maintenance and pavement management, which would necessitate the installation or retrofit of curb ramps and crosswalks within existing ROW. Facility requirements include:

- Curb ramps or sloped areas with detectable warning surface are required to eliminate barriers between street and pedestrian walkway
- Vehicular lanes and shoulders are not required to be accessible, but if determined to be a pedestrian route, then shall be accessible
- All surfaces on an accessible route shall be stable, firm, and slip resistant
- Stamped asphalt or concrete is not recommended, color is acceptable
- Vertical clearance shall be 80 inches high minimum
- If an accessible route has less than 60 inches clear width, then passing spaces at least 60 inches by 60 inches shall be located at intervals not to exceed 200 feet
- All walks with continuous gradients shall have resting areas, 5 feet in length, at intervals of 400 feet maximum

¹⁸ Caltrans Design Information Bulletin 89 (December 30, 2015) establishes the design criteria for Class IV facilities.



- Where pedestrian access routes are contained within a street or highway right-of-way, the grade of pedestrian access routes shall not exceed the general grade established for the adjacent street or highway. Where pedestrian access routes are not contained within a street or highway right-of-way, the grade of pedestrian access routes shall be 5.0% maximum.
- The cross slope of pedestrian access shall be 2.0% maximum.
- Slopes that are greater than 1V:20H (5.0%) will be considered ramps and must not exceed a 30-inch rise without landings.
- The maximum slope of a ramp shall not exceed 1V:12H (8.3%).
- Design must be in accordance with the *Highway Design Manual* for the appropriate bikeway classification (see above)
- Interpretive exhibits are also subject to accessibility requirements

Caltrans Project Development Procedures Manual, July 1999. Chapter 17, Encroachments in Caltrans Right of Way

Chapter 17 of the Caltrans Project Development Procedures Manual describes the policies and procedures for allowing encroachment of facilities within Caltrans ROW, and requirements for obtaining an Encroachment Permit. An encroachment, as defined in Section 660 of the Streets and Highways Code, can be any structure or object which is within the ROW but not a part of the Caltrans facility. Encroachments allow temporary or permanent use of highway ROW by a utility, a public entity, or a private party.

Encroachments also include any temporary or permanent break in access or use of the highway ROW: for grading, excavating, filling or removing of materials by public agencies, developers or private individuals. As stated in the Pedestrian Accessibility Guidelines discussed above, placement of pedestrian facilities within Caltrans property requires an Encroachment Permit, and facilities must be designed or retrofitted to be accessible. This documentation is required at the time of encroachment permit application.

According to the Caltrans Encroachment Permit Application Guide (Caltrans, August 2013), encroachment permits are necessary to:

*“Ensure the safety of the traveling public, Highway workers and permittees.
Protect, maintain and enhance the quality of the State Highway system during and after permitted work,
Ensure that the proposed encroachment is compatible with the primary uses of the State Highway system,
Protect the State’s and public’s investment in the Highway facility, and
Ensure that temporary uses of State Highway right of way for special events, filming etc. are conducted safely and with minimum inconvenience to the traveling public.”*

Typically, for Caltrans to approve a longitudinal encroachment permit, the following must be demonstrated as part of the permit process:

- There are no other feasible alternatives
- The encroachment area is not needed for maintenance or other traffic or safety improvements
- The facility design is safe for trail users and users of the adjacent highway facility and follows Caltrans Design Standards
- There are no significant environmental issues that cannot be mitigated.



Caltrans Project Development Procedures Manual, July 1999. Chapter 31, Nonmotorized Transportation Facilities

This Manual contains guidance for a “non-motorized transportation facility” which is a facility designed primarily for the use of pedestrians, bicyclists, or equestrians. It may be designed primarily for one of these uses or it may be designed as a joint-use facility. A non-motorized transportation facility may be part of the highway (such as a shoulder) or it may be separated from highway traffic for exclusive non-motorized use (such as a bike path or sidewalk). Any new projects for non-motorized transportation facilities along a State Highway or within its ROW will generally fall into one of the following categories:

- Replacement of an existing major route for nonmotorized traffic that is being severed or destroyed by freeway construction (S&H Code -- Section 888)
- Provision of a non-motorized facility along a new freeway corridor where non-motorized facilities do not exist (S&H Code -- Section 888.2)
- Provision of a non-motorized facility along a State Highway under a Cooperative Agreement at the request of a local agency (S&H Code -- Section 887.6)
- Provision of a nonmotorized facility along a State Highway based upon a finding that the traffic safety or capacity of the highway will be increased (S&H Code -- Section 887.8). The finding is made in consultation with appropriate law enforcement agencies.

In addition, any development of a State Highway project should address features beneficial to non-motorized traffic, including (but not limited to) widening shoulders, striping, and signing.

Money is allocated each year in the state budget for provision of non-motorized facilities. Section 887.8 of the S&H Code states that Caltrans may construct and maintain non-motorized transportation facilities approximately paralleling State Highways, after consulting with the law enforcement agency having jurisdiction over the highway. If Caltrans determines that a non-motorized facility approximately paralleling the highway would increase traffic safety or traffic capacity on the highway, Caltrans pays for the construction and maintenance of the non-motorized facility. Design of the non-motorized facilities must also be in accordance with the Highway Design Manual.

9.2 TRAIL ACCESSIBILITY

To the extent feasible, the Petaluma Sebastopol Trail will be designed to comply with applicable federal and state guidelines for disabled access. The Petaluma Sebastopol Trail is intended to be an all-weather shared-use trail, capable of accommodating pedestrians, bicycles, equestrians and universally accessible modes. Accessibility guidelines are provided by multiple agencies, and compliance would be applicable depending on the type of facility, implementing agency, and funding source. Guidelines include:



Americans with Disabilities Act (ADA) www.Access-Board.Gov

- Title 24, California Building Code
- Architectural Barriers Act, Final Guidelines for Outdoor Developed Areas, November 25, 2013
- *American Association of State Highway and Transportation Officials* (AASHTO) Manual of Uniform Traffic Control Devices (MUTCD)
- Institute of Traffic Engineering (ITE)
- Federal Highway Administration/National Highway Institute (FHWA, NHI)

The trail will be designed in accordance with ADA accessibility guidelines wherever feasible, which require a firm, stable surface for trails, and design accommodations for grade, cross-slope, width, etc. There are many design standards that provide guidance regarding trail design, and the trail segments will need to comply with one or more standards, depending upon funding, trail classification (hiking only, shared use, bikeway, etc.) and feasibility for compliance with applicable standards. There are numerous standards that may be applicable to implementation of the trail.

Access to project facilities by people of all abilities is subject to regulations and standards set forth by the United States Access Board. The Access Board is an independent federal agency that promotes equality for people with disabilities, and develops and maintains design criteria for the built environment. The Board provides technical assistance and training on these requirements and on accessible design and continues to enforce accessibility standards that cover federally funded facilities. Accessibility is regulated under the Americans with Disabilities Act (ADA), Title 24 of the California Building Code, and may be subject to standards of the Architectural Barriers Act (ABA), which applies to facilities on federal lands (or with federal funding).

Americans with Disabilities Act. The United States Congress enacted the Americans with Disabilities Act (ADA) in 1990 to address discrimination against individuals with physical and mental disabilities. The ADA requires that all facilities and buildings open to the public be accessible to those with disabilities. ADA standards for outdoor areas have not been finalized, but will likely be similar to standards for outdoor areas adopted as part of the ABA (see below). Design and implementation of portions of the trail that connect to parking areas, restrooms, trailheads or other physical facilities might also need to comply with federal regulations contained in the *ADA Accessibility Guidelines for Buildings and Facilities* (ADAAG) <http://www.access-board.gov/adaag/html/adaag.htm#4.3>. These guidelines require a 36-inch



minimum clear trail width, with passing space at minimum 200-foot intervals if the trail is less than 60 inches wide, depending upon the anticipated trail use.

Title 24, California Building Code. The California Building Standards Code (California Code of Regulations, Title 24) is updated every three years, and the current standards went into effect January 1, 2017. CBC contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. These requirements include design guidelines for accessible facilities, incorporating ADA requirements. Most project facilities, including trailheads, access points and related facilities, will be subject to ADA and state accessibility Title 24 regulations. Site furnishings and facilities such as benches, picnic tables, drinking fountains, parking areas, and routes of travel to restrooms or buildings are regulated under Title 24.

Architectural Barriers Act. Standards issued under the Architectural Barriers Act (ABA) apply to facilities designed, built, altered, or leased with certain federal funds. Passed in 1968, the ABA is one of the first laws to address access to the built environment. The law applies to projects built or altered with federal grants or loans.

To address the need for accessibility standards for outdoor areas, the Access Board developed the Architectural Barriers Act Accessibility Guidelines; Outdoor Developed Areas, which became effective November 25, 2013¹⁹. These guidelines have been incorporated into Chapter 10 of the ABA Standards, and include design standards for facilities such as piers and platforms; outdoor constructed features such as picnic tables, benches and viewing scopes; viewing areas; outdoor recreation access routes; and trails. The standards also outline the conditions for exceptions to accessibility compliance. These guidelines set forth recommended trail width, gradient, cross slope and other factors that affect trail accessibility. Depending upon the type of use, guidelines call for a maximum trail gradient of 5%, or 1 ft. rise in 20 feet of distance, with a maximum 2% cross slope. Under some circumstances, depending on the type of anticipated use and connections to accessible facilities, short distances of trail at up to 10-12% grade may be allowed if a landing is provided:

1:20 (5%) any length

1:12 (8.33%) for up to 200 feet

1:10 (10%) for up to 30 feet

1:8 (12.5%) for up to 10 feet

No more than 30% of the total trail length shall exceed 1:12

AASHTO Guidelines

The primary design guide for bicycle and shared use facilities is the “Guide for the Development of Bicycle Facilities” from the American Association of State Highway and Transportation Officials (AASHTO), 1999 (2012 update, 4th ed.). The AASHTO Guide defines a “shared use path” as a facility on exclusive right-of-way and minimal cross flow by motor vehicles. Users generally include bicyclists, skaters, and pedestrians. In most cases, the AASHTO Guide requires a greater level of accessibility when designing trails for pedestrians, including bicyclists and skaters, than the ABA guidelines, but trails should ideally be designed to comply with both standards.

¹⁹ Architectural and Transportation Barriers Compliance Board, September 26, 2013, Architectural Barriers Act Accessibility Guidelines; Outdoor Developed Areas, Final Rule, 36 CFR Part 1191 RIN 3014-AA22.



NACTO's Urban Street Design Guide and Urban Bikeway Design Guide (<http://nacto.org/usdg/>) also incorporates AASHTO guidelines for the design of complete roadway facilities and shared use paths. Both Caltrans and the US Department of Transportation endorse these guidelines.

Accessibility Exceptions

The final trail design should be in compliance with all applicable guidelines and regulations for accessibility. Most guidelines also contain conditions for exceptions to meeting trail accessibility goals, which might apply for some steeper areas where there are constrained areas, steep slopes and environmentally sensitive areas that must be avoided. Conditions for exceptions should be documented as each trail segment is implemented.

Analysis of segment opportunities and constraints included evaluation of slope and terrain, which has been incorporated into the summary of constraints rankings. It is likely that some trail segments would require a documented exception. Segments with grades over 5% would need to be designed with ramps, structures or other design elements to comply with accessibility requirements. However, segments that are within existing street ROW are generally exempted from meeting bikeway grade requirements.

Documentation of exception conditions would be need to be included in the detailed design planning for each segment as it is implemented, including Caltrans Design exception for any non-compliant trail segments within Caltrans ROW. In some cases, design exceptions would also have to comply with Caltrans requirements. Cost is generally not an allowable design exception. Exception conditions include:

Condition 1. Compliance Would Cause Substantial Harm to Cultural, Historic, Religious, or Significant Natural Features or Characteristics

Condition 2. Compliance Would Substantially Alter the Nature of the Setting or the Purpose of the Facility, or Portion of the Facility

Condition 3. Compliance Would Require Construction Methods or Materials That Are Prohibited by Federal, State, or Local Regulations or Statutes

Condition 4. Compliance Would Not Be Feasible Due to Terrain or the Prevailing Construction Practices

9.3 AESTHETIC CONSIDERATIONS

The Study Area is located within a scenic region, and portions would be subject to design and aesthetic considerations to minimize visual intrusion. Design to minimize excessive cut or fill slopes, setbacks, buffers, and/or barrier design for built elements would be subject to review to minimize potential visual impact.

Earthwork and Grading

Earthwork to create an accessible trail has the potential to disturb existing slopes. The County's Grading Standards limit grading on slopes and near environmentally sensitive habitat. Special attention is given to public view corridors in Section 23.05.034, which states:


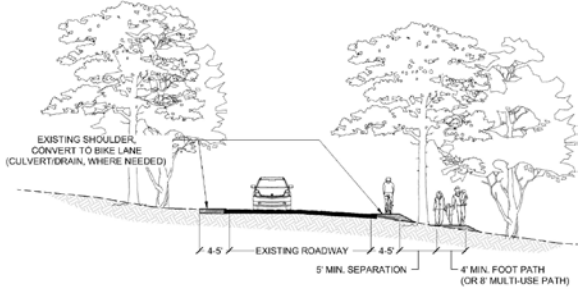

"Grading, vegetation removal and other landform alterations shall be minimized on sites located within areas determined by the Planning Director to be a public view corridors from collector or arterial roads. Where feasible, contours of finished grading are to blend with adjacent natural terrain to achieve a consistent grade and appearance."




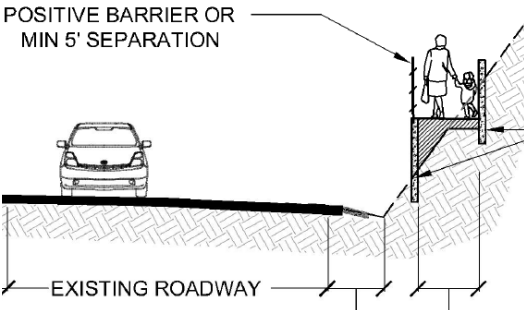

9.4 TRAIL ELEMENTS

What Will the Trail Look Like?

Depending on the final alignment location, easement width, proximity to a road or highway, and surrounding topography or environmental conditions, the Petaluma Sebastopol Trail might be a combination of paved bikeways, bike lanes and natural, stabilized surface paths, as well as separated structures including bridges, overpasses and underpasses, and would likely be similar to one of the following trail sections:

<p>Where the trail is not near any roads, it should be a minimum 8 feet wide with 2-two foot shoulders (12 feet) to meet Caltrans bikeway standards.</p> <p>Typical Segment: Laguna Connector Trail Stony Point Byway</p>	
<p>Where the trail is near a road, it must be separated from traffic by at least five to seven feet to meet Caltrans bikeway standards. The minimum one-way trail width is five feet.</p> <p>Where the trail is near high speed roadways (SR116), a positive barrier is needed to separate trail users from traffic.</p> <p>Raising or lowering the trail or placing it further from the roadway could provide additional separation.</p> <p>Typical Segment: Stony Point Road Old Gravenstein Highway SR 116 (portions) Stony Point Road (portions)</p>	 



<p>Trail structures will be needed in limited locations to span creeks, provide separation from traffic on steep slopes, or to separate users from adjacent sensitive resources such as wetlands.</p> <p>Typical Segment: SR 116 at Blucher Creek Stony Point Road at Willow Brook</p>	
<p>Portions of the trail will traverse slopes. Where the trail is located along a road, placement of the trail at mid slope should be considered to minimize ramps and to maximize separation from adjacent roads.</p> <p>Typical Segment: Portions of SR 116 west of Gossage Creek Portions of Stony Point Road</p>	<p>POSITIVE BARRIER OR MIN 5' SEPARATION</p>  

Trail Width

Petaluma Sebastopol trail segments would generally be multi-use, separated paths. It is anticipated that within this context, some segments of the trail (along SR116 or adjacent to Stony Point Road) would be suitable for bicycle and pedestrian use. A relaxed route, utilizing Sonoma County right of way and/or lands owned by Sonoma County Water Agency, that are widely separated from adjacent roads, would provide opportunities for equestrian use. Within these broad corridors, the trail facility could be designed with a separated surface to be used by bicycles and pedestrians, with a widened shoulder or separate path for equestrians.

Trails or paths completed as part of road improvements would be designed to County and/or Caltrans road standards.



Trail Surface

The trail must have a firm and stable surface to be ADA-compliant. In general, to accommodate bicycles and occasional motorized use by vehicles, the trail surface would be paved asphalt or concrete. In some areas, a permeable trail surface such as stabilized quarry fines or decomposed granite is appropriate to blend in with the natural setting. Paving designs should be selected that provide permeability, where appropriate, and fit with the rural setting.

In some locations, it will be appropriate to remain as “natural” as feasible, and, as noted above, could be constructed as a permeable path with cemented quarry fines over aggregate base or other stabilizer. Trail sections along ramps, bridges, rail crossings and boardwalk approaches, and any trails that will be routinely utilized by motorized vehicles for access and maintenance should be paved. The trail should generally be elevated slightly above existing grade, with a cross slope of 2% to provide drainage and trail compaction.

In areas where new asphalt paving is needed and a Class I trail is feasible, the trail should consist of a minimum 10-foot wide (12-14 ft. recommended) asphalt trail using 3 inches of asphalt concrete, with 2-foot wide (minimum) shoulders of 4 to 8 inches of Class 2 aggregate base (AB).

Fencing and Barriers

There are three primary fencing or barrier types that may be needed to implement the Petaluma Sebastopol Trail:

- **Field Fencing** to define trailhead entry areas, separate adjacent land uses, to keep trail users away from environmentally or culturally sensitive areas or areas with hazards; and/or to define the trail corridor;
- **Security Fencing**, which may be needed to preclude trail users from trespass into secure facilities such as City of Santa Rosa wastewater facilities.
- **Barriers**, such as fencing, guardrails or walls that separate the trail user from vehicular traffic where the trail must be located within Caltrans ROW; and

Field Fencing. Field fencing would generally consist of wire strand field fencing. Farm field fencing is appropriate in agricultural operations to keep range animals off the trail, or to preclude trail users from entering farm fields. Split rail or other decorative fencing may be appropriate as a visual guide to define the trail entrance at key locations and in resting areas. This fence would be appropriate at entry locations such as trailheads and at key intersections.

Security Fencing. More specialized fencing may be required adjacent to land uses with security concerns. In addition to setbacks between the traveled vehicle lanes and the trail, there may be a need for buffers or fencing to separate trail users from adjacent land uses. In particular, security fencing exists, or may be required adjacent to the City of Santa Rosa wastewater facilities to provide physical separation and prevent entry.

Barriers. SR 116 is a Caltrans facility. According to the Caltrans Highway Design Manual, a physical barrier is required when a Class I Bike Path is closer than five feet from the edge of the shoulder. Depending on the width of separation, suitable barriers can include a chain link fence or dense shrubs. Low barriers next to a Highway are not recommended because bicyclists could fall over them and into oncoming automobile traffic.



Where there is danger of motorists encroaching into the trail, a positive barrier (such as concrete barrier or steel guardrail) should be provided. Caltrans typically requires protective fencing on portions of pedestrian structures or trails directly adjacent to roadways.

If a guardrail is required for extensive distances along SR116, a decorative barrier meeting safety standards should be considered for aesthetic compatibility. Caltrans published ***Bridge Rails and Barriers: A Reference Guide for Transportation Projects in the Coastal Zone***, which outlines design considerations for bridges, barriers and railings in visually important areas, and similar standards could be utilized for barrier design along SR 116. Design of any barriers or railings in this area should consider aesthetics and adjacent landscape features.

Figure 9-1 illustrates typical buffer distances and shoulder width along roadways where a positive barrier may be required.

	
Weathering Steel Guard Rail (Corten)	Wood/Steel Guardrail
	
Aesthetic Low Maintenance Guardrail	Thrie-beam guardrail



Type 60 Concrete Barrier (K Rail)	Decorative Concrete Barrier

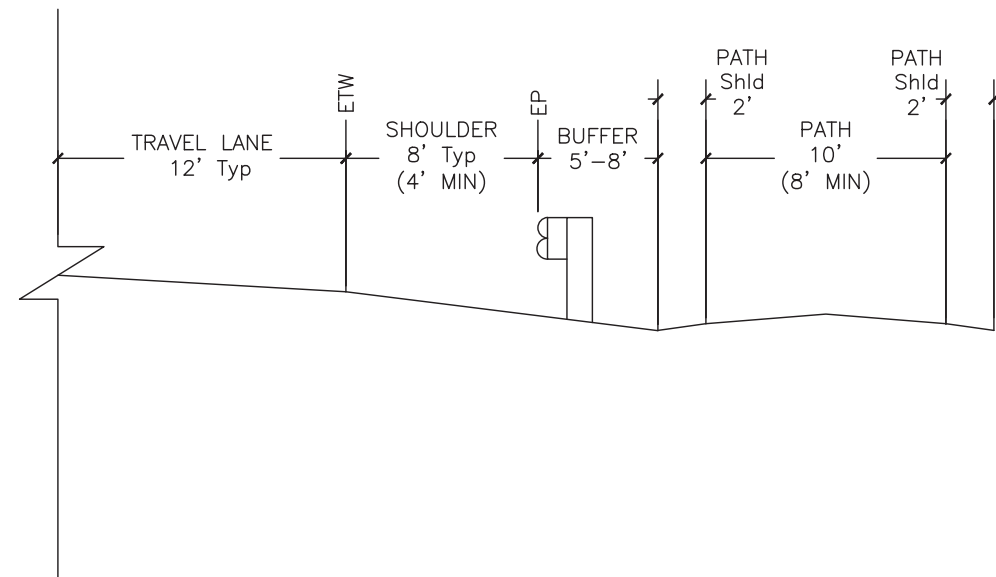
Gates and Bollards. Posts at trail intersections and entrances will be necessary in many areas, to keep vehicles from entering. Posts should be designed to be easily moveable by emergency vehicles, such as bollards or a pipe gate and bollard, but consistent with the rural setting. Pipe gates are appropriate at locations where vehicular access will be needed, and would need to be designed to permit wheelchair access. Typically, posts and bollards should only be used where there is a possibility of motor vehicle encroachment, recommended only where such encroachment is likely. Other designs, such as splitting the trail with a landscaped median at intersections could be considered, since it provides less clipping hazard, especially for bikes with trailers.

Removable or moveable (such as posts, bollards or gates) for emergency and maintenance access must leave a flush surface when removed.

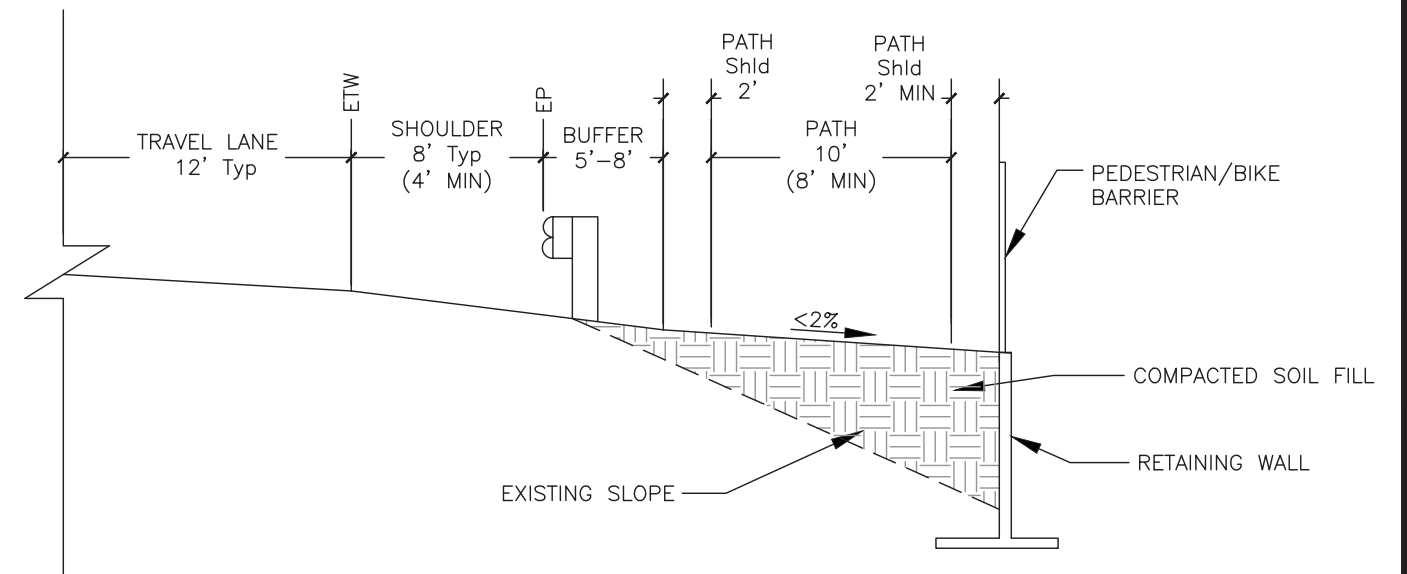


Bridges and Boardwalks

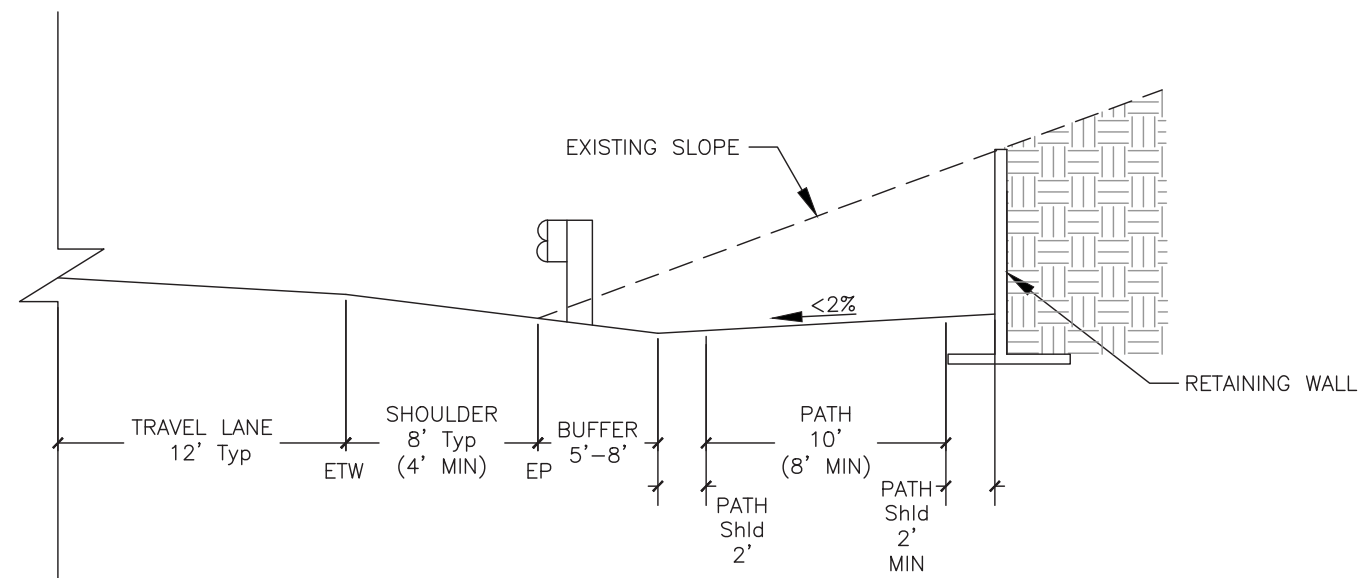
Bridges, boardwalks or drainage structures (culverts) would be needed where the trail crosses creeks, drainages or other floodplain areas. In addition to design that does not create a visual barrier or affect aesthetics, bridges and crossings must be designed and installed to avoid potential biological and hydrologic impacts, including clearspan structures where feasible, avoiding displacement or alteration of floodways, and inclusion of avoidance and minimization measures to protect sensitive wildlife, both during construction and in long term use.



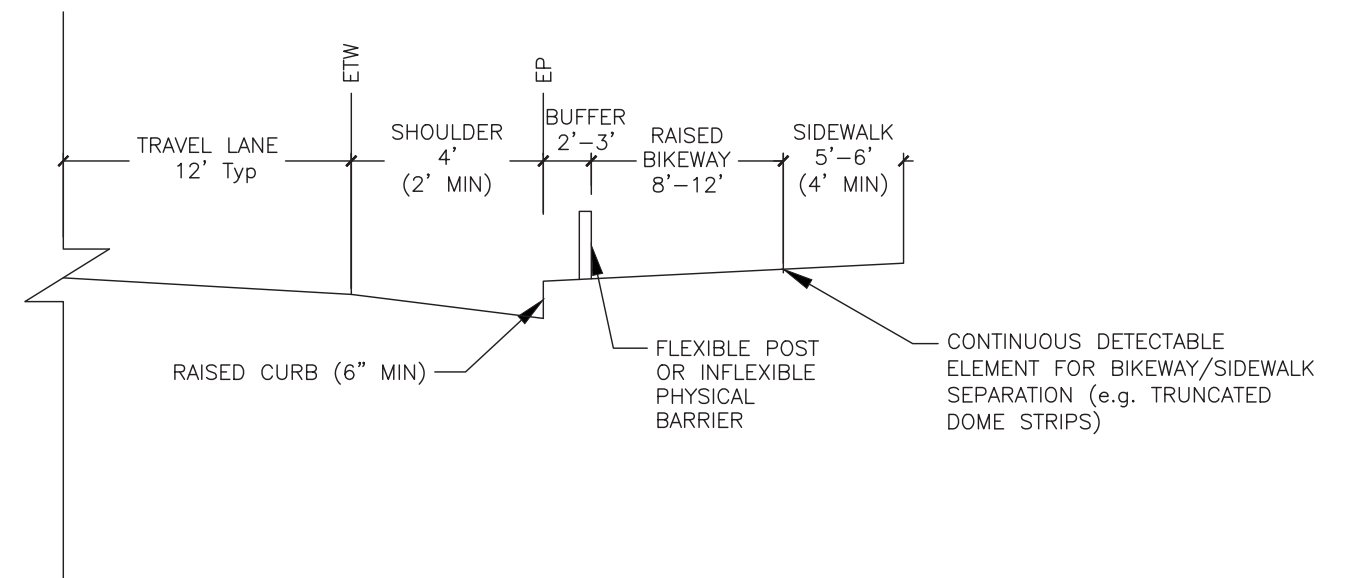
1 CLASS I MULTI-USE PATH DETAIL (TYPICAL)
X-1



2 CLASS I MULTI-USE PATH DETAIL (FILL SLOPE)
X-1



3 CLASS I MULTI-USE PATH DETAIL (CUT SLOPE)
X-1



4 CLASS IV SEPARATED BIKEWAY (CYCLE TRACK) DETAIL
X-1



9.5 SIGNAGE, WAYFINDING AND INTERPRETIVE ELEMENTS

The trail will be part of the trail network managed by Sonoma County Regional Parks. Signage and wayfinding are critical to assist trail users for use and enjoyment of the trail. A common trail signage design scheme should be utilized throughout the trail corridor. Multi-use trail signing and markings should follow the guidelines as developed by Caltrans and the Manual on Uniform Traffic Control Devices. This includes advisory, warning, directional, and informational signs for bicyclists, pedestrians, and other users. Striping, marking, and signing plans will be subject to approval by the implementing agency. Identification signs for the trail should be placed at all staging areas, trailheads, junctions, and special features:

- Signage along major inland connecting trails should direct users to the trail.
- The location of staging areas should be indicated from highways and major roadways.
- Milepost and distance markers to provide context for trail location and destination information, and to assist emergency responders when locating trail users.
- Signs should use international symbols as much as possible.
- ADA-compliant portions of the trail should be clearly indicated.

Wayfinding signs should be consistent throughout the trail, and sign elements should be grouped and designed to minimize visual intrusion. Sign elements may include acknowledgment of more than one agency (to reflect multiple stakeholders and project partners), as well as directional and informational elements. Signage and design standards that might apply include:

- City of Sebastopol
- City of Petaluma
- Sonoma County Regional Parks
- Sonoma County Transportation and Public Works Department
- Caltrans

In accordance with proposed accessibility regulations, it is recommended that trail signs provide information about the trails' running slope, width, cross slope, and other characteristics to enable people to make informed decisions about using trails based on the characteristics of the trails. Signs should include GPS coordinates to facilitate emergency access. Trail use regulations such as keeping dogs on leash, no entry into sensitive areas, and other programs to protect sensitive habitat or resources would also be placed at trail access locations.

Traffic Signs

The Manual of Uniform Traffic Control Devices (MUTCD) defines the standards to install and maintain traffic control devices on all public streets, Highways, bikeways, and private roads open to public traffic. The MUTCD, and adopted in California by Caltrans, contains standards for all traffic control devices, including road markings, highway signs, and traffic signals.



Traffic control devices are defined as all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency or official having jurisdiction, or, in the case of a private road, by authority of the private owner or private official having jurisdiction.

In general, all signs should be located two to four feet from the edge of the paved surface, have a minimum vertical clearance of 8.5 feet when located above the trail surface and be a minimum of four feet above the trail surface when located on the side of the trail. All signs should be oriented for clarity to the user.

9.6 STREET/TRAIL CROSSINGS

Where possible, the trail should be located to minimize street crossings. Crossings of major streets should be located at signalized intersections. Where the trail is located near low volume roads, signed trail crossings may be considered in conjunction with advance striping.

Trail segments in urban settings in Sebastopol and Petaluma should include pedestrian safety features such as extended curbs, pedestrian signals, refuge medians and decorative pavement to delineate the trail and provide a visual cue to safely guide trail users.

9.7 TRAILHEAD STAGING AREAS

Facilities such as parking, restrooms, overlooks, benches, picnic facilities and other features will be needed along the trail to serve visitor use. The facilities provided at each location vary according to expected level of use and duration.

Trailhead and staging facilities could potentially be provided at the following locations:

- Vicinity of Petaluma River at Petaluma Blvd. North
- Laguna de Santa Rosa Trail at Stony Point Road
- Llano Road at Laguna de Santa Rosa Trail

Improved crossing facilities may be needed if the trail facilities are located opposite the staging area.

Potential staging area improvements could include parking, benches, waste disposal, drinking fountain, and interpretive elements. These facilities are limited in the study area, and could be incorporated into any new facilities (including minimal parking improvements) to be provided at key locations.

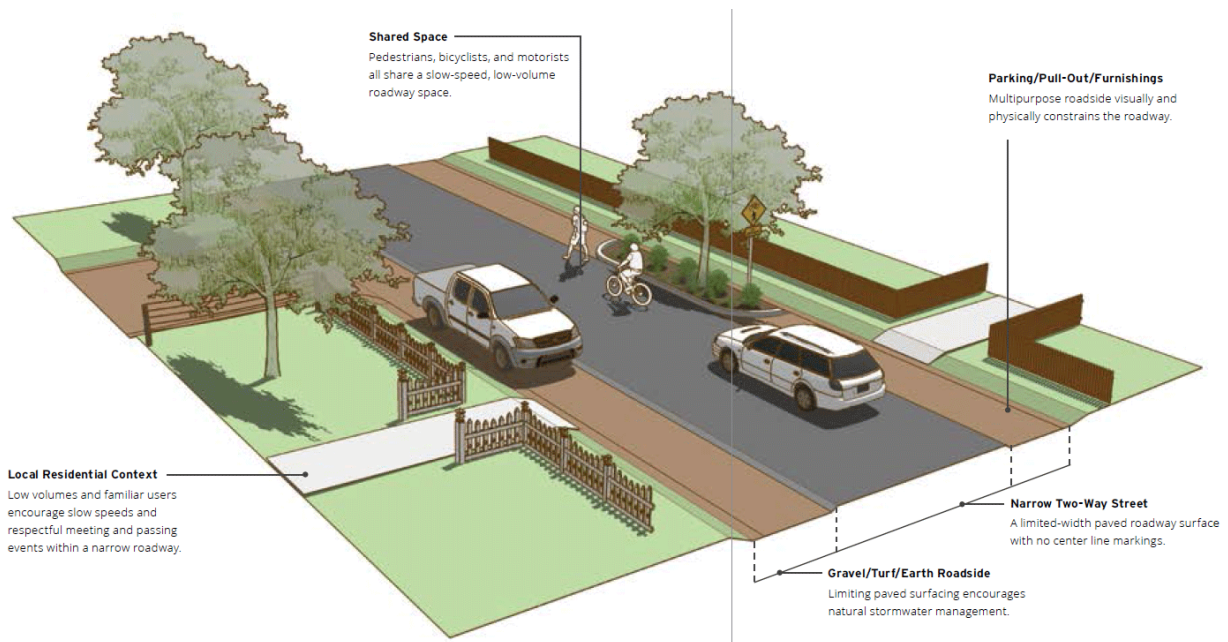


9.8 BICYCLE ADVISORY SHOULDERS

Pedestrian and bicycle use on low volume roads that connect with the regional trail, such as those within the Hessel area, could consider striping and signage to increase visibility for non-motorized users. In December 2016, the US Department of Transportation, Federal Highway Administration (FHWA) published the *Small Town and Rural Multimodal Networks FHWA-HEP-17-024*, which explores national guidelines in rural settings, and discusses two potential strategies to be used on rural, low-volume roads: Yield Roadways and Advisory Shoulders. The publication documents ongoing research with such facilities, which are used in Europe. Although these strategies have not been incorporated into current guidelines, there is a possibility that such strategies will be approved in the future, and might be considered for future incorporation into a rural road network such as that within the study area.

Yield Roadways

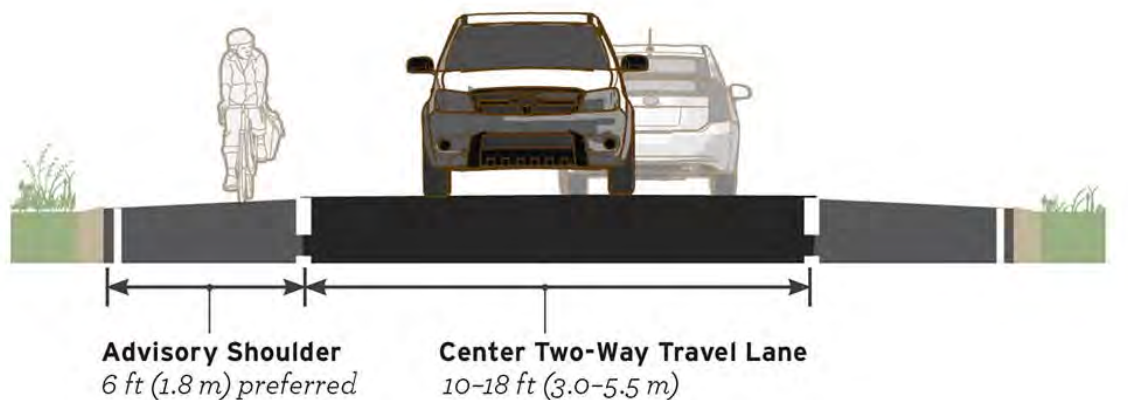
A Yield Roadway²⁰ is intended to serve pedestrians, bicyclists and motor vehicle traffic in the same **slow-speed** travel area. This is intended to be utilized on low volume, low speed roads.



Advisory Shoulders

An Advisory Shoulder is an area delineated on the road by pavement marking and/or optional pavement color. This delineation prioritizes the shared space for bicyclists and pedestrian travel, and direct vehicles to the two-way travel lane in the center of the road. This is an experimental treatment being researched, and not currently approved for use in the United States.

²⁰ Illustrations in this section from *Small Town and Rural Multimodal Networks FHWA-HEP-17-024*



9.9 TRAIL OPERATIONS AND MAINTENANCE

The Petaluma Sebastopol Trail is intended to facilitate bicycle, pedestrian and equestrian use.

Liability

Two California laws provide broad liability protection to property owners who allow public access for recreational purposes: California Recreational Use Statute and California Recreational Trails Act. These laws limit liability to private property owners. In addition, the cities or Regional Parks (as trail manager) would likely enter into agreements or secure ownership which would formalize trail use and define liability/obligations with property owners, if the trail is located on SCWA, City of Santa Rosa or private land.

Virtually all of the trail segments would be constructed, operated, and maintained by the local government entity in which it occurs, by agreement with land owners. Regional Parks would likely serve as lead agency for environmental review, project permitting, design, and construction oversight. Any trail segment within the Caltrans right-of-way would likely be constructed and operated under their procedures for an encroachment permit, or completed as part of a roadway improvement or complete streets project.

Acquisition of trail easements or fee title for land that may need to be purchased for construction of trails can be one of the primary costs of project implementation. Since much of the study area is located on private lands, securing agreements or acquisition of lands for trail implementation is a key to project success.

Mechanisms for trail agreements include:

- Purchase in fee title, trail dedication
- Easement
- License Agreement
- Memorandum of Understanding

ROW acquisition may occur in the form of trail dedication as a floating easement as a requirement or part of a larger project. It is critical that such dedications occur within feasible, buildable easements, and within a meaningful time frame. In addition, individual property owners may voluntarily agree to a trail



easement, because of their support for a trail project based on its merits, and/or the value of the tax deduction that is available.

Geotechnical Considerations

Slope stability, landslide, erosion potential, seismic design considerations, poor soil conditions and trail drainage issues will need to be carefully evaluated during the design of each trail segment. In general, the trail should be out-sloped to minimize slope disturbance, however, in some areas of steep slopes and less stable terrain, it may be necessary to in-slope the trail and provide drainage swales.

Vehicular Load Rating for Emergency Access. In general, where the trail is located along a road, design for emergency access is not needed. However, trail segments should generally be designed for access by emergency vehicles, with a minimum weight capacity of 10,000 pounds (H-10 load). Heavier load ratings (H-20) may be required by local fire and emergency response units, depending on availability of access and location. This may be desirable in locations where the trail will also provide fire access to landowners.

Flood Prone Areas. Trails located adjacent to areas that may be subject to periodic inundation may need to be reinforced with structural geosynthetics such as geocells to provide a stable trail surface and improve year-round accessibility. The need for structural support will be determined through additional engineering analysis as part of the trail design. Where trails are proposed to cross over such areas, they will require special structures and treatment, such as over-excavation and placement of engineering geotextile such as Geocell, and import of thick section of granular aggregate base. The wettest of these areas will likely require the use of a boardwalk structure supported on short piles or another anchor system.

Slope Instability and Erosion Control. Precise trail siting will be needed to avoid and/or address potentially unstable areas. If the trail will cross areas of slope instability, these areas must be carefully evaluated to ensure that trail safety is maintained, and that further degradation of slope conditions does not occur. Geotechnical slope stabilization, including reconstructive slope grading, drainage structures, and retaining walls may be needed in some areas, such as segments of SR116 or along Stony Point Road. These measures can be expensive, and careful placement of site features will be critical. Control of erosion associated with trail construction (to ensure that sediment input into creeks is minimized) will also be a critical trail design and implementation issue.

Pavement Design. Depending on soil conditions and pavement design needs, the use of geotextiles and a permeable trail surface, such as stabilized decomposed granite (DG) or stabilized quarry fines (QF), should be considered. A detailed geotechnical assessment should be prepared to identify the appropriate trail surface, thickness of materials and compaction requirements of the pavement.

Safety and Security Issues

Operation and maintenance of the trail system is an important component of overall trail implementation. Since it is likely that implementation will occur in phases and possibly by various entities, such as the City of Sebastopol, City of Petaluma, or Regional Parks, commitment to a uniform maintenance strategy is desirable. Because the trail will span multiple jurisdictions, it will be beneficial to develop policy and cooperative management agreements to facilitate management of the trail.

Regional Parks may be the lead management entity for this trail project, and would provide policing, management and coordination for trail related issues.



Some areas of the trail are adjacent to sensitive uses, such as the Santa Rosa Water Reuse/Laguna Treatment Plant, where security cameras, fencing or other methodologies to guide, monitor and preclude public access may be appropriate. Coordinated implementation of an Emergency Response Protocol that includes law enforcement, mapping of trails, wayfinding and, where appropriate, 911 emergency phones in remote areas can all be included in trail implementation projects.

Other strategies include:

- User Education Program for safe trail behavior and conflict prevention.
- Conduct inspections for safety hazards, needed repairs and outreach with neighboring property owners, residents and businesses
- Post and enforce trail rules
- Perform trail maintenance and vegetation management for fire safety and sight distance issues.

It is also expected that ongoing management of the trail route would utilize Integrated Pest Management (IPM) practices to manage pest populations and for vegetation management. This includes ecologically compatible practices and treatment strategies for the control of plant and animal pests, as well as fire management activities to reduce or maintain wildland fuels at acceptable levels.



10. PRELIMINARY COSTS

Planning level construction cost estimates were developed for each of the trail segments, including the 15.9 miles of Class I/Class IV facilities that would be constructed adjacent to local roads (Rapid Route), 5.6 miles of separated Class I facilities (Relaxed Route), and 6.5 miles of improvements to local roads (Class II/III facilities) .

As described in **Section 8**, not all of these facilities would need to be constructed to make a continuous route, and some improvements would facilitate commuter-oriented active transportation, while some facilities would facilitate recreational use. Therefore, funding and implementation might be done by different entities, or combined with other types of projects, such as roadway improvements, or stream restoration and flood improvement projects. In addition, the Class I relaxed/recreational improvements do not provide continuous connectivity between the communities, so a combined (and potentially overlapping) route is proposed, that encompasses 28 miles.

Trail Types	
Type	Miles
Class I Relaxed Route, separate from road	5.6
Class I /Class IV, Rapid Route, near adjacent road	15.9
Class II/III Improvements	6.5
Total	28

If all trail segments Class I Trail construction costs, exclusive of design and construction administration costs average just under \$1 million per mile, ranging from \$0.8 million to \$2.5 million per mile. The cost range depends on terrain, environmental issues, regulatory requirements, infrastructure, type and number of special structures, such as bridges, boardwalks, retaining wall sections and other construction complexities. Along SR 116 there are additional challenges because of factors such as:

- Traffic
- Right of way
- Utility conflicts and relocation needs
- Drainage issues
- Slope constraints requiring retaining walls
- Trees and vegetation
- Historic structures and cultural resources
- Bridges and creek crossings

The costs are balanced by the more straightforward Class II and Class III trail construction for portions within the cities and for connectors without separated trails or along less frequently traveled rural roads.

After detailed planning, environmental analysis, engineering design and construction support costs are added in, total costs may average \$1.1-1.3 million per mile. If every segment identified in the Study were implemented (including those that overlap), costs would be approximately \$33.5 million.



10.1 CONSTRUCTION COST ISSUES

Significant factors used to determine cost and construction difficulty include cross slope steepness and the presence of unstable slopes and erosive soil conditions, proximity to creeks, drainages and swales, existing infrastructure or utilities that may require relocation and trees or habitat to be avoided.

Utility relocation, right of way (ROW) and property acquisition costs, traffic control, access and the availability of mobilization and staging areas, sources of fill and excess cut soil disposal and environmental mitigation needs can all be significant parts of total construction costs, but are typically not provided as separate line items in cost estimating at this level of project feasibility evaluation and planning; they are included as part of the overall cost allowance. In terms of trail alignments on private property, for feasibility study cost analysis purposes, it is assumed that all trail facilities will be on public lands or within public right of way, and where the trail alignment is proposed for private property, the right of way or easement for trail construction will need to be obtained associated with a use permit or development agreement, or because it is in the interests of the private property owner to provide the right of way. Where this is not possible, right of way acquisition will be needed, but such costs are not provided at this level of planning. Right of way acquisition can significantly add to project costs.

Mobilization, traffic control, clearing and grubbing, grading, minor drainage structures such as culverts and underground storm drains, sub-base preparation, asphalt concrete paving, and signage and trail furnishings were all lumped together into one overall component (grading and paving), while fencing was identified as another distinct cost associated with a multi-use trail project. Bridges and other special structures, intersection improvements, and staging area costs were also separated out for cost accounting. These represent the bulk of the trail construction costs, with the grading, slope work and drainage and paving and utility relocation having the highest contribution to the overall trail construction costs.

10.2 TRAIL CONSTRUCTION COST GROUPS

For cost estimation purposes, trail segments were divided into generalized groupings associated with the expected level of difficulty in grading and paving, the need for retaining walls, drainage modifications, tree removal and mitigation, utility relocation, and in consideration of environmental constraints and construction technical issues.

Seven types of trail construction scenarios with differing types of trail design and levels of construction difficulty were identified for cost estimation purposes:

1. **New, fully separated Class I Trail** would need to be constructed, in most cases adjacent to or through open space areas or agricultural and grazing lands. Additional trail components may include:
 - a. Trail grading and paving
 - b. Minor retaining walls
 - c. Bridge or boardwalk
 - d. Fencing
 - e. Habitat restoration and mitigation
 - f. Signs, interpretive displays, benches
 - g. Paved ramps or access points



2. **Less Difficult Class I Trail** to be constructed adjacent to the existing Highway 116 in a mostly urban corridor but shoulder widening and/or a new closely adjacent and parallel path needs to be created to accommodate the Trail. This trail class is in relatively level areas with room for shoulder widening, and with some drainage, tree removal, utility relocation and paving needs to accommodate the Trail. This will be the second most common trail type within the Trail Study Area and may include additional features such as:
 - a. Positive barrier between road and path
 - b. Fence and/or landscaping
 - c. Adjacent road/lane modification, such as shoulder widening
 - d. Signs or interpretive displays
 - e. Intersection improvements, such as pedestrian curb ramps, signal modifications, sidewalks or other safety features.
3. **Moderately Difficult Class I Trail** to be constructed adjacent to the existing Highway 116 in a mostly urban corridor but shoulder widening and/or a new closely adjacent and parallel path needs to be created to accommodate the Trail, with shoulder widening, drainage, tree removal, utility relocation and paving needs to be created to accommodate the Trail. This will be the most common trail type for the Trail within the Study area and may include additional features as above.
4. **Difficult Class I Trail** as above but with more challenging slope and topographic constraints including the need for retaining walls for cut and fill slopes, as well as utility relocation, tree removal, and drainage under-grounding, the trail design would also include all of the above elements in 2 above.
5. **Class II Trail** follows an existing street or sidewalk, and only minor improvement work such as shoulder widening, drainage ditch undergrounding, some utility relocation, pavement repair, signage and striping is needed (in City of Sebastopol and Petaluma and rural roads).
6. **Class III Trail** follows an existing street or sidewalk, and only minor improvement work such as pavement repair, with some directional signage and striping is needed (City of Sebastopol or Petaluma and rural roads).
7. **Class IV Trail** (cycle-track) would be constructed along some portions of Highway 116. The paved and striped cycle-track includes 2 way bike lanes located on one side only of the Highway, separated from the highway by a barrier, with the pedestrian pathway distinguished from the bikeway by a curb and elevation difference, barrier or landscaping or other structure.

Each type of trail was then assigned an estimated average cost per lineal feet and these costs were applied per segment and trail type to determine the basic trail construction cost for the segment. Pedestrian bridges, structures, intersection improvements, and trailhead construction costs were added where appropriate to the basic trail costs in each segment to obtain the total trail construction cost for that segment. These are shown in the Cost Spreadsheet in **Appendix C**. These costs include construction costs as described above and 20% additional construction costs for Right of Way Engineering, Engineering Design, Environmental Review and Permitting, and Construction Administration and Management.

Planning level trail costs by Segment are summarized in **Table 10-1**.

**Table 10-1: Summary of Segments and Preliminary Cost**

Segment Number	City/ County	Street	Begin Point	End Point	Class	Length Miles	Cost Millions	Priority
1	Sebastopol	SR116	Sebastopol Ave.	Sebastopol City limits	II	3.2	\$3.2M	Funded
2A	County	SR116	Sebastopol City Limits	Bloomfield Road	I, IV	0.6	.99	High
2B	County	SR116	Bloomfield Road	Old Gravenstein Hwy N	I	0.9	1.63	Medium
2C	County	SR116	Old Gravenstein Hwy N	Old Gravenstein Hwy S	I	0.7	1.12	Low
2D	County	SR116	Old Gravenstein Hwy S	Lone Pine Road	I	0.3	.42	Medium
2E	County	SR116	Lone Pine	Llano Road	I	1.3	2.31	Medium
3A	County	SR116	Llano Road	Hessel Road	I	0.9	.42	Medium
3B	County	SR116	Hessel Road	Laguna Connector	I	1.2	2.44	Medium
3C	County	SR116	Laguna Connector	Stony Point Road	I,IV	0.2	.26	High ²¹
4A	County	Stony Point Rd	SR 116	Roblar Road	I	1.5	2.59	High ²²
4B	County	Stony Point Rd	Roblar Road	Mecham Road	I	0.3	.47	Medium ²³
5A	County	Stony Point Rd	Mecham Road	Stony Point Byway	I	0.3	.88	Medium
5B	County	Stony Point Rd	Stony Point Byway	West Railroad Ave	I	1.1	2.20	Low
5C	County	Stony Point Rd	West Railroad Ave	Petaluma City Limits	I	2.2	4.20	Low
6A	Petaluma	Stony Point Rd	Petaluma City Limits	Petaluma Blvd. N	I	0.9	1.48	High
6B	County Petaluma	Petaluma Blvd. North	Stony Point Road	Bailey Ave	I,IV	0.1	2.89	High ²⁴
6C	Petaluma	N/A	Industrial Ave	Petaluma River Trail (Denman Reach)	I	0.7	.28	High ²⁵

²¹ Some improvements to be provided as part of project development²² Intersection and bike/ped improvements to be provided/coordinated as part of Roblar Quarry Project²³ Intersection and bike/ped improvements to be provided/coordinated as part of Roblar Quarry Project²⁴ Improvements to be coordinated with future Petaluma River Bridge retrofit/replacement²⁵ Grant funding has been sought

**Table 10-1: Summary of Segments and Preliminary Cost**

Segment Number	City/ County	Street	Begin Point	End Point	Class	Length Miles	Cost Millions	Priority
6D	Petaluma	Old Corona Road	Industrial Ave	SMART Trail	I	1.3	1.57	Medium ²⁶
6E	Petaluma	N/A	Old Corona Road	Petaluma River Trail (Outlet Mall)	I	0.7	.29	Low ²⁷
6F	Petaluma	N/A	Capri Creek	SMART Trail	I	0.7	.78	Low ²⁸
A	County	Bloomfield Lone Pine Road	SR116/ Bloomfield Road	SR 116/ Lone Pine Road	II,III	2.5	.98	Medium ²⁹
B	County	Old Gravenstein HWY	SR116/Old Gravenstein N	SR116/Old Gravenstein S	I	0.7	1.05	Medium
C1	City of Santa Rosa County	N/A	SR 116	Llano Road	I, III	0.8	.63	Low
C2	County	N/A	Llano Road	N/A	I	0.6	.73	High
C3	County	Llano Road	SR 116	Laguna de Santa Rosa	II	0.8	.32	Medium
C4	County	N/A	Laguna de Santa Rosa	SR 116	I	1.8	1.87	Medium
C5	County	N/A	SR 116	Stony Point Road	I	0.5	.73	Low
D	County	West Railroad Ave extension N/A	Stony Point Road	Stony Point Road at West Railroad Ave extension	I	1.2	1.53	Medium

10.3 SUMMARY OF TRANSPORTATION FUNDING OPPORTUNITIES

This section provides a summary of current funding opportunities related to trails. The trail projects (segments) will be matched to potential funding programs, and the specific program criteria. In some cases, projects may be selected or organized to meet grant program funding criteria, or projects may be jointly implemented by project partners such as the Sonoma County Transportation Authority or others.

The transportation funding opportunities listed below are active, unless otherwise noted, and are accepting applications through 2018.

²⁶ Anticipated to be implemented as part of development project

²⁷ Anticipated to be implemented as part of development project

²⁸ Anticipated to be implemented as part of development project

²⁹ Potential Safe Routes to Schools Project



Understanding Transportation Funding

Approximately every six years, the U.S. Congress adopts a surface transportation act — Congress’s authorization to spend tax dollars on highways, streets, roads, transit and other transportation related projects throughout the U.S. The most recent surface transportation act is titled “Moving Ahead for Progress in the 21st Century” (MAP-21). The legislation was signed into law on July 6, 2012. MAP-21 funding is allocated to states based on federal formulas. The Federal formulas allocate a portion of each state’s funds to specific surface transportation programs such as transit, congestion mitigation, and highways; while other portions of these funds are allocated to the states for use in discretionary programs.

In California, these funds are generally administered by Caltrans or the Resources Agency, although most programs are then distributed through metropolitan planning organizations (MPOs) such as the Sonoma County Transportation Authority (SCTA). The regional government agencies, which vary by location within the State, administer the funding of local projects. The majority of the funding programs established in the legislation are for transportation purposes, as opposed to recreation-only, with an emphasis on reducing auto trips and traffic congestion, improving traffic safety, developing intermodal transportation systems, and reducing pollutants and emissions produced by transportation.

Bicycle, pedestrian, trail (recreational trails), and school safety improvement projects may be funded by a variety of federal, state, regional, and/or local funding programs. Federal and state programs have continued to acknowledge the importance of these improvements with increased flexibility in the major funding programs, along with the development of dedicated programs for “active” or “non-motorized” transportation projects. Project funding may also be obtained through bond measures, special tax districts, private entities, and/or directly by a local agency’s general fund.

Funding Local Transportation Projects

To be eligible for funding, projects must meet a variety of criteria. Typically, projects must be listed in a Regional Transportation Improvement Plan (RTP). Listing in an RTP is generally achieved through local actions such as listing in a local agency’s Capital Improvement Plan (CIP), the completion and adoption of a bicycle master plan, pedestrian master plan, specific plan, project study report, feasibility study, and/or other special studies. These planning efforts serve to evaluate potential projects and demonstrate their value through the public process. The result is typically a quantification of the costs and benefits of a project (such as saved vehicle trips, safety index ratings, and/or reduced emissions), proof of public involvement and support, environmental review at the state or federal level, evaluation of project alternatives, and the identification and elimination of potential fatal flaws, or development of overriding considerations. Next, the allocation of funds typically requires a commitment of local resources. In most cases, MAP-21 programs will provide 80 to 90 percent funding of a local project, but there is a preference to leverage other moneys and demonstrate a cooperative funding approach.

Summary of Programs

The following section presents a general description of funding programs that can be used to implement the projects contained in this study.



Federal Programs

Moving Ahead for Progress in the 21st Century Act (MAP-21) ³⁰

In July 2012, P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law, funding surface transportation programs at over \$105 billion for fiscal years (FY) 2013 and 2014. MAP-21 is the first long-term highway authorization enacted since 2005. MAP-21 provides needed funds, and it transformed policy and the programmatic framework that guides the growth and development of the country's transportation infrastructure. MAP-21 creates a streamlined, performance-based, and multimodal program to address the challenges facing the nation's transportation system. These challenges include improving safety, maintaining infrastructure, reducing traffic congestion, improving efficiency, protecting the environment, and reducing delays in project delivery. MAP-21 builds on and refines many of the highway, transit, bike, and pedestrian programs and policies established in the 1990's.

MAP-21 replaced SAFETEA-LU with a similar amount of total funding, but significantly changed the overall number and scope of programs. For example, the number of programs has been consolidated by two-thirds. The Transportation Enhancements (TE) program has been eliminated and replaced with the Transportation Alternatives Program (TAP). The new TAP encompasses most of the previous bike, trail, pedestrian, and school safety funding mechanisms from SAFETEA-LU. Under MAP-21, states allocate 50 percent of their TAP funds to larger MPOs to run grant programs and administer funds for local projects. States can use the remaining 50 percent for TAP projects or can spend these funds on other transportation priorities. Some of the SCTA planning area does not have an urbanized area population of 200,000 or more; if so, it does not receive direct TAP sub-allocation.

Web Link: <https://www.fhwa.dot.gov/map21/>

Transportation Alternatives Program ³¹

The Transportation Alternatives Program (TAP) authorized under Section 1122 of MAP-21 provides funding through Caltrans for programs and projects in California defined as transportation alternatives, including on- road and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for the planning, design or construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

Under TAP, Caltrans, Metropolitan Planning Organizations (MPOs), and nonprofits are not eligible as direct grant recipients of the funds. Caltrans, MPOs, and nonprofits are eligible to partner with any eligible entity on an eligible TAP project, which has now been incorporated into the Statewide ATP Program.

Web Link: <http://www.dot.ca.gov/hq/transprog/map21.htm>

National Recreational Trails Program ³²

The Recreational Trails Program (RTP) provides funds for recreational trails and trails-related projects. The RTP is administered at the federal level by the Federal Highway Administration (FHWA). It is

³⁰Currently Active Program

³¹Not Active At This Time

³²Currently Active Program



administered at the state level by the California Department of Parks and Recreation (DPR). Non-motorized projects are administered by the Department's Office of Grants and Local Services (OGLS). Motorized projects are administered by the Department's Off-Highway Motor Vehicle Recreation Division. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized uses, as well as motorized uses, such as off-road vehicle (ORV) trails.

RTP funds may be used for:

- Maintenance and restoration of existing trails;
- Development and rehabilitation of trailside and trailhead facilities and trail linkages;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails (with restrictions for new trails on federal lands);
- Acquisition of easements or property for trails;
- State administrative costs related to this program (limited to seven percent of a State's funds); and
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

Eligible applicants include cities and counties, parks districts, state agencies, Federal agencies, and non-profit organizations with management responsibilities of public lands. There is no maximum or minimum limit on grant request amounts. The maximum amount of RTP funds allowed for each project is 88% of the total project cost. The applicant is responsible for obtaining a match amount that is at least 12% of the total project cost. Eligible match sources include: State funds, including State Grant funds; Local funds, including general funds and bond funds; Private funds; Donated materials and services; Value of donated land (for Acquisition projects only); and other federal funds.

The RTP non-motorized funding program will provide approximately \$1.47 million per year. The current federal RTP funding source, MAP-21, was set to expire on September 30, 2014, but continued utilizing short-term extensions. The RTP Program has subsequently been integrated into the ATP.

Web Link: http://www.parks.ca.gov/?page_id=24324

Highway Safety Improvement Program ³³

The Highway Safety Improvement Program (HSIP), which is administered by Caltrans, remains as one of the core federal-aid programs. HSIP funds are intended to help achieve a significant reduction in traffic fatalities and serious injuries on public roads. The Federal Program requires states to develop and implement a Strategic Highway Safety Plan (SHSP) that identifies improvement strategies to address traffic safety. Funds can be used for safety improvement projects on any public road or publicly owned bicycle or pedestrian pathway or trail.

A safety improvement project corrects or improves a hazardous roadway condition, or proactively addresses highway safety problems that may include: intersection improvements; installation of rumble strips and other warning devices; elimination of roadside obstacles; railway-highway grade crossing safety; pedestrian or bicycle safety; traffic calming; improving highway signage and pavement marking; installing traffic control devices at high crash locations or priority control systems for emergency vehicles at signalized intersections, safety conscious planning and improving crash data collection and analysis, etc.

³³ Currently Active Program



Caltrans sets aside funds for construction and operational improvements on high-risk rural roads and may use the remainder of funds for bicycle and pedestrian pathways or trails and education and enforcement. Caltrans' call for projects and application deadlines vary from year to year. HSIP funds could potentially be used to improve key intersections. It should be noted that some HSIP funds are incorporated into the State ATP Program.

Web Link: <http://www.dot.ca.gov/hq/LocalPrograms/hsip.html>

Transportation Investment Generating Economic Recovery (TIGER) ³⁴

Initiated by the American Recovery and Reinvestment Act (ARRA) in 2009, and continued by Congress since then, the highly-competitive Transportation Investment Generating Economic Recovery (TIGER) program is not formula-based, as are many other federal funding sources.

Project sponsors apply directly to USDOT to fund major capital improvements, and the applications are evaluated using criteria relating to benefit-cost ratio, economic development, sustainability, and other performance measures. TIGER is mode-neutral: the most competitive applications for highway, transit, bicycle and pedestrian, or port improvements are funded. Several bike-pedestrian focused applications have been awarded (including both planning and design/construction phases). Typically, TIGER calls-for-projects have both a high minimum grant amount and matching requirements that render smaller projects ineligible or financially infeasible. However, they also have made exceptions to those thresholds for projects in rural areas.

Land and Water Conservation Fund ³⁵

The Land and Water Conservation Fund (LWCF) program provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. LWCF is administered by the National Parks Service and the California Department of Parks and Recreation and has been reauthorized. Cities, counties, tribes, and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply.

Applicants must fund the entire project and will be reimbursed for fifty percent of costs. \$2,000,000.00 is the maximum request amount for any individual project. Eligible project must meet two specific criteria. The first is that projects acquired or developed under the program must be primarily for recreational use and not transportation purposes, and the second is that the lead agency must guarantee to maintain the facility in perpetuity for public recreation.

Applications are considered using criteria such as priority status within the State Comprehensive Outdoor Recreation Plan (SCORP). The State Department of Park and Recreation will select which projects to submit to the National Park Service (NPS) for approval. Final approval is based on the amount of funds available that year, which is determined by a population-based formula, with a 40/60 split for northern and southern California respectively.

Web Link: http://www.parks.ca.gov/?page_id=21360

³⁴ Currently Active Program

³⁵ Currently Active Program



Rivers, Trails and Conservation Assistance Program³⁶

The National Park Service Rivers, Trails, and Conservation Assistance (RTCA) program supports community-led natural resource conservation and outdoor recreation projects across the nation. This program provides technical assistance via direct staff involvement to establish and restore greenways, rivers, trails, watersheds, and open space areas. The RTCA program provides planning assistance only. Projects are prioritized for assistance based upon criteria that include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation and focusing on lasting accomplishments. Federal agencies may be the lead partner only in collaboration with a non-federal partner.

Web Link: <http://www.nps.gov/orgs/rtca/index.htm>

State Funding Programs

Caltrans³⁷

Funding for new projects for non-motorized transportation facilities along a State highway or within its right-of-way generally falls into one of the following categories:

- Replacement of an existing major route for non-motorized traffic that is being severed or destroyed by freeway construction (S&H Code -- Section 888)
- Provision of a non-motorized facility along a new freeway corridor where non-motorized facilities do not exist (S&H Code -- Section 888.2)
- Provision of a non-motorized facility along a State highway under a Cooperative Agreement at the request of a local agency (S&H Code -- Section 887.6)
- Provision of a non-motorized facility along a State highway based upon a finding that the traffic safety or capacity of the highway will be increased (S&H Code -- Section 887.8). The finding is made in consultation with appropriate law enforcement agencies.
- Part 3 – Specific Project Development Procedures (31-4 07/01/1999L Project Development Procedures Manual).

Senate Bill 1: The Road Repair and Accountability Act of 2017

As discussed in Section 3, **SB1**, adopted in July 2017, is a funding program to provide funding for transportation infrastructure, expand existing programs, and created new transportation funding programs for implementation that is funded by a gas tax.

In the Study Area, SR116 is slated to receive funding in two separate grants - one for improvements within the City of Sebastopol, and the other for road resurfacing in the unincorporated sections between Sebastopol and Cotati.

Active Transportation Program³⁸

In September 2013, the California legislature created the Active Transportation Program (ATP) to be administered by the California Department of Transportation (Caltrans). The ATP consolidates existing federal and state transportation programs, including the **Transportation Alternatives Program (TAP)**, **Bicycle Transportation Account (BTA)**, and **State Safe Routes to School (SR2S)**, into a single program

³⁶ Currently Active Program

³⁷ Currently Active Program

³⁸ Currently Active Program



with a focus to make California a national leader in active transportation. The ATP is administered by the Division of Local Assistance, Office of Active Transportation and Special Programs. The purpose of ATP is to encourage increased use of active modes of transportation by achieving the following goals:

- Increase the proportion of trips accomplished by biking and walking,
- Increase safety and mobility for non-motorized users,
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals,
- Enhance public health,
- Ensure that disadvantaged communities fully share in the benefits of the program, and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

Web Link: <http://www.dot.ca.gov/hq/LocalPrograms/atp/>

Statewide Transportation Improvement Program³⁹

The Statewide Transportation Improvement Program (STIP) is a list of major transportation projects to be funded across the state over the next five years. The STIP is updated biennially by the CTC. MPOs adopt Regional Transportation Improvement Programs (RTIPs), which are then incorporated as subsets of the STIP. The Interregional Transportation Improvement Program (ITIP), which includes improvements to long-distance highway and rail corridors, is also a subset. While STIP refers to a document, it also is commonly used to refer to a funding source (also known as Regional Improvement Program funding) mostly devoted to major highway capacity expansion projects. To the extent that future STIP funds are available, they could be used to fund trail improvement projects.

State Highway Operations Protection Program⁴⁰

The State Highway Operations Protection Program (SHOPP) is a multi-year program of capital projects whose purpose is to preserve and protect the State Highway System. Funding is comprised of state and federal gas taxes. SHOPP funds capital improvements relative to maintenance, safety, and rehabilitation of state highways and bridges that do not add a new traffic lane to the system. Just over \$1 billion is allocated to SHOPP annually. Funding is based on need, so there are no set distributions by county or Caltrans district. There are no matching requirements for this program. Projects include rehabilitation, landscaping, traffic management systems, rest areas, auxiliary lanes, and safety. Caltrans Projects are “applied” for by each Caltrans District. Each project must have a completed Project Study Report (PSR) to be considered for funding. Projects are developed in fall every odd numbered year. Caltrans emphasizes that consideration should be given for each SHOPP project to also accomplish associated bicycle-pedestrian facilities.

Web Link: <http://www.dot.ca.gov/hq/transprog/shopp.htm>

Caltrans Sustainable Communities Planning Grants⁴¹

Caltrans Sustainable Communities Planning Grants are intended to promote strong and healthy communities, economic growth, and protection of our environment. These planning grants (divided into two subcategories: Strategic Partnerships and Sustainable Communities) support closer placement of

³⁹ Currently Active Program

⁴⁰ Currently Active Program

⁴¹ Currently Active Program



jobs and housing, efficient movement of goods, community involvement in planning, safe and convenient pedestrian and bicycle mobility and access, smart or strategic land use, and commute alternatives. This program should be further explored as a potential source of funding for preparation of special focus plans that include trail segments, plans which could build on the information in this study. However, environmental documentation and preliminary engineering are not eligible for these grants.

Web Link: <http://www.dot.ca.gov/hq/tpp/grants.html>

Office of Traffic Safety⁴²

The California Office of Traffic Safety (OTS) has the mission to obtain and effectively administer traffic safety grant funds to reduce deaths, injuries and economic losses resulting from traffic related collisions in California. OTS distributes federal funding apportioned to California under the National Highway Safety Act and MAP-21. Grants are used to mitigate traffic safety program deficiencies, expand ongoing activity, or develop a new program. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. OTS grants address several traffic safety priority areas including Pedestrian and Bicycle Safety. Eligible activities include programs to increase safety awareness and skills among pedestrians and bicyclists. Concepts may encompass activities such as safety programs, education, enforcement, traffic safety and bicycle rodeos, safety helmet distribution, and court diversion programs for safety helmet violators.

Web Link: <http://www.ots.ca.gov/>

Environmental Enhancement and Mitigation Program⁴³

Environmental Enhancement and Mitigation Program (EEMP) funds are allocated to projects that offset environmental impacts of modified or new public transportation facilities including streets, mass transit guideways, park-n-ride facilities, transit stations, tree planting to equalize the effects of vehicular emissions, and the acquisition or development of roadside recreational facilities, such as trails. State gasoline tax monies fund the EEMP. The EEMP program represents an opportunity to fund improvements as mitigation to highway work, as well as other highway facilities in Sonoma County.

Web Link: <http://resources.ca.gov/eem/>

California State Coastal Conservancy⁴⁴

The California State Coastal Conservancy manages several programs that provide grant funds for trails, access, and habitat restoration projects. The funding cycle for these programs is open and on-going throughout the year. Funds are available to local government as well as non-profits. The Conservancy may be a funding source for bicycle facilities that improve access to Sonoma County's beaches, rivers, and creeks.

Web Link: <http://scc.ca.gov/category/grants/>

Habitat Conservation Fund⁴⁵

The Habitat Conservation Fund (HCF) provides \$2 million dollars annually in grants for the conservation of habitat including wildlife corridors and urban trails statewide. Eligible activities include property acquisition, design, and construction. The HCF is 50% dollar for dollar matching program. California Environmental Quality Act (CEQA) compliance is required. Urban projects should demonstrate how the project would increase the public's awareness and use of park, recreation, or wildlife areas.

⁴² Currently Active Program

⁴³ Currently Active Program

⁴⁴ Currently Active Program

⁴⁵ Currently Active Program



Web Link: http://www.parks.ca.gov/?page_id=21361

Wildlife and Habitat Restoration Funding Opportunities

Wildlife Conservation Board Public Access Program⁴⁶

This program funds land acquisitions that preserves wildlife habitat or provides recreational access for hunting, fishing or other wildlife-oriented activities. Up to \$250,000 is available per project with applications accepted quarterly. Eligible projects include interpretive trails, river access and trailhead parking areas. The state must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases.

Web Link: <https://www.wcb.ca.gov/FundingSources.aspx>

State River Parkways Program⁴⁷

This goal of this program is to provide recreational, wildlife, flood management, water quality and urban waterfront revitalization benefits to communities along river corridors. Trail-related projects are a strong component of the program, by achieving recreation, interpretation and potentially conversion of abandoned industrial lands goals. Public access is a fundamental requirement of the program.

Web Link: http://resources.ca.gov/bonds_prop50riverparkway.html

State Water Resources Control Board Grants

Federal CWA 319(h) Program⁴⁸

This program is an annual federally funded nonpoint source pollution control program that is focused on controlling activities that impair beneficial uses and on limiting pollutant effects caused by those activities. States must establish priority rankings for waters on lists of impaired waters and develop action plans, known as Total Maximum Daily Loads (TMDLs), to improve water quality. Project proposals that address TMDL implementation and those that address problems in impaired waters are favored in the selection process. There is also a focus on implementing management activities that lead to reduction and/or prevention of pollutants that threaten or impair surface and ground waters.

Web Link: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/319h/

The California Fish Passage Forum⁴⁹

The California Fish Passage Forum funds project proposals for fish passage projects in California that advance the Forum's mission to protect and revitalize anadromous fish populations by restoring connectivity of freshwater habitats throughout their historic range. The program funds projects at various levels depending upon need and annual revenues. This and other sources of fish passage funding could potentially be used to mitigate for trail project impacts crossing streams with steelhead.

Web Link: <http://www.cafishpassageforum.org/index.cfm?content.display&pageID=112>

⁴⁶ Currently Active Program

⁴⁷ Not an Active Program

⁴⁸ Currently Active Program

⁴⁹ Currently Active Program



California Strategic Growth Council⁵⁰

Affordable Housing and Sustainable Communities (AHSC)

The Strategic Growth Council's Affordable Housing and Sustainable Communities Program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that reduces greenhouse gas ("GHG") emissions. These projects facilitate the reduction of the emissions of GHGs by improving mobility options and increasing infill development, which decrease vehicle miles traveled and associated greenhouse gas and other emissions, and by reducing land conversion, which would result in emissions of greenhouse gases.

Projects are also to support related and coordinated public policy objectives, including:

- Reducing air pollution
- Improving conditions in disadvantaged communities
- Supporting or improving public health
- Improving connectivity and accessibility to jobs, housing and services
- Increasing options for mobility, including active transportation
- Protecting agricultural lands to support infill development

Web Link: https://www.sgc.ca.gov/s_ahscprogram.php

Regional Funding Programs

TDA Article 3 ⁵¹

Transportation Development Act (TDA) Article 3 funds are generated from State gasoline sales taxes and are returned to the source counties from which they originate to fund transportation projects. Article 3 funds provide a 2 percent set aside of the County TDA funds for bicycle and pedestrian projects. Eligible projects include right-of-way acquisition; planning, design and engineering; support programs; and construction of bicycle and pedestrian infrastructure, including retrofitting to meet ADA requirements, and related facilities. Each year the Sonoma County Board of Supervisors approves a Program of Projects for the County and requests allocation from the Metropolitan Transportation Commission (MTC).

Web Link: <http://www.mtc.ca.gov/funding/>

One Bay Area Grant Program⁵²

The five-year, \$327 million OneBayArea Grant (OBAG) Program is a funding approach administered by MTC that integrates the region's federal transportation program with California's climate law (Senate Bill 375, Steinberg, 2008) and the Sustainable Communities Strategy. Funding is targeted toward achieving local land-use and housing policies by:

- Rewarding jurisdictions that accept housing allocations through the Regional Housing Need Allocation (RHNA) process.
- Supporting the Sustainable Communities Strategy for the Bay Area by promoting transportation investments in Priority Development Areas (PDAs)
- Initiating a pilot program that will support open space preservation in Priority Conservation Areas (PCA).

⁵⁰ Currently Active Program

⁵¹ Currently Active Program

⁵² Currently Active Program



- The OBAG program allows flexibility to invest in transportation categories such as Transportation for Livable Communities, bicycle and pedestrian improvements, local streets and roads preservation, and planning activities, while also providing specific funding opportunities for Safe Routes to School (SR2S) and Priority Conservation Areas.

Web link: <http://www.mtc.ca.gov/funding/onebayarea/>

Local Funding Programs

Direct Local Jurisdiction Funding

Local jurisdictions can fund bicycle and pedestrian projects using a variety of sources. City or county general funds are often earmarked for non-motorized transportation projects, especially sidewalk and ADA improvements.

Future road widening and construction projects are one means of providing bike lanes and sidewalks. To ensure that roadway construction projects provide these facilities where needed, appropriate, and feasible, it is important that an effective review process is in place so that new roads meet the standards and guidelines presented in this Study.

Sonoma County Transportation Authority / Measure M⁵³

The Sonoma County Transportation Authority / Regional Climate Protection Authority (SCTA/RCPA) is the countywide planning and programming agency for transportation and coordinates climate protection activities countywide.

The SCTA, was formed as a result of legislation is the coordinating and advocacy agency for transportation funding for Sonoma County, and administers Measure M funds generated within Sonoma County through a local sales tax for specific transportation projects in the County. The SCTA partners with other agencies to improve transportation in the County, including Highway 101, local streets, transit, bicycle and pedestrian facilities.

The Regional Climate Protection Authority, RCPA, was formed through legislation in 2009 to coordinate countywide climate protection efforts among Sonoma County's nine cities and multiple county agencies. The RCPA is engaged in securing grant funding for a variety of GHG reducing efforts including energy efficiency, building retrofit and alternative transportation programs. Data collection, public information and education are significant elements of the climate protection effort.

Web Link: <http://www.sctainfo.org/>

Impact Fees and Development Implementation

As stated in Policy CT-3v of the County General Plan Circulation and Transit Element, where nexus exists, private or public development projects should plan, design, and construct bicycle and pedestrian facilities to integrate with the existing and planned bicycle and pedestrian network. This would be appropriate for any projects that generate tourism or trip generation that could be served by complementary bicycle and pedestrian facilities, including winery events, hotels, restaurants, residential projects and others. This Study can serve as a guide for the provision of facilities, and individual projects should integrate these facilities into project development documents.

⁵³ Currently Active Program



Another potential local source of funding is developer impact fees, typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- and off-site pedestrian and bikeway improvements, which will encourage residents to walk and bicycle rather than drive. In-lieu parking fees may be used to help construct new or improved bicycle parking. A clear connection between the impact fee and the mitigation project must be established.

Special Taxing Districts

Special taxing districts, such as redevelopment districts, can be good instruments to finance new infrastructure – including shared use trails and sidewalks – within specified areas. New facilities are funded by assessments placed on those that are directly benefited by the improvements rather than the general public. In a “tax increment financing (TIF) district, taxes are collected on property value increases above the base year assessed property value. This money can then be utilized for capital improvements within the district. TIFs are especially beneficial in downtown redevelopment districts. These districts are established by a petition from landowners to a local government. The districts can operate independently from the local government and some are established for single purposes, such as roadway construction.

Other

Local sales taxes, fees, and permits may be implemented, requiring a local election. Parking meter revenues may be used according to local ordinance. Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of groups such as the California Conservation Corps, which offers low-cost assistance will be effective at reducing project costs, and is encouraged in the State ATP guidelines.

Local schools or community groups may use the bikeway or pedestrian project as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right-of-way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations “adopt” a bikeway and help construct and maintain the facility.

In addition, local non-profits or other groups can enter into public-private partnerships to purchase private lands to facilitate trail corridor implementation. In Sonoma County, partnerships between local nonprofit groups such as LandPaths, Sonoma Land Trust partnered with conservation funding organizations such as the Gordon and Betty Moore Foundation, Trust for Public Land, or others, have resulted in the acquisition and management of open space lands for use by the public. One such example is Bohemia Ecological Preserve in Occidental, owned and managed by LandPaths.



11. IMPLEMENTATION

Implementation of a continuous trail connecting Petaluma, Sebastopol and beyond will be a multi-step process, completed as a number of individual phases or construction of separate segments that will link together over time. It is likely that the segments using available or newly acquired public ROW would be completed by the Cities of Petaluma or Sebastopol, with Caltrans, Regional Parks or perhaps County Public Works constructing segments of the project in unincorporated areas. In such cases, where Caltrans ROW is involved, Caltrans could potentially complete some of the work associated with other transportation projects, where funding and the transportation project approval process permit.

Trail segments involving private lands are typically completed as a condition of development approval, easement acquisition, licensing or use agreement, or other cooperative agreement with the property owner.

11.1 NEXT STEPS

This Study provides a relatively general evaluation and analysis of potential Petaluma-Sebastopol area trail alignments. Construction of actual trail projects will require additional site-specific planning, environmental review, and design development, with a number of subsequent steps. The actual next steps for any specific project will vary in terms of level of analysis, and the time involved to complete them. The following typical steps are required for construction of a public trail project requiring detailed planning, design, environmental review and project permitting prior to construction.

1. Review and/or approval of this Feasibility Study by lead agencies and project stakeholders.
2. Identify/confirm priority projects, secure funding and program funds for project implementation.
3. Continue discussions with stakeholders where easements or right-of-way are needed. Where appropriate, obtain Agreements in Principle or Memorandums of Understanding for right-of-way as individual projects or phases move forward towards construction.
4. Prepare Preliminary Engineering Design Documents, with greater focus on phases identified for initial design and construction. Update cost estimates and more clearly identify ROW needed.
5. Complete environmental assessment process (CEQA/NEPA, as appropriate). Some areas (within existing road rights of way) may be categorically exempt.
6. Obtain regulatory permit approvals.
7. Negotiate and complete ROW agreements, including easements, and trail use or licensing agreements.
8. Prepare detailed engineering design plans and construction documents. Publicly bid the project's construction plans.
9. Construction, including construction oversight of the approved plans by a qualified contractor to ensure that the project plans, along with all of the environmental mitigation measures and all permit conditions, are followed and implemented as approved.

Caltrans Trail Implementation

Coordination with Caltrans has occurred throughout the study process, and will continue as projects are implemented to ensure that Caltrans capital projects, maintenance activities and operations meet the needs of all travel modes on the state Highway system.



Encroachment and Design within Caltrans Right of Way

Caltrans has established procedures for projects that are completed within state right of way (ROW), or completed with funds administered under their authority as part of the Local Assistance process. It is anticipated that some segments of the trail may be completed under this program.

Facilities that are located within Caltrans ROW must also obtain an encroachment permit.

11.2 REGULATORY PERMITTING

In addition to Caltrans permitting process for any work within Caltrans ROW or utilizing federal funds administered by them, other regulatory permits may be needed. Biological resources are subject to regulatory requirements as outlined in the following local, state and federal statutes and policy documents. In addition, cultural resources are subject to protections under state and county law, as well as county permits that may trigger a building permit.

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (FESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGF)
- Migratory Bird Treaty Act (MBTA)
- Porter-Cologne Water Quality Control Act
- Sonoma County

A summary of regulatory permitting requirements is presented in **Table 10-2**.



Table 11-2 Regulations and Permit Summary

Administering Agencies	Design Review/Agreement/Permit	Regulation
USFWS	Issues “no effect” or “not likely to affect” letter.	Consultation with the United States Army Corps of Engineers (USACE) under Section 7
	Protects against destruction of migratory bird nests and possession of migratory bird “parts.”	Migratory Bird Treaty Act (MBTA)
CDFW	Environmental Review	California Environmental Quality Act (CEQA)
	Issues permit in creeks, wetlands and waterways	Streambed Alteration Agreement
SF Bay Regional Water Quality Control Board	Issues water quality certification.	Section 401 of the Federal Clean Water Act
United States Army Corps of Engineers	Issues Nationwide or Individual Permit to perform dredge or fill activities in the Waters of the U.S., including wetlands.	Section 404 of Federal Clean Water Act, Porter-Cologne Water Quality Act
	Issues permit to create obstructions or fill of navigable waters of the U.S. (bridges)	Section 10 of the Rivers and Harbors Act of 1899
Sonoma County	Construction of facilities on County-owned land (Responsible Agency)	Grading, encroachment, use agreement, cultural resources
City of Petaluma and/or City of Sebastopol	Construction of facilities on land within the City limits that is not within County or State owned lands (Responsible Agency)	Grading, encroachment, use agreement, possible design

U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and the local San Francisco Bay Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The San Francisco Bay RWQCB enforces actions under this general order for



isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife. The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.



11.3 PRIORITIES AND PHASING

It is not presently possible to determine the timing of construction of all of the phases of the Trail. Project priorities and phasing will be driven in large part by the availability of funds, and in some cases the ability to implement trail projects in conjunction with other related projects. Trail construction phasing will be influenced by the relative complexity of projects, difficulty of environmental and permitting issues, problems with right-of-way acquisition, the interest of the public agency stakeholders in building trails within their jurisdictions, and public demand. Presented here is an approach to project phasing for stakeholder and public review and to facilitate further discussion.

This Feasibility Study is intended to facilitate the preparation of grant applications by providing draft trail alignment maps, and baseline environmental information (including opportunities and constraints), descriptions of trail alignments and preliminary costs for the design, environmental review/permitting, and construction of the trail segments. This would allow all of the interested stakeholders and public agency landowners within the trail corridor the flexibility and ability to actively pursue projects as needs arise and opportunities for trail construction present themselves.

The Petaluma Sebastopol Trail Project will most likely be initiated and the first phases of the rapid or commuter route along but separated from SR116 completed at the two ends (City of Petaluma and City of Sebastopol), working towards the most challenging center section along SR116. Some segments of the relaxed or recreation trail alignment option could also be constructed in a phased approach, and independently of construction along SR 116.

High Priority Projects

This section summarizes the first priorities for trail implementation. It should be noted that priorities may change depending upon opportunities for implementation based on adjacent development, roadway improvement projects, funding allocations, habitat restoration funding, agricultural and open space easement acquisition, or other factors. In addition, projects within the Cities or County may be completed concurrently, depending on community support and funding. The Goal would be to initiate construction of some of the High Priority Projects within 5 -7 years and complete all or nearly all of them within 10-12 years. Because implementation of trail projects is often reactionary to opportunities, related transportation or restoration projects, and to funding availability for kinds of projects, the list below does not represent a rigid attempt to rank them in numerical priority order.

1. **Segment 1.** City of Sebastopol Trail improvements (under construction; SB 1 funding). The completion of bicycle and pedestrian projects within Sebastopol is funded and anticipated for completion within the next year.
2. **Segment 2A** (Class I/Class IV improvements) between Sebastopol City Limits and Bloomfield Road would provide a needed off-street connection between schools, businesses and residents in the Bloomfield area and destinations within the City of Sebastopol. This segment has also been noted by local bicyclists as a safety concern.
3. **Segment 6C**, City of Petaluma. Completion of the short gap in the Petaluma River Trail would provide a complete off-street recreational route to the existing Denman Staging Area. This work should be coordinated with recently awarded funding for floodplain improvements and restoration of the upper Petaluma River.



4. **Segment 6B**, City of Petaluma. Completion of this short gap in the Petaluma Blvd. North Class II bike lanes and sidewalks would provide a complete on-street connection along the City's primary arterial corridor and transit facilities. The timing of this connection would need to be coordinated with future improvements to the existing Petaluma River Bridge. Interim connections to the Petaluma River Trail (such as a separate pedestrian bridge) could be considered to improve bicyclist and pedestrian safety.
5. **Segment 6A**, City of Petaluma. Within Petaluma, completion of Segment 6A (Stony Point Road north of Old Redwood Highway/Petaluma Blvd. North) would provide a connection to existing tourist destinations such as the Petaluma Pumpkin Patch and the KOA Campground. This segment was noted by bicyclists as a safety concern, and would provide an off-street connection to existing Class II facilities on Stony Point Road.
6. **Segments C2 and C3**, Recreational Trail Improvements along the Laguna de Santa Rosa would provide a complete segment between Stony Point Road and Llano Road, and connect to an existing staging area. Completion of the short segment of Class II improvements (**Segment C3**) would provide a connection to SR 116 and a potential staging area at that location. The staging area could be integrated with planned improvements to the Llano Road/SR 116 intersection.
7. **Segment 6D**, City of Petaluma. This segment would provide a complete off-street connection between the SMART Trail (which connects to downtown Petaluma as well as areas east of Highway 101), and would eliminate safety crossing issues on Corona Road.
8. **Segments 2B, 2C, 2D, and 2E, and Segment B** (SR116 Improvements, and Old Gravenstein Hwy). To be coordinated with Caltrans, would provide a complete connection to the Laguna de Santa Rosa recreational route, and potential staging area. Either Segment B or Segment 2C would provide a complete connection, but Old Gravenstein Highway would provide a respite from travel along SR 116, would serve businesses and destinations in that area, and connects to planned Class II improvements on Todd Road. These improvements should be incorporated into Caltrans/SCTA, and County road improvement and signalization projects.
9. **Segment 3** (SR116 Improvements). Segments **3A, 3B** and **3C** would complete the commuter oriented connection to Stony Point Road and facilitate implementation of Segment C4 to connect to the Laguna de Santa Rosa recreational route, and existing staging area. These improvements should be incorporated into Caltrans/SCTA roadway and signalization projects.
10. **Segments C4 and C5**, Recreational Trail Improvements connecting to the Laguna de Santa Rosa. These improvements along the SCWA right of way would be completed after the trail spine along SR 116 is completed, and would provide a direct connection to the Laguna de Santa Rosa Trail, the existing staging area, and would provide loop trail opportunities for visitors.



Mid - Long Term Priorities

Projects that might be implemented on a longer timeline include those that do not initially provide a connection to key destinations, are parallel to existing/priority bicycle and pedestrian facilities, or where landowner coordination may be needed to allow trail implementation. The Goal would be to initiate construction of some of the Medium to Long-Term Priority Projects within 12 -15 years and complete them all within 25-30 years.

These include:

- **Segments 4A and 4B.** Class II facilities exist along Stony Point Road, although pedestrian facilities are not present. Intersection improvements to facilitate bicycle and pedestrian safety should be incorporated into intersection improvements in this area as properties are improved or as part of transportation projects.
- **Segments 5A, 5B and 5C.** Like Segment 4, Class II facilities exist along Stony Point Road, although pedestrian facilities are not present. Intersection improvements to facilitate bicycle and pedestrian safety should be incorporated into intersection improvements in this area as properties are improved or as part of transportation projects. Completion of this segment would facilitate implementation of the Stony Point Byway.
- **Segment A.** Improved bicycle and pedestrian facilities on Lone Pine Road, Bloomfield Road, and other rural roads. These facilities would likely be completed as part of transportation roadway improvements, or school safety access projects, and would not be completed or managed by Regional Parks as part of the trail network.
- **Segment C1.** Extension of the Laguna de Santa Rosa Trail west of Llano Road would provide additional recreational opportunities as well as a direct connection to planned intersection improvements at Lone Pine Road. This trail could also connect to potential Llano/Laguna trails north of the study area. Implementation of this trail segment would be subject to coordination with landowners and stakeholders in the vicinity, including the City of Santa Rosa.
- **Segment D, Stony Point Byway.** Although publicly owned, implementation of this segment would be dependent on completion of trail connections north and south of the segment.
- **Segments 6E and 6F, Petaluma River Trail.** These trail segments would complete the River Trail north of the Downtown area. Completion of the trail would likely be a part of future development of adjacent lands, but could be completed earlier if incorporated into Petaluma River floodplain and restoration improvements.

In addition to the project segments identified in this study, it is conceivable that another entity, such as a nonprofit group, charitable trust or other organization may acquire right of way or easements along former railroad lands or other property that could be incorporated into the trail network. This Study is not intended to preclude such discussions or future implementation. As a living document, such opportunities would be revisited should these lands become available for public use in the future.



Table 11-3
Summary of Trail Implementation Priorities

Priority	Segment Number	City/ County	Street	Begin Point	End Point	Class	Length Miles	Cost Millions
1	1	Sebastopol	SR116	Sebastopol Ave.	Sebastopol City limits	II	3.2	\$3.2M
2	2A	County	SR116	Sebastopol City Limits	Bloomfield Road	I, IV	0.6	.99
3	6C	Petaluma	N/A	Industrial Ave	Petaluma River Trail (Denman Reach)	I	0.7	.28
4	6B	County Petaluma	Petaluma Blvd. North	Stony Point Road	Bailey Ave	I,IV	0.1	2.89
5	6A	Petaluma	Stony Point Rd	Petaluma City Limits	Petaluma Blvd. N	I	0.9	1.48
6	C2	County	N/A	Llano Road	N/A	I	0.6	.73
6	C3	County	Llano Road	SR 116	Laguna de Santa Rosa	II	0.8	.32
7	6D	Petaluma	Old Corona Road	Industrial Ave	SMART Trail	I	1.3	1.57
8	2B	County	SR116	Bloomfield Road	Old Gravenstein Hwy N	I	0.9	1.63
8	B	County	Old Gravenstein HWY	SR116/Old Gravenstein Hwy N	SR116/Old Gravenstein Hwy S	I	0.7	1.05
8	2C	County	SR116	Old Gravenstein Hwy N	Old Gravenstein Hwy S	I	0.7	1.12
8	2D	County	SR116	Old Gravenstein Hwy S	Lone Pine Road	I	0.3	.42
8	2E	County	SR116	Lone Pine	Llano Road	I	1.3	2.31
9	3A	County	SR116	Llano Road	Hessel Road	I	0.9	.42
9	3B	County	SR116	Hessel Road	Laguna Connector	I	1.2	2.44
9	3C	County	SR116	Laguna Connector	Stony Point Road	I,IV	0.2	.26
10	C4	County	N/A	Laguna de Santa Rosa	SR 116	I	1.8	1.87
10	C5	County	N/A	SR 116	Stony Point Road	I	0.5	.73
Mid to long Term Implementation								
	4A	County	Stony Point Rd	SR 116	Roblar Road	I	1.5	2.59
	4B	County	Stony Point Rd	Roblar Road	Mecham Road	I	0.3	.47



Priority	Segment Number	City/County	Street	Begin Point	End Point	Class	Length Miles	Cost Millions
	5A	County	Stony Point Rd	Mecham Road	Stony Point Byway	I	0.3	.88
	5B	County	Stony Point Rd	Stony Point Byway	West Railroad Ave	I	1.1	2.20
	5C	County	Stony Point Rd	West Railroad Ave	Petaluma City Limits	I	2.2	4.20
	A	County	Bloomfield Lone Pine Road	SR116/ Bloomfield Road	SR 116/ Lone Pine Road	II,III	2.5	.98
	C1	City of Santa Rosa County	N/A	SR 116	Llano Road	I, III	0.8	.63
	D	County	West Railroad Ave extension N/A	Stony Point Road	Stony Point Road at West Railroad Ave extension	I	1.2	1.53
	6E	Petaluma	N/A	Old Corona Road	Petaluma River Trail (Outlet Mall)	I	0.7	.29
	6F	Petaluma	N/A	Capri Creek	SMART Trail	I	0.7	.78



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Appendices Section 508 Compliance Information

The Appendices contain graphics, photographs, tables and other information (that is contained elsewhere in the study) to document the community engagement effort, biological resources in the study area, and potential project costs. A summary of the information provided in this section is listed below. Please contact Ken Tam of Sonoma County Regional Parks Department at 707-565-3348 for additional information.

Appendix A: Community Engagement

Pages 1-3:	Community survey in text form
Pages 4-19:	Graphics showing survey results in chart form (summarized on Page 3 of Study)
Pages 20-22:	PowerPoint presentation from Listening Sessions 1 and 2, March 30, 2017
Pages 23-26:	Minutes from Listening Sessions 1 and 2
Page 27:	Graphics showing Meeting Notice for Community Workshops 1 and 2, 4-5-17 and 4-15-17
Pages 28-30:	PowerPoint presentation from April 5 and April 15, 2017 Workshops
Pages 31-33:	Scans of Sign in Sheets 4-5-17
Page 34:	Photos of Workshop 4-5-17
Pages 35-39:	Workshop minutes 4-5-17
Pages 40-41:	Scans of Sign in Sheets 4-15-17
Page 42:	Photos of Workshop 4-15-17
Pages 43-47:	Workshop minutes 4-15-17
Pages 48-53:	Petaluma Pedestrian and Bicycle Advisory Committee Agenda and Powerpoint presentation
Pages 54-61:	Community Workshop 3, 2-1-18, comments received, photos and Powerpoint presentation
Pages 62-69:	Scans of comment cards, Workshop 3, 2-1-18
Pages 70-71:	Response to comments received at Workshop 3
Pages 71-74:	Scans of Sign in Sheets 2-1-18
Pages 74-78:	Board of Supervisors Staff Report, 2-6-18
Page 79:	Map showing 6 proposed trail alignments and 4 connecting trails
Pages 80-94:	City of Sebastopol City Council staff report and Powerpoint presentation, 2-6-18
Pages 95-119:	Other correspondence and comments received, and study responses

Appendix B

Pages 120-124: Biological Resources in the study area

Appendix C

Pages 125-128: Preliminary Project Costs

Appendix A: Community Engagement



SONOMA COUNTY REGIONAL PARKS

Petaluma to Sebastopol Trail Survey

- 1) _____ **What is your primary interest in the Petaluma to Sebastopol Trail?**
- a. Recreational Use (biking, walking/hiking, jogging/running, walking pet)
 - b. Commute or transit by bicycle or walking
 - c. Neighbor/Resident of Sebastopol
 - d. Neighbor/Resident of Hessel, Bloomfield, Turner, Peterson
 - e. Neighbor/Resident of SR 116/Stony Point Road
 - f. Neighbor/Resident of Petaluma
 - g. Recreation/Tourism/Visitor
 - h. Agriculture/Rancher
 - i. Business/other:

- 2) _____ **Do you currently use the existing shoulders along Stony Point Road and/or SR 116 between Petaluma and Sebastopol to bicycle?**
- a. Yes
 - b. No

What do you like best/least about bicycling here?

- 3) _____ **Do you currently use the existing shoulders along Highway 116 between Petaluma and Sebastopol to walk?**
- a. Yes
 - b. No

What do you like best/least about walking here?

- 4) _____ **What would make a trail between Petaluma and Sebastopol most attractive to you?**
- a. Opportunity to enjoy scenic views.
 - b. Opportunity to bicycle or walk to Petaluma or Sebastopol for recreation.
 - c. Opportunity to commute by bicycle to Petaluma or Sebastopol.
 - d. Opportunity to bicycle or walk to schools, services, transit, or other destinations located along the corridor.



SONOMA COUNTY REGIONAL PARKS

- 5) _____ **When considering connections to existing bike routes as well as recreation and work destinations, would you prefer the trail to be on the north side or the south side of Highway 116? Where would you like to cross?**

- a. North side of Highway 116
- b. South side of Highway 116

Desired crossing location:

- 6) _____ **If the trail is built, how often would you use it?**

- a. Never
- b. Once a month
- c. Once or twice a week
- d. Every day

- 7) _____ **Do you live on or near Highway 116 or Stony Point Road? If so, what is your biggest concern?**

I don't live near these roads

- 8) _____ **What other roads or trails in the Study Area do you use for bicycling and walking? What do you like or dislike about them?**

Please provide your contact information if you would like to be included on the project mailing list.

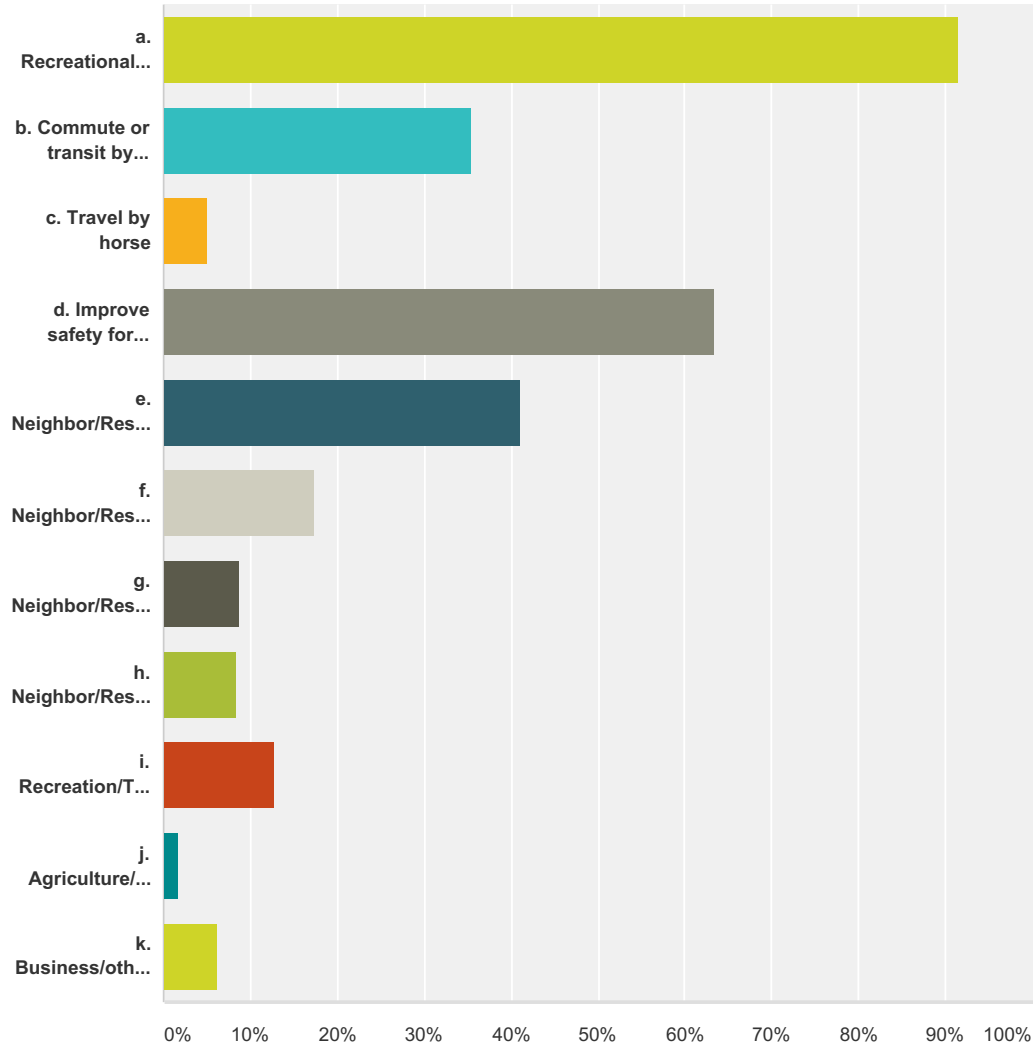
Name: _____ Address: _____

Email: _____.

Thank you!

Q1 What is your primary interest in the multi-use Petaluma Sebastopol Trail? **Check all that apply.**

Answered: 432 Skipped: 0



Answer Choices	Responses
a. Recreational use (bicycling, walking/hiking, jogging/running, walking a dog)	91.44% 395
b. Commute or transit by bicycle or walking to school, work, other places of interest	35.42% 153
c. Travel by horse	5.09% 22
d. Improve safety for pedestrians, bicyclists, and motorists.	63.43% 274
e. Neighbor/Resident of Sebastopol	41.20% 178
f. Neighbor/Resident of Hessel, Bloomfield, Cunningham, Turner, Petersen	17.36% 75
g. Neighbor/Resident of Highway 116 or Stony Point Road	8.80% 38
h. Neighbor/Resident of Petaluma	8.33% 36

Petaluma Sebastopol Trail Community Survey

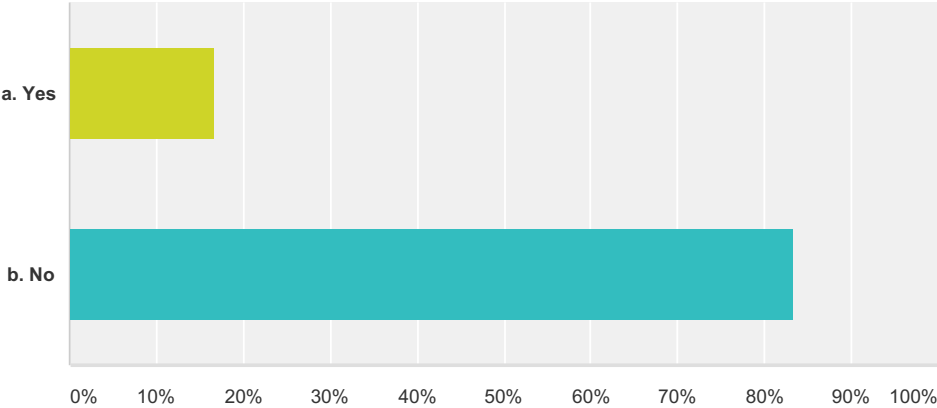
i. Recreation/Tourism/Visitor	12.73%	55
j. Agriculture/Rancher	1.62%	7
k. Business/other (please specify)	6.25%	27
Total Respondents: 432		

Q2 Where do you live? Please enter zip code.

Answered: 429 Skipped: 3

Q3 Do you currently use the existing shoulders along Stony Point Road and/or Highway 116 between Petaluma and Sebastopol to walk, jog, or run?

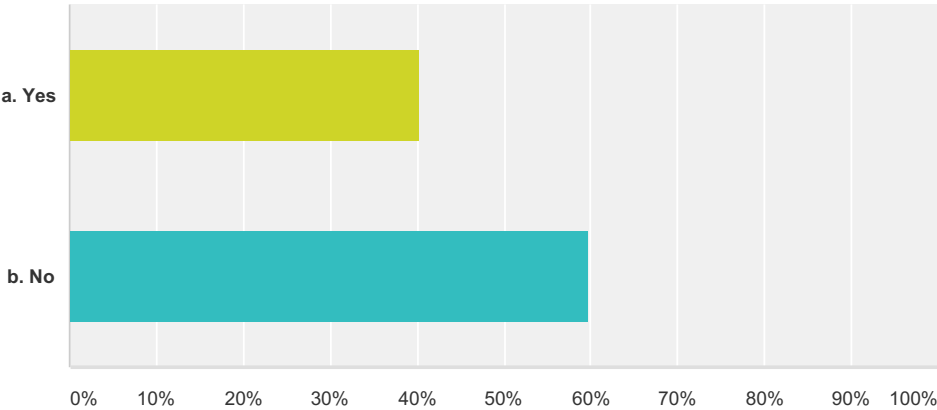
Answered: 429 Skipped: 3



Answer Choices	Responses	
a. Yes	16.78%	72
b. No	83.22%	357
Total		429

Q4 Do you currently use the existing shoulders along Stony Point Road and/or Highway 116 between Petaluma and Sebastopol to bicycle?

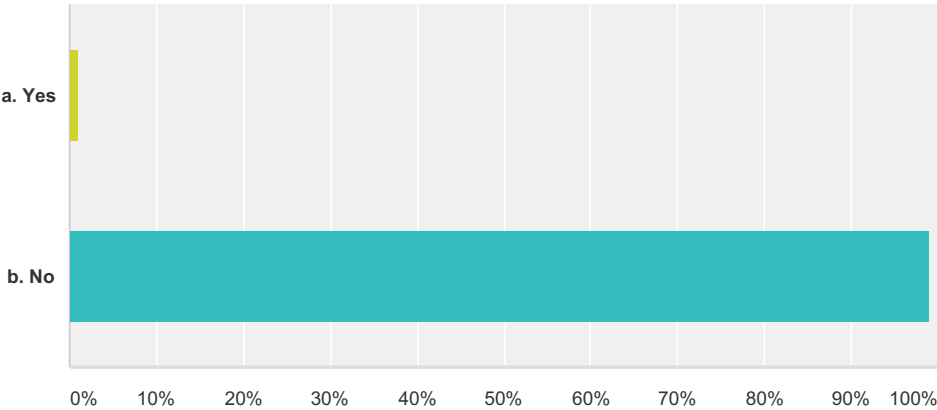
Answered: 427 Skipped: 5



Answer Choices	Responses	
a. Yes	40.28%	172
b. No	59.72%	255
Total		427

Q5 Do you currently use the existing shoulders along Stony Point Road and/or Highway 116 between Petaluma and Sebastopol to ride a horse?

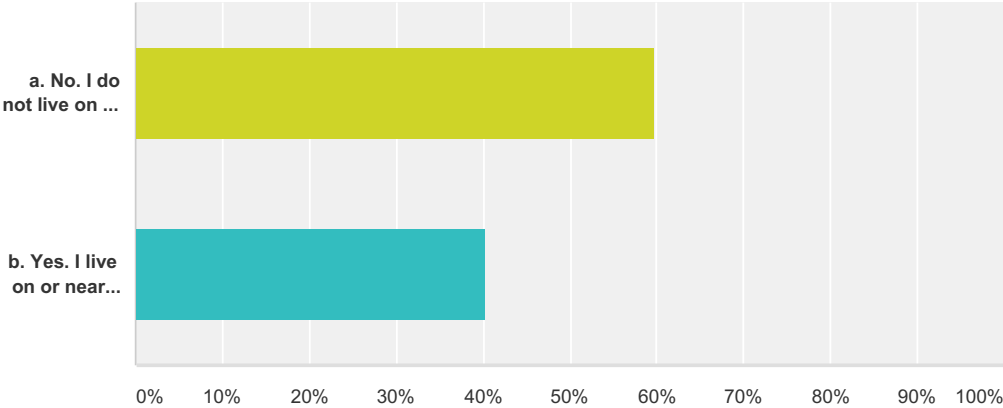
Answered: 416 Skipped: 16



Answer Choices	Responses	
a. Yes	0.96%	4
b. No	99.04%	412
Total		416

Q6 Do you live on or near Stony Point Road or Highway 116? If so, what is your biggest concern.

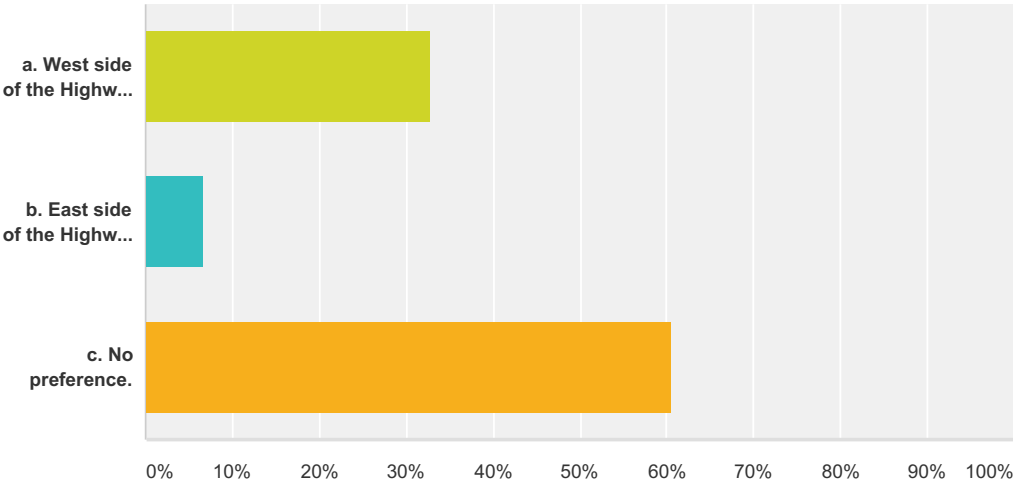
Answered: 410 Skipped: 22



Answer Choices	Responses	
a. No. I do not live on or near Stony Point Road or Highway 116	59.76%	245
b. Yes. I live on or near Stony Point Road or Highway 116	40.24%	165
Total		410

Q7 When considering connections to existing pedestrian pathways and bike routes as well as recreation and work destinations, would you prefer the trail to be on the west side or east side of Highway 116? Where would you like to cross?

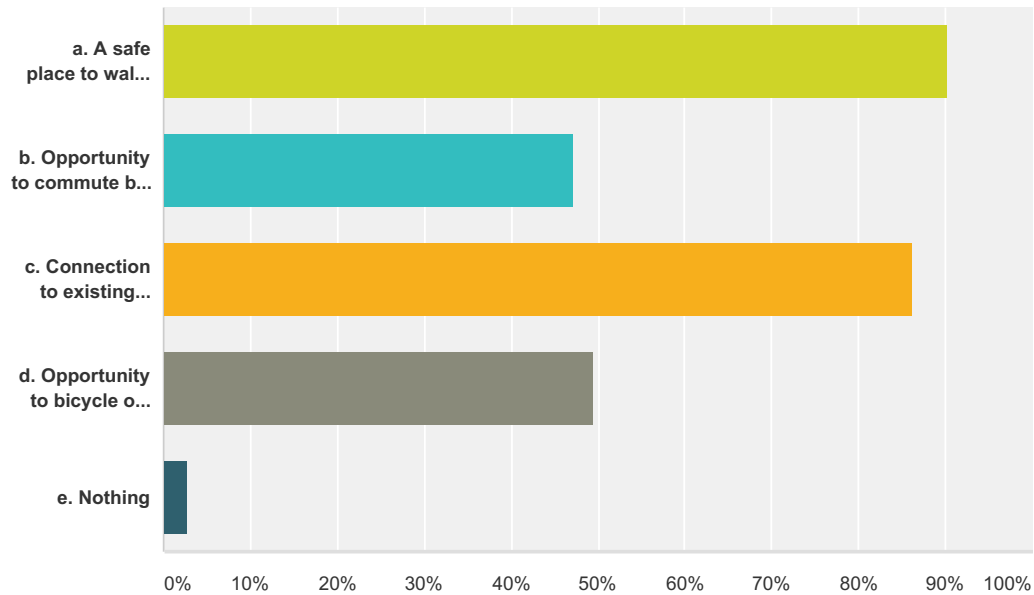
Answered: 416 Skipped: 16



Answer Choices	Responses	
a. West side of the Highway 116 road shoulder.	32.69%	136
b. East side of the Highway 116 road shoulder.	6.73%	28
c. No preference.	60.58%	252
Total		416

Q8 What would make a trail between Petaluma and Sebastopol most attractive to you? Check all that apply.

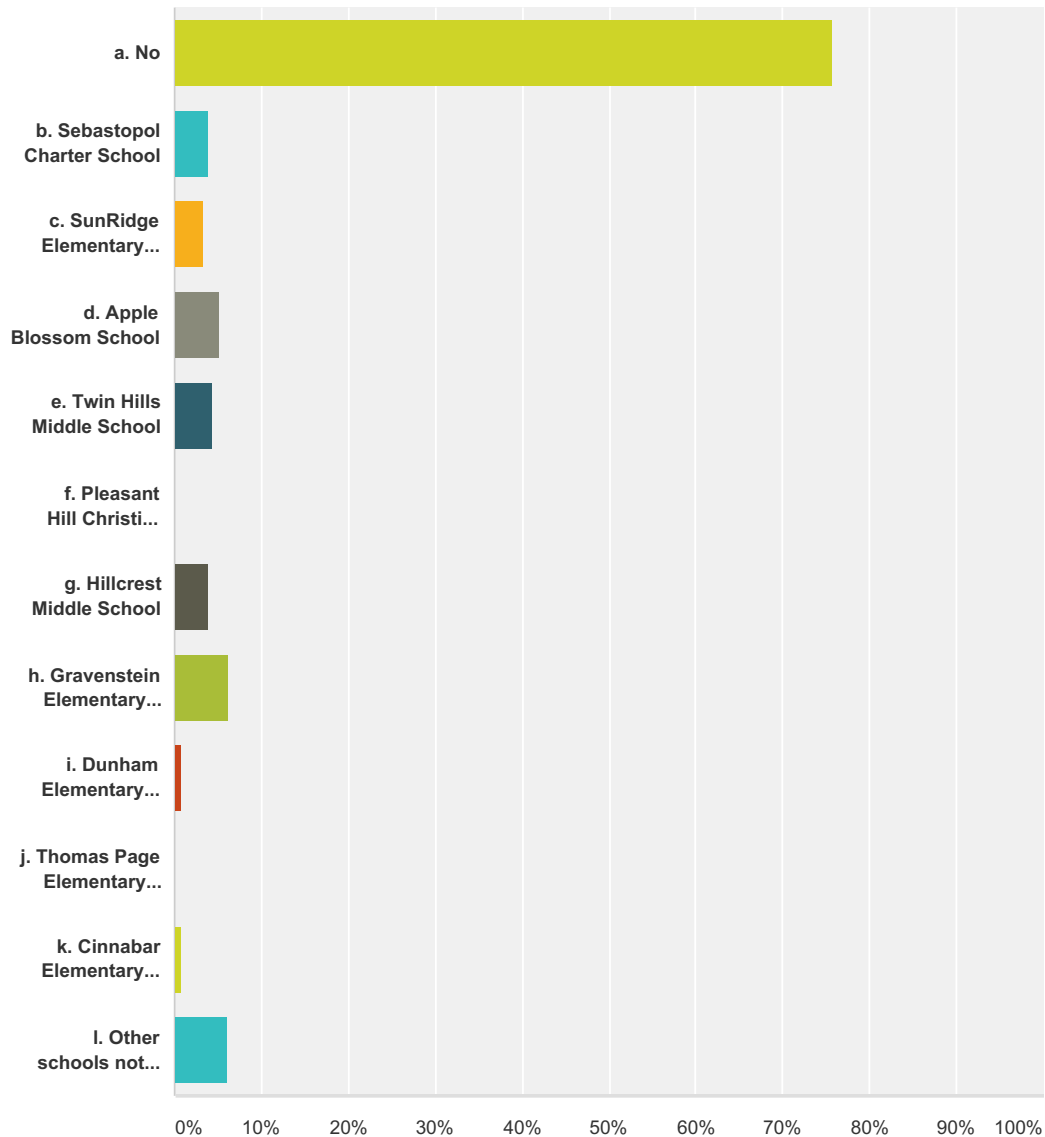
Answered: 429 Skipped: 3



Answer Choices	Responses
a. A safe place to walk, jog, bicycle, or ride a horse.	90.21% 387
b. Opportunity to commute by bicycle to Petaluma, Sebastopol, and other areas.	47.09% 202
c. Connection to existing trail networks such as the Joe Rodota/West County Trail and the planned Sonoma Marin Area Rail Transit Trail and Laguna de Santa Rosa Trail.	86.25% 370
d. Opportunity to bicycle or walk to schools, churches, services, transit, or other destinations located along the corridor.	49.42% 212
e. Nothing	2.80% 12
Total Respondents: 429	

Q9 Do you have family members attending any of the schools listed below? If yes, check all that apply.

Answered: 381 Skipped: 51



Answer Choices	Responses	
a. No	75.85%	289
b. Sebastopol Charter School	3.94%	15
c. SunRidge Elementary School	3.41%	13
d. Apple Blossom School	5.25%	20
e. Twin Hills Middle School	4.46%	17
f. Pleasant Hill Christian School	0.00%	0

Petaluma Sebastopol Trail Community Survey

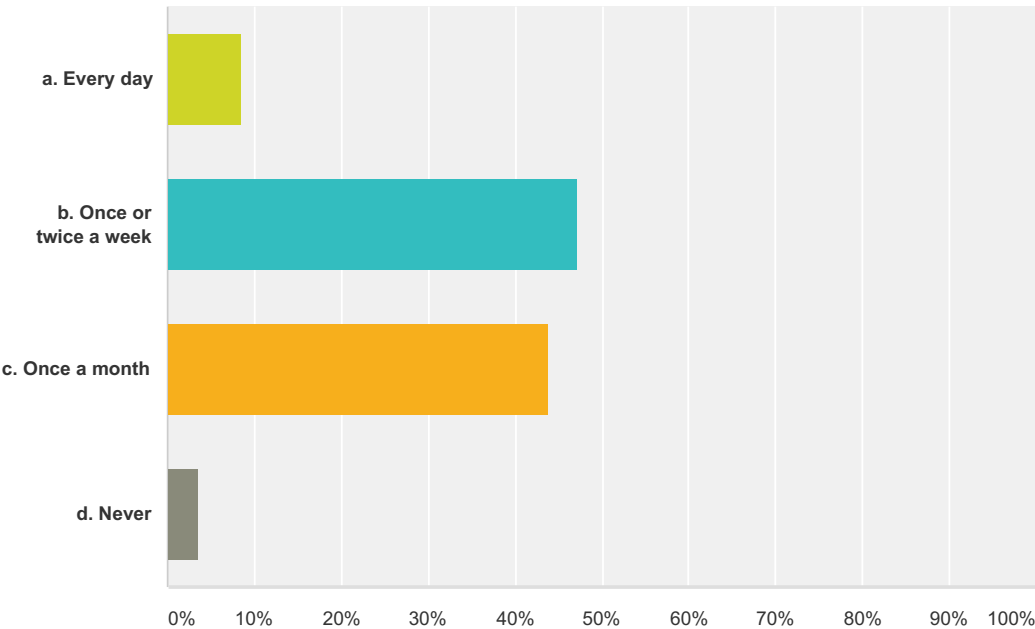
g. Hillcrest Middle School	3.94%	15
h. Gravenstein Elementary School	6.30%	24
i. Dunham Elementary School	0.79%	3
j. Thomas Page Elementary School	0.00%	0
k. Cinnabar Elementary School	0.79%	3
l. Other schools not listed above and within the study corridor (please specify)	6.04%	23
Total Respondents: 381		

Q10 Please specify places of interest or destinations that you would like to see a trail connection.

Answered: 124 Skipped: 308

Q11 If the trail is built, how often would you use it?

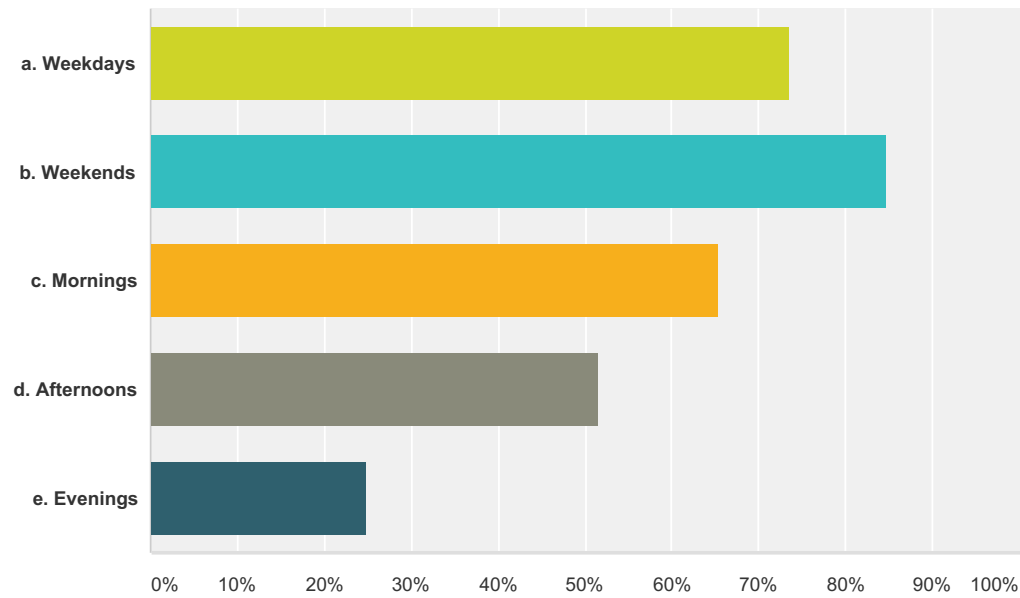
Answered: 429 Skipped: 3



Answer Choices	Responses	
a. Every day	8.62%	37
b. Once or twice a week	47.09%	202
c. Once a month	43.82%	188
d. Never	3.50%	15
Total Respondents: 429		

Q12 When would you use the trail? Check all that apply.

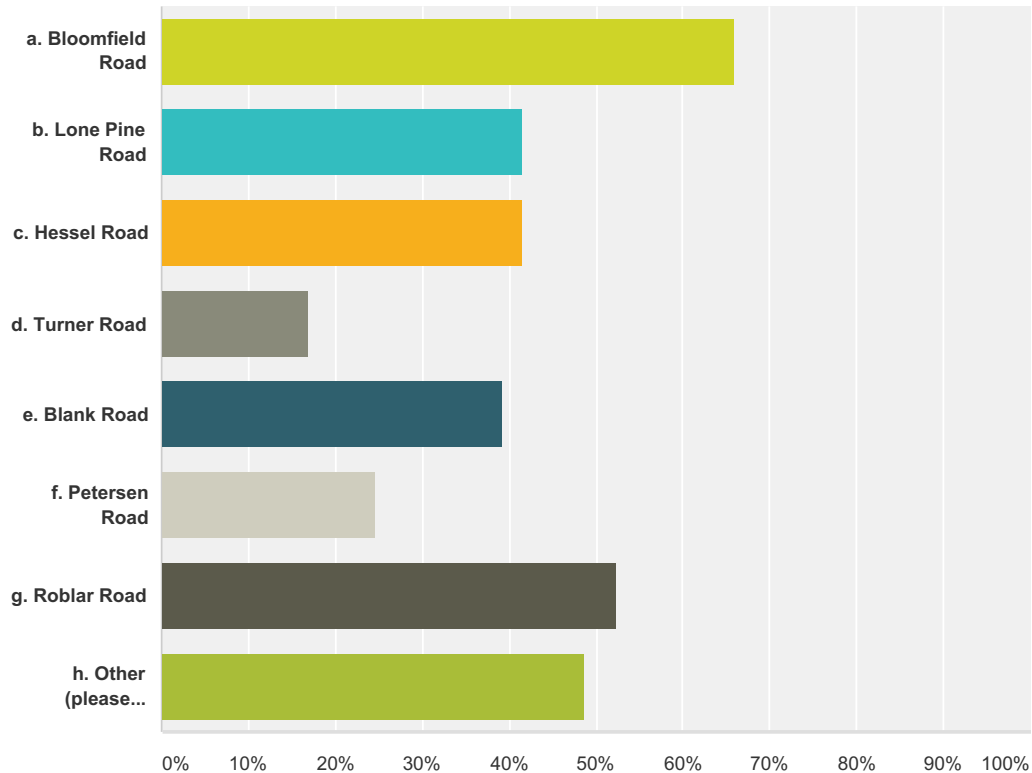
Answered: 415 Skipped: 17



Answer Choices	Responses	
a. Weekdays	73.49%	305
b. Weekends	84.82%	352
c. Mornings	65.30%	271
d. Afternoons	51.57%	214
e. Evenings	24.82%	103
Total Respondents: 415		

Q13 What other roads and/or trails in the study area do you use for walking, jogging, bicycling, and horseback riding? Check all that apply. What do you like or dislike about them?

Answered: 267 Skipped: 165




Answer Choices	Responses
a. Bloomfield Road	65.92% 176
b. Lone Pine Road	41.57% 111
c. Hessel Road	41.57% 111
d. Turner Road	16.85% 45
e. Blank Road	39.33% 105
f. Petersen Road	24.72% 66
g. Roblar Road	52.43% 140
h. Other (please specify)	48.69% 130
Total Respondents: 267	

Q14 Please provide any additional comments below and contact information (name, mailing address, email address, and telephone number) if you would like to be included on the project mailing list. Thank you for taking the survey.

Answered: 184 Skipped: 248

M1

Stakeholder Meeting
March 30, 2017



Petaluma-Sebastopol Trail Feasibility Study

SONOMA COUNTY REGIONAL PARKS

Agenda

- Introduction
- Study Team
- What is the Petaluma-Sebastopol Trail?
- Study Area
- Background
- Scope of Work /Timeline
- Opportunities for Input
- Next Steps

SONOMA COUNTY REGIONAL PARKS

Introduction

- This is a long range planning study to determine options for a multi-use trail. The Petaluma Sebastopol Trail will connect the two cities and their network of community trails.
- The Trail is identified in the 2010 Sonoma County Bicycle and Pedestrian Plan and other transportation and land use plans.
- The Study is funded by a Caltrans Sustainable Transportation Planning Grant (State funds) with local match funds from the County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club.
- A key element of the Study is Community Outreach.

SONOMA COUNTY REGIONAL PARKS

Study Team

Questa Engineering

- Jeff Peters
- Margaret Henderson

Parisi Transportation Consulting


Sonoma Ecology Center

Ken Tam, Project Manager
565-3348
ken.tam@sonoma-county.org

Steve Ehret, Park Planning Manager
565-2041
steve.ehret@sonoma-county.org

SONOMA COUNTY REGIONAL PARKS

What is the Petaluma Sebastopol Trail Feasibility Study?



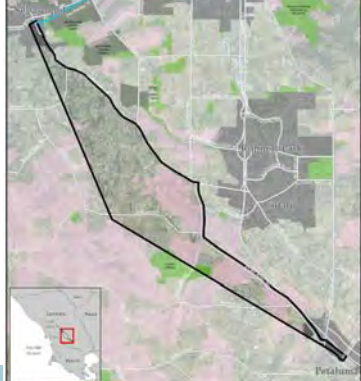
- **Community initiated study:**
 - Trails connecting communities
 - Safety concerns about walking and bicycling on area rural roads
 - bicycling, walking, recreational and commuting opportunities
- **Trail concept inspired by former Petaluma Sebastopol Railroad:**
 - Much of the railroad right-of-way is privately owned and developed for other purposes, and not available.
 - Feasibility study will help determine the **most workable route for the trail.**

SONOMA COUNTY REGIONAL PARKS

Study Area

Rodota Trail in Sebastopol along Hwy 116 and Stony Point Road south and west to Corona Road in Petaluma.

Incorporate trail planning efforts within cities of Sebastopol and Petaluma.



Petaluma - Sebastopol Trail Feasibility Study

Goals

- Provide safe active transportation options for bicyclists and pedestrians
- Increase connectivity of public spaces
- Provide access to recreation and physical activity for all ages
- Provide trails for multiple modes of travel
- Foster economic vitality with connections to local destinations
- Design for trail safety



SONOMA COUNTY REGIONAL PARKS

2005 - 2015 Bicycle & Pedestrian Collisions

Outcomes

- This is a **long-range Planning Study** that will be used to identify location, right of way, utilities, biological, cultural, traffic, safety and other issues affecting trail implementation.
- The Study will evaluate alternatives and recommend a preliminary alignment (where the trail might go), initial design, and identification of segments that have potential to be built in the near future.
- The costs and the economic and other benefits to the community will also be assessed.

SONOMA COUNTY REGIONAL PARKS

Outreach

- Project stakeholders, groups and individuals with interests in this Study:
 - Businesses
 - Churches/Schools
 - Bicycle/pedestrian advocates
 - Agriculture, vineyards, wineries
 - Government representatives
- Residents and property owners within the Study corridor.



SONOMA COUNTY REGIONAL PARKS

Opportunities for Input

- Electronic mailing
- Newspaper notification
- Individual outreach
- Project Website
- User surveys
- Workshops
- Board of Supervisors

SONOMA COUNTY REGIONAL PARKS

Timeline

Summer 2016 – Spring 2017: Identification of existing conditions, right of way and utility mapping, community survey, initial contact and meetings/workshops with stakeholders, interest groups, and the public.

April – May 2017: Further identification and evaluation of issues, opportunities and alternatives based on public input from community workshops and online surveys.

May – July 2017: Preparation and presentation of Draft Feasibility Study.

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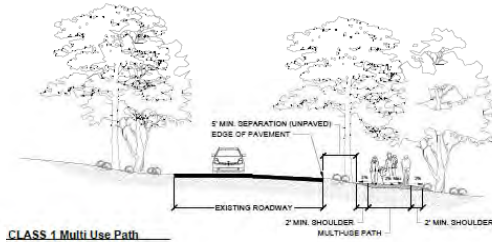
SONOMA COUNTY REGIONAL PARKS

Potential Trail Routes



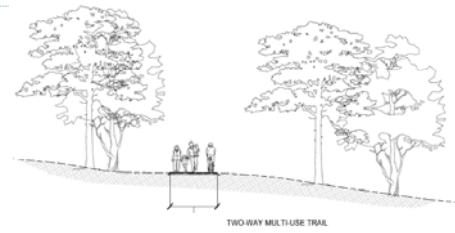
SONOMA COUNTY REGIONAL PARKS

Trail Near Road



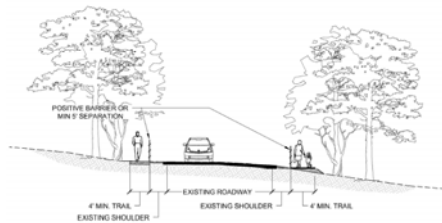
SONOMA COUNTY REGIONAL PARKS

Separated Trail



SONOMA COUNTY REGIONAL PARKS

Split Path (constrained areas)



SONOMA COUNTY REGIONAL PARKS

Next Steps

- Compile and analyze what we hear from you today and at the community workshops.
- Develop an existing conditions report and define corridor constraints and issues to be addressed.
- Conduct another public workshop that will address alternative alignments.
- Check the plan website for updates <http://parks.sonomacounty.ca.gov/>

SONOMA COUNTY REGIONAL PARKS

Survey

Tell us about your trail use and preferences

1. Please fill out a survey on-line at your convenience.
2. Share the survey with your friends and colleagues!

SONOMA COUNTY REGIONAL PARKS

Petaluma to Sausalito Trail Survey

1. What is your primary reason for the Petaluma to Sausalito Trail?

a. Recreation (for exercise, walking, jogging, etc.)

b. Commuting (for work, school, or other purposes)

c. Transportation (for work, school, or other purposes)

d. Other (please specify)

2. Do you currently use the existing shoulder along Highway 101 between Petaluma and Sausalito?

a. Yes

b. No

3. What do you like best about existing trail?

a. Location

b. Scenery

c. Safety

d. Other (please specify)

4. What would make a trail between Petaluma and Sausalito most attractive to you?

a. Opportunity to enjoy the view

b. Opportunity to enjoy the view and scenery

c. Opportunity to enjoy the view and scenery and to enjoy the view

d. Opportunity to enjoy the view and scenery and to enjoy the view and scenery

e. Opportunity to enjoy the view and scenery and to enjoy the view and scenery and to enjoy the view and scenery

f. Opportunity to enjoy the view and scenery and to enjoy the view and scenery and to enjoy the view and scenery and to enjoy the view and scenery

5. How often do you plan to use the trail?

a. Daily

b. Weekly

c. Monthly

d. Other (please specify)

SONOMA COUNTY REGIONAL PARKS

Thank You

Questions?

Contacts:
Ken Tam, Project Manager, 565-3348
ken.tam@sonoma-county.org

Steve Ehret, Park Planning Manager, 565-2041
steve.ehret@sonoma-county.org

Subscribe to project updates at parks website
www.parks.sonomacounty.ca.gov/ by clicking on "Sign up for Planning Updates"

SONOMA COUNTY REGIONAL PARKS

Petaluma Sebastopol Trail

Listening Session 1 March 30, 2017 1:00-2:30 PM

Attendees:

- Ken Tam, Sonoma County Regional Parks
- Margaret Henderson, Questa
- Jeff Peters, Questa
- Will Hutchinson, RProp
- Jan Godoski, RProp
- Girardo Martinez, Jr.
- Deborah Preston, RProp

Ken Tam introduced the project, and Jeff Peters led a PowerPoint presentation outlining the Study, goals, timeline and opportunities for input. This is the first of several workshops and opportunities to provide input on the Trail Feasibility Study.

This is a feasibility study based on the trail concept that is been worked on since 2010. The original concept explored using former railroad right of way for the alignment, however, this study will examine a variety of options.

There was a question about the railroad parcels; the former railroad parcels north of Roblar Road will not be evaluated further in this study because they have been reconveyed to private owners and it would not be feasible to get them back as continuous ownership, since many have been redeveloped, or one property owner could prevent a continuous trail. However, there are some segments that are in County ownership (along Roblar Road), along 116, in areas that might be redeveloped (such as the flea market) or south of Roblar Road where there are long continuous ownership segments that will be evaluated as part of the study.

What is the study process? There will be several workshops and opportunities for input. At completion the study will be sent to the Board of Supervisors for acceptance they're going to be a number of workshops.

Is Gary Helfrich still involved now that he is a County employee? No, the new Director of the Sonoma County Bicycle Coalition is Alisa O'Loughlin, and is the Coalition's project representative.

The property owners would like to make sure their feelings are known regarding land-use along the railroad rights of way; when the area was open there was a lot of theft, drug use and trespassing along the railroad.

Measure J failed by 1082 votes, and the measure included a trail on the railroad right of way. It was explained that was a general description and not intended to specify a particular alignment, more that it would be a trail to reflect the heritage of the former rail route connecting the communities. The likely main route will be near the Hwy 116 and/or Stony Point Road corridors with connections to smaller roads where there is public ownership.

Bicycle races occur on Blank and Turner Roads, with congestion.

Some portions of the railroad are on public property.

Will Hutchinson is going to collect comments and provide them to Railroad property owners. He stated he has met with everyone in the area including those in the Stony Point area. He indicated they would like to propose alternate routes that do not go through their properties. His preference would be to have a trail along Llano Road. It was noted that Llano Road is outside the study area, and does not connect the two communities. Such a trail would be the subject of a separate study. There's concern among the property owners about the trail in their backyard. Near Analay High School, some people walk to Occidental Road on the West County Trail and feel uncomfortable looking into people's backyards.

Ms. Preston does not want the trail on the railroad right-of-way, however she feels that the trail on 116 is noisy and would like to consider expanding the study area to provide a nicer place for riding and walking.

There was a comment from area residents that Blank Rd., Turner Road and some of the smaller roads (Lone Pine Rd.) are dangerous and too narrow, although there are many pedestrians, dog walkers, bicycles, etc. There's a concern about whether a bicycle lane could be placed on one side of the road or provide a wider shoulder for pedestrians to use along some of the smaller roads. Residents indicated that there is increased use by bicycles and pedestrians in the area; they also commented that the roads are horrible with potholes, and some roads are narrow so a vehicle must stop when there is a car coming in the opposite direction. This occurs along Peterson Blank, Hessel, Turner and Lone Pine Roads. They indicated that such use has more than doubled over the last ten years.

Use by pedestrians and bicycles has increased in the rural areas. In the Lone Pine area, people don't walk or bike due to concerns about safety.

There was a comment that some of the agricultural property landowners south of Roblar would likely oppose the trail.

Residents also indicated that there is equestrian use in the study area including buggies along Blank, Turner and Hessel Roads.

The study team indicated that some improvements (like bicycle and pedestrian facilities associated with traffic improvements, or safety measures associated with schools) may be done as part of related projects.

The goal is to have a complete study by the end of the year, when it will be presented to the County Board of Supervisors.

Attendees were invited to write on large format maps showing the study area. The following map comments were made:

- Lots of bike, pedestrian and some horse traffic on Blank Road
- 116 is narrow, busy and dangerous
- 116 at Hessel has a dangerous curve and intersection
- Super-busy intersections from Gravenstein School traffic: Lone Pine /116 and Lone Pine/Twig
- Robert and Eugene Camozzi against {trail} {not present}
- Bob Herreias against {trail} {not present}

Petaluma Sebastopol Trail

Listening Session 2 March 30, 2017 3:00-4:30 PM

Attendees:

- Ken Tam, Sonoma County Regional Parks
- Steve Ehret, Sonoma County Regional Parks
- Margaret Henderson, Questa
- Jeff Peters, Questa
- Tom Abrams, Santa Rosa Cycling Club
- Kenyon Webster, City of Sebastopol
- Jeff Stutsman, City of Petaluma
- Patricia Webb, Petaluma Pedestrian and Bicycle Advisory Committee (PBAC)
- Sean Walling, Petaluma PBAC
- Melissa Hatheway, Petaluma PBAC
- Jim Fain, Sebastopol Trailmakers
- Erick Ratliff, Sonoma County Pedestrian Advisory Committee
- Sarah Gurney, Sebastopol City Council
- Alisha O'Loughlin, Sonoma County Bicycle Coalition
- Seana L.S. Gause, Sonoma County Transportation Authority
- Lynn Deedler

Ken Tam introduced the project, and Jeff Peters led a PowerPoint presentation about the study, including the background and goals of the study. This is a long-range study.

Members of the group indicated that Lone Pine, Bloomfield, and other roads are hazardous and not safe for pedestrians and bicyclists.

Jim Fain indicated he was a part of the project when it was being evaluated years ago and he indicated that there is a gap between the city and county planning that he would like to have addressed in the study around Elphick and Sparkes Road which is dangerous.

Representatives from Sebastopol would like the trail to be located to go into the heart of Sebastopol rather than through the Laguna which does not connect to the community.

Steve Ehret indicated the objective of the study is connecting the two communities and the Llano Road area would be studied in a separate study; it's not in the county Master Plan.

There's a need for a connection to South Sebastopol.

There are different routes proposed depending on the need/use so there would be connections to a primary trail.

Mr. Ehret clarified there is no budget for construction, this is a long range study.

The goal of the study is to determine a route for a class one (separated, off street) trail. The study will include options for funding and implementing the trail.

Ms. Gause of Sonoma County Transportation Authority indicated a route on 116 would conflict with the Caltrans proposal to widen the area from Sebastopol to Stony Point with shoulders. Ms. Henderson indicated that if the study recommends a route along 116, then bicycle and pedestrian improvements could potentially be incorporated into the project, if it is implemented. 8 ft. shoulders on both sides is a potential issue.

Ms. O'Loughlin indicated that with some pressure, SCBC was able to advocate for a project that had 4 foot shoulders that provided some level of bike improvements.

Challenges include lack of a direct continuous route outside of 116, the rural residential character with many small properties. Potential opportunities to connect to 116 with loops off the highway to connect to destinations, and some creative options (fencing, vines etc.) to provide some separation between the roadway and the trail should be considered, such as grade separation. Where the trail leaves 116 in places would give a more pleasant experience.

Who would maintain the project? The county would maintain county portions; Caltrans is currently maintaining the West County Trail even though the county will eventually take that over. The cities would manage trails within their limits.

An online survey and outreach email will be available online. School districts are on the distribution list; there's a social media presence. It's going to be on the Sebastopol Facebook page and Petaluma iBike. It will be on the Sonoma County website with a link to the survey potential users and could be advertised at a bike to work day.

There was a question regarding the scenic Highway designation and how that could be used to encourage the trail project to beautify some portions of the area. It was also noted that connections to Gravenstein and Hillcrest Schools are important, as well as connections to trails in the Cotati/Rohnert Park area.

Attendees were invited to write on maps showing the study area. The following map comments were made:

- Widen trail at Denman to connect to KOA.
- Expand map in Petaluma to show connection to SMART trail.
- Evaluate Mt. Vernon between Lone Pine and Turner
- Keep Lone Pine and Bloomfield SRTS
- Consider Old Gravenstein Hwy route
- Research this section (former railroad section between 116 at Flea Market and Lone Pine)
- {Sparkes/Elphick area} needs improvement for safety
- {Flea Market to Lone Pine, former railroad property} Open and attractive section with most owners willing to give public access easement starting at the flea market
- Creek (north of 116) 4-open property starting with Grow Nursery

Petaluma-Sebastopol Trail Feasibility Study

Please join us for a discussion about the Petaluma-Sebastopol Trail Feasibility Study.

Community Workshops

Wednesday April 5, 2017

6:30 PM to 8:30 PM

Sebastopol Veterans Memorial Building
Dining Room
282 S High Street | Sebastopol, CA 95472

OR

Saturday, April 15, 2017

9:00 AM to 11:00 AM

Petaluma Veterans Memorial Building
Conference Room A
1094 Petaluma Blvd. South | Petaluma, CA 94952

Pick a date that is convenient for you.

(The same materials will be presented on both dates.)

A Spanish translator is available upon request prior to meeting).



The Sonoma County Regional Parks Department is preparing a feasibility study for an approximately 13-mile bicycle and pedestrian trail connecting the Cities of Petaluma and Sebastopol. The study is funded with a Caltrans Sustainable Transportation Planning Grant (State funds) and local match funds from Sonoma County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club. The study will identify a preliminary trail alignment and design and prioritize trail segments for future construction. The project costs and the economic and other benefits to the community will also be assessed. Beginning April 5, 2017, the public can provide input by completing an online community survey available in English and Spanish on the Sonoma County Regional Parks Department Website at:

http://parks.sonomacounty.ca.gov/About_Us/Project_Details/Petaluma_Sebastopol_Trail_Proposed.aspx

Project Timeline and Next Steps:

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December 2017: Board of Supervisors presentation.

Questions? Not able to attend?


Contact Ken Tam,
Project Manager
(707) 565-3348

ken.tam@sonoma-county.org
www.sonomacountyparks.org



Workshops
 April 5, 2017
 6:30 PM to 8:30 PM
 Sebastopol Center for the Arts

April 15, 2017
 9:00 AM to 11:00 AM
 Petaluma Veterans Memorial Building



Petaluma-Sebastopol Trail Feasibility Study

SONOMA COUNTY REGIONAL PARKS

Agenda

- Introduction
- Study Team
- What is the Petaluma-Sebastopol Trail?
- Study Area
- Background
- Scope of Work /Timeline
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SONOMA COUNTY REGIONAL PARKS

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SONOMA COUNTY REGIONAL PARKS


Study Team

QUESTA ENGINEERING Parisi TRANSPORTATION CONSULTING SONOMA COUNTY REGIONAL PARKS

Questa Engineering ■ Jeff Peters ■ Margaret Henderson	Ken Tam, Project Manager 565-3348 ken.tam@sonoma-county.org
Parisi Transportation Consulting	Steve Ehret, Park Planning Manager 565-2041 steve.ehret@sonoma-county.org
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SONOMA COUNTY REGIONAL PARKS

What is the Petaluma Sebastopol Trail Feasibility Study?



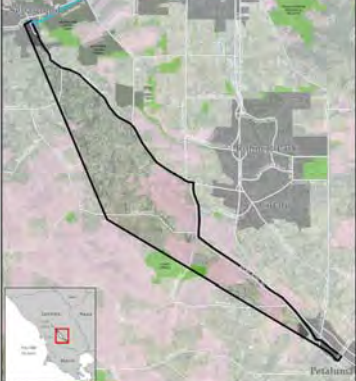
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SONOMA COUNTY REGIONAL PARKS

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Petaluma - Sebastopol Trail Feasibility Study

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SONOMA COUNTY REGIONAL PARKS

2005 - 2015 Bicycle & Pedestrian Collisions

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SONOMA COUNTY REGIONAL PARKS

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- Residents and property owners within the Study corridor.



SONOMA COUNTY REGIONAL PARKS

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- Newspaper notification
- Individual outreach
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SONOMA COUNTY REGIONAL PARKS

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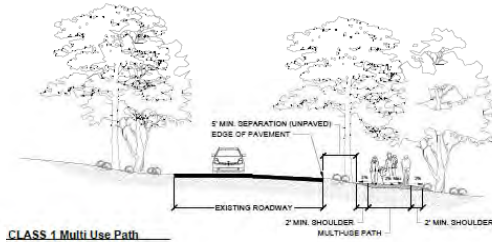
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Potential Trail Routes



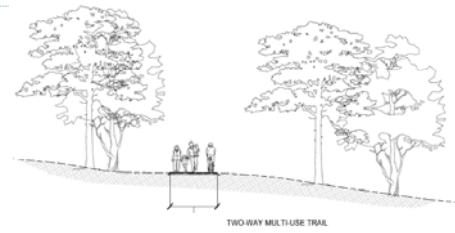
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Trail Near Road



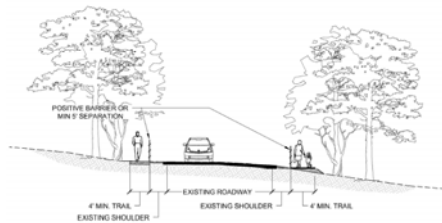
SONOMA COUNTY REGIONAL PARKS

Separated Trail



SONOMA COUNTY REGIONAL PARKS

Split Path (constrained areas)



SONOMA COUNTY REGIONAL PARKS

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SONOMA COUNTY REGIONAL PARKS

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2. Share the survey with your friends and colleagues!

SONOMA COUNTY REGIONAL PARKS
Petaluma to Sausalito Trail Survey

1. What is your primary reason for the Petaluma to Sausalito Trail?

- a. Recreation (for exercise, walking, jogging, etc.)
- b. Commute (to work, school, etc.)
- c. Transportation (for delivery, etc.)
- d. Other (please specify)

2. Do you currently use the existing shoulder along Highway 101 between Petaluma and Sausalito?

- a. Yes
- b. No

3. What do you like best about existing trail?

- a. Scenic views
- b. Proximity to water
- c. Proximity to shops or services
- d. Proximity to public transit
- e. Proximity to other trails
- f. Other (please specify)

4. What would make a trail between Petaluma and Sausalito most attractive to you?

- a. Proximity to water
- b. Proximity to shops or services
- c. Proximity to public transit
- d. Proximity to other trails
- e. Proximity to scenic views
- f. Other (please specify)

SONOMA COUNTY REGIONAL PARKS

Thank You

Questions?

Contacts:
Ken Tam, Project Manager, 565-3348
ken.tam@sonoma-county.org

Steve Ehret, Park Planning Manager, 565-2041
steve.ehret@sonoma-county.org

Subscribe to project updates at parks website
www.parks.sonomacounty.ca.gov/ by clicking on "Sign up for Planning Updates"

SONOMA COUNTY REGIONAL PARKS

PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
COMMUNITY WORKSHOP
SIGN IN SHEET

DATE: April 5, 2017

PDF ✓

PDF

PRINT NAME	ADDRESS	EMAIL ADDRESS OR TELEPHONE NO.
Michael Benson		
Ross Raudrup		
Jim & Jan Shaw		
AL 451 Hew Lum		
Pat Goddard		
Kent & Vibeke Maszk		
Robert Herrerias		
Cate Hutton		
Lami Bortan		
Chris Anderess		
Ken Wells		
Shirley Lin		
Paul Larkin		
Tom Rush		
Ken (AR)		
Jennifer Kircher		
Cindy O'Grady		
deb Preston		

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PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
 COMMUNITY WORKSHOP
 SIGN IN SHEET
 DATE: April 5, 2017

PRINT NAME

ADDRESS

EMAIL ADDRESS OR TELEPHONE NO.

Jacqui McMahon		
Alex Roa		
Don Shaw		
Michael Sutcliffe		
Una Glass		
Al Gerhardt		
Devin Butler		
Derek Bayless		
Rick Coates		
Mark Grum		
JOHN PFEIFFER		
Franny Minervini-Zi		
Melissa Hatheway		
Mike Shervell		
Amy Loukonen		
Jim Fair		

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PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
 COMMUNITY WORKSHOP
 SIGN IN SHEET
 DATE: April 5, 2017

PRINT NAME	ADDRESS	EMAIL ADDRESS OR TELEPHONE NO.
Prescilla + David Cohen		
Will Hutchinson		
Ben Chambers		
Prescilla Cohen		
Sean McNeil		
Robert + Jessica Holman		
RUE FURCH		
WAYNE GIBB		
Pamela Tennant		
ROGER SPIRIDONOFF		
Mark + Robin Aldridge		
RICHARD DAVIS		
ALAN SOULE		
MARC + MARLA CANIZZAR		
JOHN CRUZ		
NANCY JANECK		
KEN YON WEBSTER		
MR JAN L. GODOSEK		

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Petaluma-Sebastopol Trail Workshop 4-5-2017 Photos



Petaluma Sebastopol Trail
Workshop 1 April 5, 2017 6:30-8:30PM
Comments

Attendees: See sign in sheet

County/Consultant Representatives:

Ken Tam, Sonoma County Regional Parks
Steve Ehret, Sonoma County Regional Parks
Jeff Peters, Questa
Margaret Henderson, Questa

Ken Tam of Sonoma County Regional Parks introduced the project and acknowledged funding partners including Caltrans, Sonoma County Bicycle Coalition, Santa Rosa Cycling Club, and the cities of Petaluma and Sebastopol.

Jeff Peters of Questa gave a PowerPoint presentation on the study goals, outcomes, timeline and opportunities for public comment. He indicated that the study team had done research regarding the former Petaluma-Sebastopol rail line, and that the railroad right-of-way for the most part has been relinquished to adjacent landowners or others and is not owned by the county and will not be considered further in the project. However, in a few areas such as the former railroad parcels along 116 or south of Roblar Rd., there may be opportunities to place the trail outside of the highway right of way. In these areas, there is some public ownership, or there are long, continuous rights of way with few landowners. The County also owns several parcels along Roblar Road.

Public comments:

1. Lynn Deedler asked: how was it determined that ownership was relinquished?

Research into railroad ownership, succession of owners and relinquishment was conducted. Except for a few parcels, the County did not take ownership. On the Rodota Trail, the County acquired the lands directly from the railroad. In this case the County (except for a few parcels) did not accept the right-of-way and it was sold to other property owners directly from the railroad.

2. Did you actually contact the owners of the railroad right-of-way?

There's a railroad properties owners group here tonight that represents the railroad property owners and they have indicated that many are not in support of using their lands for a trail.

3. Is it true that bicycles enhance the value of adjacent right away?

There are studies that show that this is true; many times, when a trail goes in, people along the trail put gates in to increase access to the trail.

4. The railroad property owner's group representative indicated that the consensus of the owners was that they do not want trails along their lands.

5. Will Hutchinson represents 200 right of way landowners and indicated that he that there is not support for using the trails.

6. Can you identify right of way that would be needed to complete the project?

Yes, the project will identify right of way needs for the recommended alignment.

7. Jessica Holman on Val Lee Lane by the hay fence indicated that her property floods. She owns part of the railroad right of way and it's a personal area to her she has a pirate ship; she had a wedding there; and she is very interested in keeping it private for her personal use and she would not support having a trail on her property.

Mr. Tam asked her if she would support the concept of a trail if it was in a different area and she indicated yes.

8. Mr. Tam reiterated that the County is not looking at taking away property or using eminent domain for the trail, which means looking carefully at what public lands are available and what can be done within available right-of-way.

9. In Sebastopol near the Rodota trail, how would you connect to the Rodota trail connection? I live on a small one-block street with dangerous corners and want to make sure that the trail does not go through my neighborhood.

It would occur somewhere within the city of Sebastopol to provide connectivity to the community.

10. What are the usual sources of funding for projects such as this?

There are federal transportation funds, parks and recreation funding, and in Sonoma County Measure M are primary sources of funding. There are also other sources of funding depending on the type of project such as safe routes to school or creek restoration where you might put a public access trail associated with it. Grant funding is very competitive, and SCRP has been fairly successful. This study took several years to be awarded funding.

11. Do you have anything online showing the routes?

If you provide your email address this presentation can be sent to you.

12. Please provide a map showing street names.

Okay.

13. I'm a 40 year resident of Sebastopol, and am happy **not** to use the central railroad. I want security and privacy. I want the trail on Llano Road to connect to the Rodota Trail.

Ken Tam explained that Llano Road is outside the study area, and this study is to connect downtown Sebastopol with Petaluma. Connections in the Llano Road area are part of the Laguna de Santa Rosa.

14. I'm a 50 year resident of the community, and I regret the gradual loss of access to the countryside. I would like a 2 foot wide access area for horses to ride along the side of the road or along the trail.

Mr. Tam indicated that the West County Trail has such as shoulder, but it needs continuous and regular use in order to maintain and not to become overgrown. There are others in the study area along Blank and Turner Road that have horses, including buggies.

15. A question was asked about the development costs.

The development costs are an average of \$1 million per mile, and it may include engineering design, environmental analysis, permitting as well as physical land alteration such as grading, utility relocation, paving, and it could include other factors such as retaining walls or other structures, guardrails, bridges, etc.

16. Did you send a notice to all property owners and could we have a wider study area?

There has been newspaper notification, social media (Facebook), email correspondence and other outreach. The study area is limited on the north/east side (Laguna de Santa Rosa is a separate area) but could include a wider area to the south and west.

17. There was a question about the project being funded by the Bicycle Coalition and the Bicycle Cycling club and there was a concern expressed that the study be impartial.

18. There was a question about trail routes with utility conflicts and how that works.

The engineer will work with the utility company regarding utilities and if there is a need to protect or relocate utilities within the proposed trail alignment. Utility relocation or undergrounding can be very expensive.

19. In the Lone Pine area, I feel economic values would be enhanced if the circulation were improved. The traffic and parking patterns (with the school) are very bad, there's a lot of traffic and it's really difficult to walk ride or drive along those streets during school hours.

20. There was a question about security -- whether it would be addressed in the study and whether there is a record of police activity along the Rodota trail since that trail went in.

We will check on that.

21. On Roblar Road, the County property on the railroad line is near my home, and I don't want the trail in front near my front door. Will the study discuss the impact of the road on the new Quarry project? There's a safety issue along Roblar, and there will be with trucks along the street, as well as traffic from the school, the landfill, the quarry and people using Roblar as a 101 alternative. They all seem to contribute to the excessive traffic on the road.

Mr. Tam said there is no safe place for kids to bike to school and that's one of the reasons why a trail project is a good one for an area such as this.

22. There's not enough money to fix the roads but to put trails in; bikes don't pay for trails. Bicyclists ride through town and use the bathroom but don't patronize the businesses, such as in Occidental.
23. The trail could help the community, by connecting people to one another. People walking on the road and talking to one another would be a positive experience.
24. I used to walk to school in Hessel when I was a kid, but the trail won't be built in time to serve my kids. I used to be able to walk to school or walk on 116. I value personal property but would like to see connections. There are no parks in this area; there are no places for kids to get together and play; there's no place to have a picnic or a trail or anything else and I would appreciate a Regional Park presence in the area.
25. I ride a bike and pay taxes and also drive a car and so I do pay taxes towards roads and trails. The best way to see the area is to get out of the car. There should be more opportunity for kids to get out and enjoy the area.
26. Ken Tam noted that increased patronage at Forestville businesses is due to the West County Trail, and people in this area have requested that the trail be extended into town.
27. Jan Godoski of the Railroad property owners group said that when the railroad alignment was open he got robbed three times until they put a fence up. He also indicated that south of Roblar Road, those property owners wouldn't support it and are World War II and Korean War veterans.
28. What would the trail would look like and would be like the SMART trail?

The trail would be a minimum of 8 foot wide with 2 foot shoulders; it would not have same fencing as the SMART trail, which is needed for safety.

29. I live on Eddie Lane behind Analy High School; there is constant use of the West County Trail behind my house, but it's never a problem with trail users and it's healthy exercise that I support.
30. If it were not for the Rodota trail, I would not ride on Highway 12 or on 116 from Sebastopol to Santa Rosa. I do not think that there is a safe comfortable route going south to Petaluma at the current time. I would like to create a trail for everybody with the least impact on individuals.
31. I live on McFarlane Avenue and believe that walking along the road is a good positive experience and way to interact with my neighbors.
32. What does infeasible mean?

Mr. Tam indicated that the project would not use eminent domain in order to create the trail.

33. What is the economic impact on property values?

In general, research has shown that property values generally go up near trails. There was a study done in Portland on the Burke Gilman Trail, and East Bay Regional Park District has done a study on property values associated with trail implementation. Someone also mentioned a study done by Economic Planning Systems. Information links:

<https://headwaterseconomics.org/trail/82-burke-gilman-trail-property-values/>

<http://www.ebparks.org/economics>

<https://www.railstotrails.org/resourcehandler.ashx?id=4482>

<http://www.americantrails.org/resources/adjacent/sumadjacent.html>

34. I support bicycle trails, and believe a safe trail is a great asset, but do not believe eminent domain is appropriate. I would not want to coerce other property owners into providing a trail -- it has to be a cooperative experience.
35. I am very proud that we are able to discuss contentious issues in a respectful manner.
36. A bikeway along 116 is a poison pill it -- discourages trail use. A separate trail is preferable to bike lanes. People ride 116 out of need, not desire, and it is more important to have a road for safety that is accessible for the community and not just a recreational trail.
37. On the Laguna, the trail would not be good, and the trail should provide access from one end of town to the other, especially for commuting.
38. I would like to see specific street names on the maps.
39. What happened to the Gravenstein and Sebastopol Trails?

Mr. Tam indicated that is a separate trail proposal that's not part of this project.

40. I used to live in Davis, and was disappointed by the lack of bike facilities when I moved here ten years ago. I have seen an increase in the number of parents with children riding bikes and would support more facilities to get people outdoors in a healthy activity.
41. Lynn Deedler indicated there's an outpouring of support of the rail trail but not on some parts of the alignment. He indicated that the trail alignment from the flea market to Lone Pine Rd. would be supported by the property owners and he also indicated that the owner of the Rental Place would support the project.

The presentation was concluded and people wrote comments on the maps and spoke individually regarding the project. Map comments:

- Eleanor [Sebastopol] is a safe city street for a trail
- Most fatalities are along 116 in Sebastopol. A separate safer route should be found in town.
- [Sequoia Burger] very dangerous stretch along creek.
- What about Water Trough-Bloomfield-Canfield-Roblar?
- Trail alignment along 116 is dangerous and does not satisfy community needs.
- Railroad Route determined ~~infeasible~~ impractical
- Expand Study area up Llano Road

PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
 COMMUNITY WORKSHOP
 SIGN IN SHEET
 DATE: April 15, 2017

PRINT NAME

ADDRESS

EMAIL ADDRESS OR TELEPHONE NO.

Ref X

X

Will Hutchinson
Cathy Albini
Earl Fisk
JAN GODOSK.
LYNN DEEDLER
TODD SCHRAM
GARY PETERSEN
CHRIS AMBERGER
NANCY CHIEN-ERIKSEN

am
:
ned

st

PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
 COMMUNITY WORKSHOP
 SIGN IN SHEET
 DATE: April 15, 2017

PRINT NAME	ADDRESS	EMAIL ADDRESS OR TELEPHONE NO.
MIKE ELLIS		
pdf ✓ DIANA ELLIS		
PDQ please ✓ Barbara Tromble		.com
Steve Tromble		on
Joe Morgan		
Sheila Diker		
JOE ALBINI		
RICHARD DAVIS		n
Robert Herrenias		
Patricia Webb		
Pam Davis		
KEN CUSHMAN		
TONINE BROOKS		.com

Petaluma-Sebastopol Trail Workshop 4-15-2017 Photos



Petaluma Sebastopol Trail
Workshop 2 April 15, 2017 9-11 AM
Comments

Attendees: See sign in sheet

County/Consultant Representatives:

Ken Tam, Sonoma County Regional Parks

Jeff Peters, Questa

Margaret Henderson, Questa

Ken Tam of Sonoma County Regional Parks introduced the project and acknowledged funding partners including Caltrans, Sonoma County Bicycle Coalition, Santa Rosa Cycling Club, and the cities of Petaluma and Sebastopol.

Jeff Peters of Questa gave a PowerPoint presentation on the study goals, outcomes, timeline and opportunities for public comment. He indicated that the study team had done research regarding the former Petaluma-Sebastopol rail line, and that the railroad right-of-way for the most part has been relinquished to adjacent landowners or others and is not owned by the county and will not be considered further in the project. However, in a few areas such as the former railroad parcels along 116 or south of Roblar Rd., there may be opportunities to place the trail outside of the highway right of way. In these areas, there is some public ownership, or there are long, continuous rights of way with few landowners. The County also owns several parcels along Roblar Road.

Margaret Henderson indicated that based on previous requests, there is a map for review that shows the expanded Petaluma area with connections to the planned SMART Trail.

Public comments:

1. Would electric scooters be allowed?

Electric scooters are allowed, gas powered devices are generally not, due to fire hazard.
Scooters for mobility assistance are allowed.

2. How many people are from various areas?

- 20 Petaluma
- 6 Hessel
- 10 Sebastopol

3. Was this study spurred by the effort of 25 years ago? There was a lot of controversy at that time. The basis of the question is that people in the area are nervous about eminent domain.

The concept of a rail-trail is in the County Bicycle Plan. This study is a continuation of that, to determine a workable alignment.

The trail would ideally be for bicycle, pedestrian and equestrian use, where feasible. The County is not interested in taking land by eminent domain. On the Joe Rodota trail, one piece was acquired through eminent domain, but there was no designated owner, and the owner was unaware of ownership, and agreed to the action. In that case, it was a key connection, there was an appraisal to determine value, and a willing owner.

4. Is this a collaboration between Regional Parks and others?

Study contributors:

- Regional Parks
- City of Sebastopol
- City of Petaluma
- Santa Rosa Bicycle Coalition
- Santa Rosa Cycling Club

5. Who has the ultimate authority to move forward?

The County Board of Supervisors

6. Is there coordination with the traffic signal planned along Hwy 116, which will cost \$8-12 million? The traffic and Fire Department is a problem.

Yes but that is a different study with separate meeting.

7. Will leash laws be enforced on the trail? Lynch Creek Trail is full of unleashed dogs.

Regional Parks has posted signs, patrol and enforcement of trails.

8. Lynn Deedler: The Railroad alignment meets 95% of all goals, it is open, attractive and I would like to know why it is not worthwhile to pursue?

Jeff Peters responded that research on the ownership indicates that of the approximate 80 parcels, 19 are publicly owned, with 200 parcels touching. Use of eminent domain is challenging and not a desire of the County, so one owner could preclude an entire trail. A sampling of deeds was conducted, showing some railroad parcels were easements that reverted to the original owner, and in other cases sold to others.

That said, an effort will be made to individually contact each railroad property owner to document their willingness to sell or donate land in support of a trail on the former railroad lands. A priority would be lands in the vicinity of the flea market and 116 in the north, and the area south of Roblar Road.

9. One of the parcels near McFarlane Road has a drainage easement and culvert that needs to be maintained. How would that work if the property is sold for a trail?

If there is a county owned and maintained parcel, all of the easements and maintenance would be completed by the County.

10. Will Hutchinson of Railroad Property owners indicated that no property owner he contacted is willing to give up their parcel. He supports widening the road and putting in bike lanes. Don't force private owners to give up land. He indicated that the trail would not increase property value due to uncertainty.
11. 60% of bicycle riders are scared to ride on a busy road, it may be okay for advanced riders, but some will not ride at all.
12. Regarding increased property values, not on a horse ranch. There are potential problems. I take my horses elsewhere to ride. The vision long ago was of baby carriages on the trail. Some parts of the community may value, but not entirely.

Ken Tam responded that the trail would be paved with shoulders suitable for horses, the challenge is to identify a route to accommodate horses, there are equestrians in the Hessel area.

13. I ride horses, bikes, and volunteer with the County Parks mounted patrol. Bikes and baby buggies are not a problem or conflict. I don't like to ride a bike along a road with drivers. I would like to consider equestrian use.

Jeff Peters responded that a trail along 116 would need to include significant improvements such as guardrails to provide separation.

14. I live off the Rodota Trail, We need wide areas to accommodate users. Having to deal with 60 landowners would slow the project.
15. For a bike trail along 116, you would have to acquire easements and get ROW, there are some narrow areas, and many challenges.
16. As a Hessel area resident, I had three burglaries from the railroad line before I put up a fence. I surveyed my neighbors and they want bike lanes. On Stony Point Road, the trail should be on the east side where there are no houses.
17. I'm a fifty year resident, and I own a rail parcel, and I concerned about homeless vagrants and transients on the trail. Women are afraid to ride. There are not enough police; there is a privacy problem, and they can hop the fence and rob houses.

Ken Tam responded that on the Rodota Trail, the homeless area was there before the trail was built and has been an ongoing issue.

18. I live along the Rodota Trail, and there was fear when the trail went in, but most people embrace it now.
19. Blank Road needs bike lanes.

20. A trail along a road is not used, but a separated trail is used by everyone. And there are no break-ins when there is lots of use. Look at the possibility, everyone would use it.

21. Put a wide shoulder on one side for horses.

22. Make the trail safe for our families and our grandchildren. We need to feel safe.

23. Lynn Deedler—On the West County Trail, there is no transient problem, no vagrants, no homeless problem. Studies show that perceived problems are not founded.

Jeff Peters responded that most crimes in this setting are teens, not burglaries with lookouts and cars. We have contacted Sonoma County and cities to provide crime statistics. Often owners will put gates along the trail to increase access.

24. Would the trail be a system with solutions for small road or section as well as main trail? I like the idea of something for everyone.

Yes. There will be small segments and neighborhood connections.

25. Will Hutchinson- the Roblar Road quarry—the owner is required to widen the road and provide a signal to improve safety, but this will affect bicycles.

The quarry applicant has requested an amendment to his approval to allow narrower traffic lanes. This will be evaluated.

26. Lynn Deedler—coming down 116, there are 100 private driveways and private roads. How will this not conflict with a trail?

These are design challenges to be addressed.

27. Are any parking areas proposed?

Where there are opportunities for parking areas they will be shown, but on the West County Trail, there is not a big demand for parking and most users are local.

28. At the Sebastopol end of trail, should consider trail along the Laguna rather than connection to the Rodota Trail on the city streets.

Ken Tam responded that this is a separate project, a Laguna trail through city of Santa Rosa lands has been studied, and the trail would be on the east side of the Laguna. It's a separate project.

The presentation was concluded and people wrote comments on the maps and spoke individually regarding the project. Map comments:

- Possible trailhead development and parking for bikes (at vicinity of Petaluma Blv. And Stony Point/Industrial)
- Provisions need to be made to mitigate impacts on isolated segments where property owners will be impacted.
- Would like considerations for horse use, maybe one or two road accesses for 2 horse trailers to park nearby.
- Joe A., Petersen Road: Bicycle Tax to help funding
- Consider possible widening of Roblar Road by quarry operation for bike lanes from Stony Point to Canfield
- Traffic signal at 116 and Hessel Road by the Hessel Grange
- Herrerias (SWStony Point/Roblar)- No

**Petaluma Pedestrian and Bicycle Advisory Committee
January 3, 2018**

**CITY OF PETALUMA, CALIFORNIA
REGULAR MEETING OF THE PEDESTRIAN AND BICYCLE ADVISORY COMMITTEE**

APPOINTED MEMBERS

Melissa Hatheway
Bjorn Gripenburg, Chair
Alena Heidecke
Roger Leventhal, RMPC Representative
Bill Wolpert, Planning Commission
Marja Tarr
Sean Walling
Patricia Webb, Vice Chair

COUNCIL LIAISON

Kathy Miller

STAFF LIAISON

Curt Bates, City Engineer



COMMISSION MEETINGS

1st Wednesday of each month
City Manager's Conference Room, City Hall
11 English Street
Petaluma, CA 94952

CONTACT INFORMATION

Phone (707) 778-4311
Fax (707) 778-4498
cbates@ci.petaluma.ca.us
cityofpetaluma.net

AGENDA

Wednesday, January 3, 2018
06:00 P.M.

1. CALL TO ORDER

2. ROLL CALL


3. PRESENTATION

- A. Presentation on Update from Sonoma County Parks Department on Petaluma Sebastopol Trail Feasibility Study (No attachments)-Presented by Mr. Ken Tam, Sonoma County Parks

Comments Received:

1. Will there be a discussion of funding sources for the trail? Yes
2. Will the trail connect to the SMART trail? Yes, there is an opportunity for a connection just west of HWY 101, east of the proposed pedestrian bridge.
3. The Committee commented that applicable portions of the Study may be included when the Bicycle and Pedestrian Plan is updated, and this document provides information on the cost and funding for trail completion.


PETALUMA BICYCLE & PEDESTRIAN ADVISORY COMMITTEE
January 3, 2018



Petaluma-Sebastopol Trail Feasibility Study

SONOMA COUNTY REGIONAL PARKS

What is the Petaluma Sebastopol Trail Feasibility Study?



Community Initiated Study:

- Determine preferred alignment for multi-use trail to connect Sebastopol and Petaluma
- Connections to destinations
- Safety concerns about walking and bicycling on area rural roads
- Provide bicycling, walking, recreational and equestrian opportunities where possible

Public Outreach:

- 2 Stakeholder sessions
- 2 Community workshops
- 2 City meetings
- 1 Community workshop
- 2 Board of Supervisors meetings

Trail concept inspired by former Railroad:

- However, most railroad right-of-way is now privately owned, developed for other purposes, and not available, so other alignment is needed.

SONOMA COUNTY REGIONAL PARKS

Introduction

- This is a long range planning study to determine options for a multi-use trail. The Petaluma Sebastopol Trail will connect the two cities and their network of community trails.
- The Trail is identified in the 2010 Sonoma County Bicycle and Pedestrian Plan and other transportation and land use plans.
- The Study is funded by a Caltrans Sustainable Transportation Planning Grant (State funds) with local match funds from the County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club.
- A key element of the Study is Community and Stakeholder Outreach.

SONOMA COUNTY REGIONAL PARKS

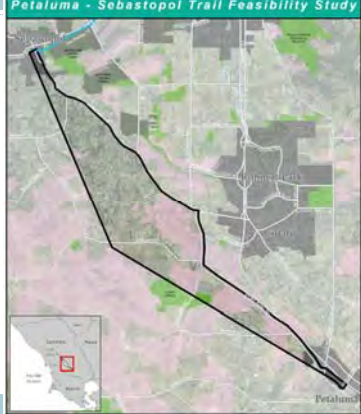
Petaluma - Sebastopol Trail Feasibility Study

Study Area

Rodota Trail in Sebastopol along Hwy 116 and Stony Point Road south and west to Corona Road in Petaluma.

Connecting route along SCWA pipeline and Laguna de Santa Rosa

Incorporate trail planning efforts within cities of Sebastopol and Petaluma.



SONOMA COUNTY REGIONAL PARKS

Study Team

QUESTA ENGINEERING
Parisi TRANSPORTATION CONSULTING
SONOMA ECOLOGY CENTER
SONOMA COUNTY REGIONAL PARKS

Ken Tam, Project Manager
565-3348
ken.tam@sonoma-county.org


Steve Ehret, Park Planning Manager
565-2041
steve.ehret@sonoma-county.org

Jeff Peters
Margaret Henderson

SONOMA COUNTY REGIONAL PARKS

Goals

- Provide safe active transportation options for bicyclists and pedestrians
- Increase connectivity of public spaces
- Provide access to recreation and physical activity for all ages
- Provide trails for multiple modes of travel
- Foster economic vitality with connections to local destinations
- Design for trail safety
- Incorporate into City/County Bike Plans



SONOMA COUNTY REGIONAL PARKS

Outcomes

- This is a **long-range Planning Study** that will be used to identify location, right of way, utilities, biological, cultural, traffic, safety and other issues affecting trail implementation.
- Evaluate alternatives, recommend a preliminary alignment (where the trail might go), and identify preferred and alternative segments.
- Determine planning level costs and economic and other benefits to the community.

SONOMA COUNTY REGIONAL PARKS

Initial Trail Routes Identified



SONOMA COUNTY REGIONAL PARKS

Outreach

- Nine meetings and workshops
- Outreach to owners and stakeholders
- Website comments
- Survey (432 responses)



SONOMA COUNTY REGIONAL PARKS

Issues and Opportunities

- Don't use private (former railroad) lands for trail
- Roads in Hessel/Cunningham are narrow
- SR 116 is busy and noisy
- Encroachment into right of way occurs throughout the area (fences, utilities, roads)
- Sensitive wildlife habitat
- Cultural/Historic Resources
- Explore Water Agency right of way
- Explore use of public (former railroad) lands
- Provide commuter-friendly route
- Provide low-speed route for hikers, equestrians, families
- Caltrans SB1 Funding for improvements along SR116

SONOMA COUNTY REGIONAL PARKS

Survey Results

- Support trail for recreational use and to improve safety.
- Majority live in Sebastopol, Hessel and Petaluma
- 50 visitors outside study area.
- Over 80% do not currently use SR 116 or Stony Point Road for pedestrian travel, and 60% do not bicycle along this route.
- Four respondents ride a horse along this route.
- 60% had no preference regarding which side of the road for a trail.
- Concern is bicycle/pedestrian user safety.
- Over 90% want a safe place to walk, jog, bicycle, or ride a horse.
- 86% want connections to other trail systems such as Laguna and Rodota trails.
- Less than 25% have children in local schools.
- Users would like connections to destinations.
- Almost half would use the trail once or twice a week.
- Roads currently used most for bicycling or walking are Bloomfield and Roblar Roads.

SONOMA COUNTY REGIONAL PARKS

Decision Matrix

Table 7-2 Environmental, Social and Economic Constraints and Opportunities

Segment	Planning Consistency				Environmental Constraints and Opportunities						Social and Economic Issues				Least Constrained Alignment
	Maximum access for pedestrians, bicyclists and equestrians	Connections to existing and planned local trails	User Experience (noise, safety)	Aesthetics/Visual Resources	Agricultural Resources	Biological Resources	Geology, Soils	Hydrology and Water Quality	Land Use (residential or ROW needed)	Transportation/Traffic	Accessibility/Topography	Health and Transit Connections	Engineering Complexity/Cost	Compatibility with adjacent uses and community goals	
1															
2N															
2S															
3N															
3S															
4W															
4E															
5W															
6															
A															
B															
C															
D															

SONOMA COUNTY REGIONAL PARKS

Preferred Alignment

Concept: Rapid/commute route for cyclists along 116 and Stony Point, and relaxed/recreational route to provide opportunities for slower paced bicycle, pedestrian and equestrian use along the Laguna Trail connection, Laguna trail, Old Gravenstein Hwy, and Stony Point.

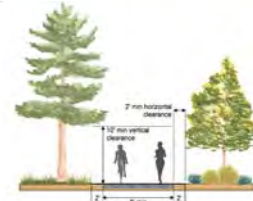
Precise alignment of some segments to be determined, based on landowner outreach.

SANOMA COUNTY REGIONAL PARKS



Class I - Bike Path

- Portions of SR 116
- Laguna Connector
- Old Gravenstein HWY
- Portions of Stony Point Road
- Stony Point Byway



Preferred Alignment

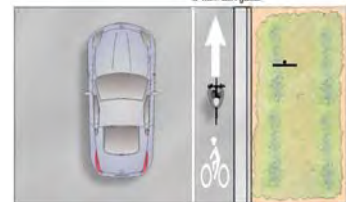
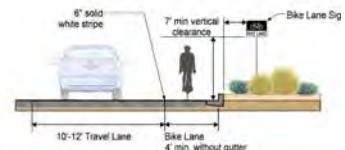


SANOMA COUNTY REGIONAL PARKS



Class II - Bike Lane

- City of Sebastopol
- Bloomfield/Lone Pine
- Liano Road
- Roblar Road
- Portions of City of Petaluma



Connecting Trails and Staging Areas

A: Bloomfield Road/Lone Pine Road. Bicycle and pedestrian improvements such as bike lanes, signage and/or delineated path for pedestrians for school/neighborhood use. (Not a Class I trail)

B: Old Gravenstein Hwy. Class I path along northeast side

C: Laguna Trail Connection. Class I Path on SCWA lands to connect to Laguna Trail. Precise alignment subject to negotiation.

D: Stony Point Byway. Trail on former rail lands, owned by County and SMART. Precise alignment subject to negotiation.

Potential Staging Areas:

- Old Gravenstein HWY at SR116
- Old Liano Road/116 or City of Santa Rosa Treatment Plant area
- Vicinity of Mechem at Stony Point
- Petaluma River at Stony Point

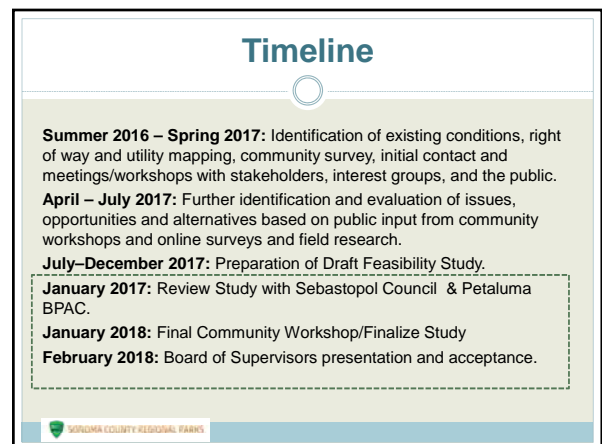
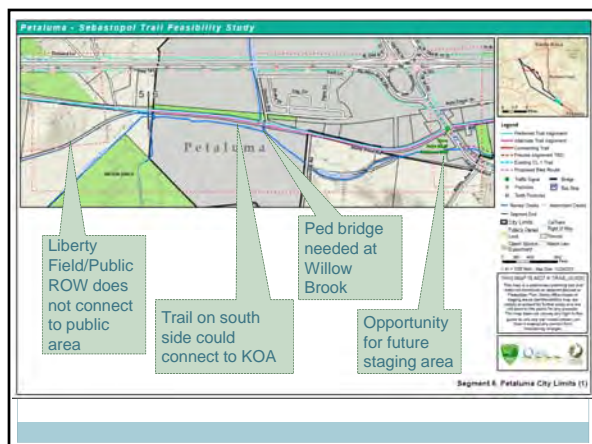
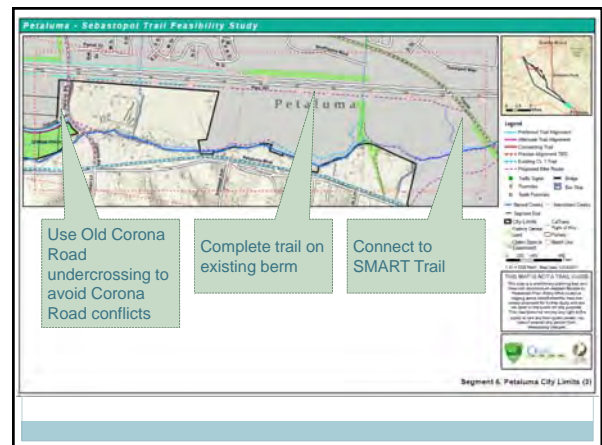
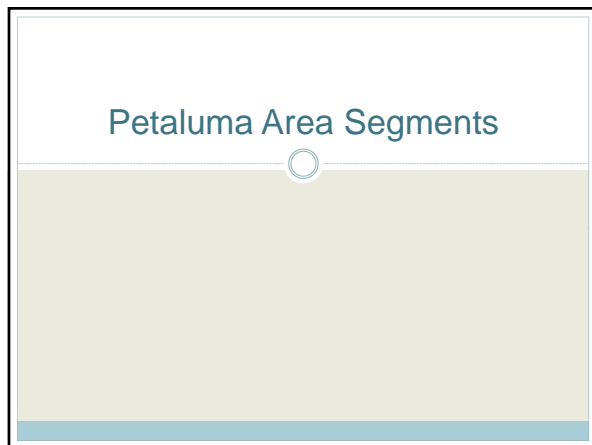
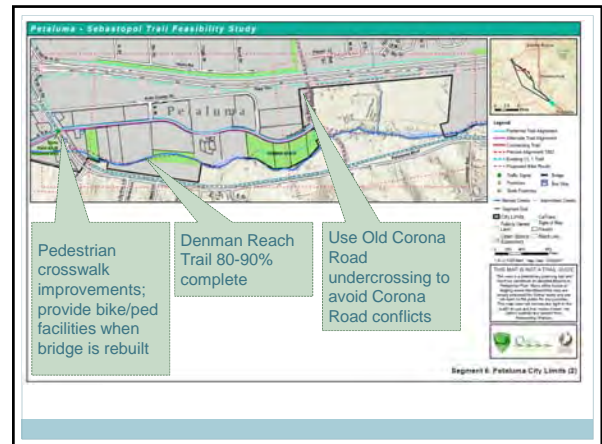
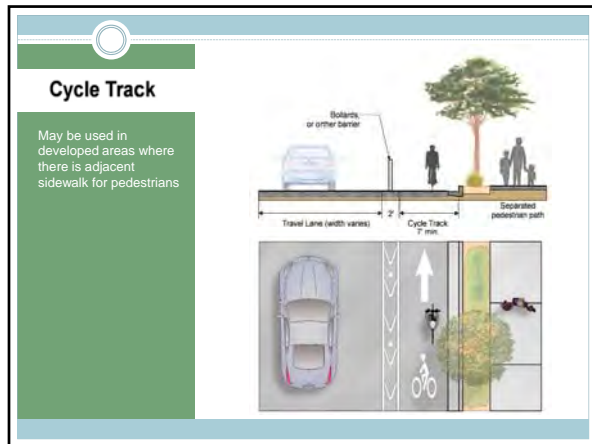
SANOMA COUNTY REGIONAL PARKS



Class III - Bike Route

- Rural Roads, such as Hessel, Blank, Canfield





Next Steps

- Receive comments.
- Finalize Study and Maps.
- Present to Sebastopol CC and Board of Supervisors
- Check the Trail Plan website for updates
<http://parks.sonoma-county.ca.gov/>

 SONOMA COUNTY REGIONAL PARKS

Thank You

Questions?

Contacts:

Ken Tam, Project Manager, 565-3348

ken.tam@sonoma-county.org

Steve Ehret, Park Planning Manager, 565-2041

steve.ehret@sonoma-county.org

Subscribe to project updates at parks website

www.parks.sonoma-county.ca.gov/ by clicking on "Sign up for Planning Updates"

 SONOMA COUNTY REGIONAL PARKS

Petaluma-Sebastopol Trail Feasibility Study

Join us for a discussion about the Petaluma-Sebastopol Trail Feasibility Study Report.

Community Workshop

The Feasibility Study Report findings and recommendations will be presented for public review and comment.

Thursday, February 1, 2018

5:30 PM to 7:00 PM

Sebastopol Veterans Memorial Building
Dining Room

282 S High Street | Sebastopol, CA 95472



The Sonoma County Regional Parks Department is in the final stages of preparing a Feasibility Study Report covering an approximately 15-mile bicycle and pedestrian trail connecting the Cities of Petaluma and Sebastopol. The feasibility study was funded with a Caltrans Sustainable Transportation Planning Grant (State funds) and local match funds from Sonoma County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club. The Feasibility Study Report incorporates comments and suggestions from two community workshops, plus the recommendations of stakeholder groups. It identifies a recommended preliminary trail alignment and design and prioritizes trail segments for future construction. The project design, environmental review, construction costs, and the economic and other benefits to the community have also been determined. For more information, please visit the following website:

http://parks.sonomacounty.ca.gov/About_Us/Project_Details/Petaluma_Sebastopol_Trail_Proposed.aspx

Project Timeline and Final Steps:

June – December 2017: Preparation of Draft Feasibility Study Report

January 3, 2018: Petaluma Bicycle and Pedestrian Advisory Committee presentation

February 1, 2018: Community Workshop presentation

February 6, 2018: Draft Feasibility Study Report to Board of Supervisors

February 6, 2018: Sebastopol City Council presentation

February 13, 2018: Final Feasibility Study Report to Board of Supervisors

**Questions?
Not able to attend?**

Contact Ken Tam,
Project Manager
(707) 565-3348

ken.tam@sonoma-county.org
www.sonomacountyparks.org



**Community Workshop #3
Sebastopol Community Center**

February 1, 2018

Comments Received:

1. How will changes to the route be handled? This is a long range feasibility study, and the options will be refined further as the trail is implemented, including environmental review, grant funding applications, precise design engineering, and project construction. Each of these steps is a public process, with opportunities to comment and provide input on trail implementation.
2. How will property owners be notified? Affected property owners will be notified in accordance with regulatory requirements, and there is usually a published community wide notification. All information is also posted on the Sonoma County Regional Parks website.
3. What is the status of the SR116 project within the County? Caltrans has allocated funding from the SB1 project for resurfacing SR 116 between Sebastopol and Cotati. Although SB1 requires provisions for active transportation (bicycles and pedestrians), this project will only include pavement rehabilitation of the existing roadway, with no planned shoulder improvements.
4. EcoRing, a nonprofit organization, has a position that tourists prefer trails on railroad alignments. Comment noted.
5. What is the funding source for this project? Funding is generally obtained by the County by leveraging funds received through new housing construction (\$3600 per house), and applying for grant funding or other mechanisms to match with other local, state and federal programs; these funds are leveraged at about 7:1.
6. Has eminent domain ever been used to get right of way for a trail? Portions of the Joe Rodota Trail were obtained through an eminent domain process, where the property title was in question.
7. The trail project should consider families with children, and provide maximum safety for all bike abilities, put the bike path off the road. Comment noted.
8. Railroad property owner was subject to break in from the trail in 1978 and 1979. Comment noted.
9. Along Stony Point Road, consider safety measures due to trucks moving heavy equipment, possibly consider east side of road. Comment noted. The study recommends safety measures to protect bicycles and pedestrians, especially at the intersection of Meham, Roblar and Stony Point, where the quarry is proposed. The precise route could be on either side of the road.
10. What is the process for acquiring right of way on SR 116? The highway is a state facility, and Caltrans has a strict process for negotiating right of way. It is prohibited to reach out to property owners until a precise determination of land needed is made, so that

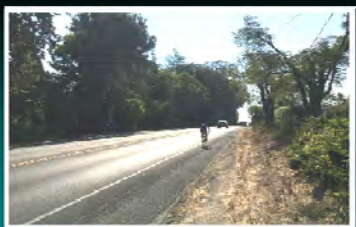
the process is open and fair. All Caltrans projects must include facilities for bicycle and pedestrian travel as part of projects, so a right of way determination will be made during precise design. In some areas, the current right of way is sufficient for incorporation a path, in other areas, right of way may be needed. Other techniques include shifting the lanes or specific design in areas to minimize right of way needs.

11. Sometimes the best solution is not the easiest, and you should consider the long term acquisition of former railroad land for a long term project. Comment noted.

12. Photos from workshop:



Petaluma-Sebastopol Trail Feasibility Study



February 1, 2018



SONOMA COUNTY REGIONAL PARKS

1

Introduction

- This is a **long range planning study**
- Evaluate options for a multi-use trail to connect Sebastopol and Petaluma
- Trail is identified in Sonoma County Bicycle and Pedestrian Plan and other transportation and land use plans.
- Funded by a Caltrans Sustainable Transportation Planning Grant (State funds) with local match funds from the County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club.
- Key element of the Study is Community and Stakeholder Outreach.

February 1, 2018



SONOMA COUNTY REGIONAL PARKS

2

What is the Petaluma Sebastopol Trail Feasibility Study?



- Community Initiated Study
- Determine most feasible preferred trail alignment
- Provide connections to existing and planned bicycle and pedestrian networks and other destinations
- Address safety concerns about walking and bicycling on rural roads
- Provide bicycling, walking, recreational and equestrian opportunities

Concept inspired by former Railroad
However, **most railroad right-of-way is now privately owned**, developed for other purposes, and not available, so another alignment is needed.

February 1, 2018



SONOMA COUNTY REGIONAL PARKS

3

Study Area

Rodota Trail, SR116 and Stony Point Road south and west to Corona Road

Connecting route along SCWA pipeline and Laguna de Santa Rosa

Incorporate trail plans within cities of Sebastopol and Petaluma.



February 1, 2018



SONOMA COUNTY REGIONAL PARKS

4

Outreach

- Nine meetings and workshops
- Outreach to owners and stakeholders
- Website comments
- Survey (432 responses)



February 1, 2018



SONOMA COUNTY REGIONAL PARKS

5

Survey Results

- Safety is key concern
- Over 90% want a safe place to walk, bicycle, or ride a horse and connect to other trails
- Most live in Sebastopol, Hessel and Petaluma
- 50 residents live outside study area
- Most popular roads for bicycling or walking are Bloomfield and Roblar Road
- Less than 25% have children in local schools
- Four respondents ride a horse along this route

February 1, 2018



SONOMA COUNTY REGIONAL PARKS

6

Initial Trail Routes Identified



February 1, 2018

SONOMA COUNTY REGIONAL PARKS

7

Issues and Opportunities

- Privately owned (former railroad) lands not available
- Roads in Hessel and Cunningham are narrow
- SR 116 is busy and noisy
- There is encroachment into public right of way (fences, utilities, driveways)
- Sensitive wildlife habitat
- Cultural/Historic Resources
- Explore Sonoma County Water Agency right of way
- Explore use of public lands, easements and road right of way
- Provide commuter-friendly route
- Provide low-speed recreational route for hikers, equestrians, families
- Caltrans SB1 Funding for improvements along SR116

February 1, 2018

SONOMA COUNTY REGIONAL PARKS

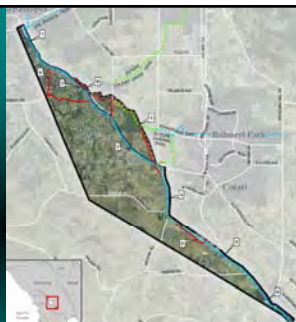
8

6 Trail Segments

- City of Sebastopol Bike Lanes and Sidewalks
- SR 116 Multi Use Path
- Stony Point Road Multi Use Path
- City of Petaluma Multi Use Path; Bike lanes on Petaluma Blvd. North

4 Connecting Trails

- Bloomfield Road/Lone Pine Road Class II bike lanes
- Old Gravenstein Hwy Class I along road
- Laguna Trail Connection Class I on SCWA lands
- Stony Point Byway Class I on County-owned former railroad right of way



February 1, 2018

SONOMA COUNTY REGIONAL PARKS

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Trail Types

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Proposed Class I Bike Path Locations:

- Portions of SR 116
- Laguna Connector Trail
- Old Gravenstein Highway
- Portions of Stony Point Road
- Stony Point Byway



February 1, 2018

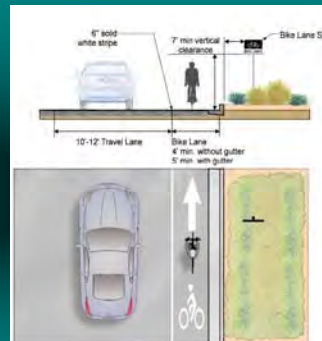
SONOMA COUNTY REGIONAL PARKS

11



Proposed Class II Bike Lane Locations:

- City of Sebastopol
- Bloomfield/Lone Pine
- Llano Road
- Roblar Road
- Stony Point Road
- Portions of City of Petaluma



February 1, 2018

SONOMA COUNTY REGIONAL PARKS

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Class III - Bike Route

Proposed Class III Bike Route Locations:

- essell Road
- Blank Road
- Canfield Road
- Other rural roads



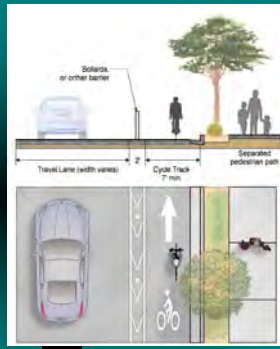
Shared-use Travel Lane
14' min. recommended

February 1, 2018  13


Cycle Track

Proposed Cycle Track Locations:

- Transition from developed areas
- Separate sidewalk for pedestrians



Travel Lane (with vehicle) 2' min.
Cycle Track 7' min.
Separated pedestrian path

February 1, 2018  14


Staging Areas

Existing Staging Areas:


- Stony Point Road at Laguna de Santa Rosa Trail
- Petaluma River Trail at Corona Road

Consider additional staging:


- Old Gravenstein Hwy. at SR116
- Old Llano Road at SR 116
- Petaluma River at Stony Point Road

February 1, 2018  15

Trail Alignment Maps


February 1, 2018  16

Segment 1: Sebastopol

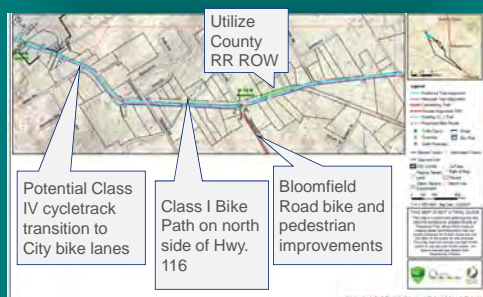


Class II bike lanes, sidewalks and accessibility improvements

Funding committed, ongoing Caltrans design and coordination

February 1, 2018  17

Segment 2: Cooper Rd. to Llano Rd.




Utilize County RR ROW

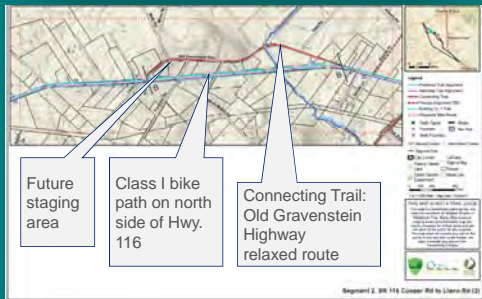
Potential Class IV cycletrack transition to City bike lanes

Class I Bike Path on north side of Hwy. 116

Bloomfield Road bike and pedestrian improvements

February 1, 2018  18

Segment 2: Cooper Rd. to Llano Rd.



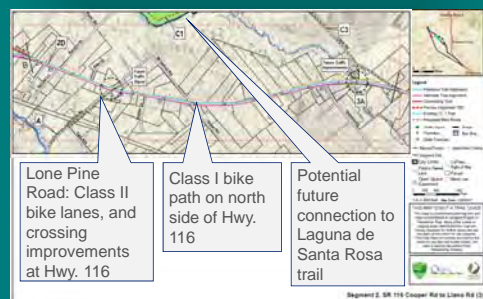
February 1, 2018



SAN DIEGO COUNTY REGIONAL PARKS

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Segment 2: Cooper Rd. to Llano Rd.



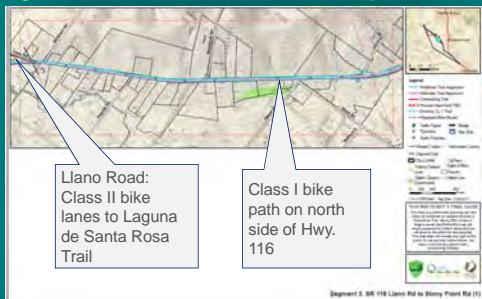
February 1, 2018



SAN DIEGO COUNTY REGIONAL PARKS

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Segment 3: Llano Rd. to Stony Point Rd.



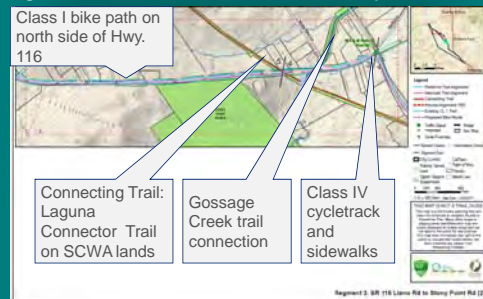
February 1, 2018



SAN DIEGO COUNTY REGIONAL PARKS

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Segment 3: Llano Rd. to Stony Point Rd.



February 1, 2018



SAN DIEGO COUNTY REGIONAL PARKS

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Segment 4: Stony Point Rd. to Mechem Rd.



February 1, 2018



SAN DIEGO COUNTY REGIONAL PARKS

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Segment 4: Stony Point Rd. to Mechem Rd.



February 1, 2018



SAN DIEGO COUNTY REGIONAL PARKS

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Preliminary Costs

Trail Type	Miles	Cost (millions)
Class I Recreational Route, separate from road	5.6	\$9.5
Class I /Class IV, Commuter Route, near adjacent road	15.9	\$22.5
Class II/III Improvements	6.5	\$1.5
Total	28	\$33.5

Implementation of many of these segments may be incorporated into roadway, flood control and habitat restoration projects.

February 1, 2018



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Project Timeline and Final Steps

June–December 2017: Preparation of Draft Feasibility Study Report

January 3, 2018: Petaluma Bicycle and Pedestrian Advisory Committee Presentation

February 1, 2018: Community Workshop Presentation

February 6, 2018: Draft Feasibility Study to Board of Supervisors

February 6, 2018: Sebastopol City Council Presentation

February 13, 2018: Final Feasibility Study to Board of Supervisors

February 1, 2018



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Thank You



Questions?

February 1, 2018



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Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Thank you so much for envisioning and pursuing this project. ~~The Quality of life,~~ The connection with nature, and the ability to travel safely to work, errands, and shopping will improve quality of life for users of the path AND the drivers who won't have to worry ~~about~~ ~~interact with~~ them as much.

Optional:

Name: Cynthia Spigarelli

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

What a shame that the homeowners put up such resistance to the original route through Hessel. I appreciate all the hard work done by the SoCo Parks & the consultants. The recreational quality of the trail is greatly degraded by going along 116.

Please keep me in the loop about this project.

Optional:

Name: Cate Hutton

Email or Phone: cateh

(Please print)

Please note that comments and information submitted become part of the p

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

① The more our bike trails follow byways distant from highways the more our citizens can safely and sanely utilize them. Please spend the time to find ways to allow us to travel away from 45-55 mph traffic. It's better for our health and our economy.

② Please provide an apples to apples comparison side by side of the railroad + 116/st nypt options (i.e. # of driveways, how much land acquisition, etc.)

Optional:

Name: Marsha Sue Lushis

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Safe bike riding is important to me. I look forward to the development + completion of the Petaluma to Sebastopol trail. Safe bike trails enhance the interest in and use of such trails for residents + visitors. Your efforts to move forward are appreciated.

Optional:

Name: Kay Hanton Cruz

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Fantastic. Let's build those class 1 trails asap!

Optional:

Name: Ken Crushman

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

The study as presented did not adequately address the feasibility of the route along the Railroad ROW.

The route along 116 is only partially separated from traffic and users will travel facing traffic with only painted lines to protect them - UNSAFE.

The right path is along the ROW as much as possible while protecting rights of property owners.

Optional:

Name: JOHN CRUZ

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study

Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Is there any room to utilize "roundabouts" on 116 or any of the alternate routes?

Optional:

Name:

Email or Phone:

(Please print)

Vibeke Maszk

Please note that comments and information submitted become part

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

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Petaluma-Sebastopol Trail Feasibility Study

Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

BIG FAN OF RAILROAD RAILS TO TRAILS AND

WOULD LIKE TO SEE THE RAILROAD BEING USED FOR THIS TRAIL

Please send me the list of all properties along the old railroad - including private public & vacant land ownership

Optional:

Name:

Email or Phone:

(Please print)

RANDY JOHNSON

Please note that comments and information submitted become part

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

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Petaluma-Sebastopol Trail Feasibility Study

Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Tourists prefer trails constructed on rail rights-of-way and away from highways their noise and exhaust. They prefer the general grade of former rail routes and views. ECRing therefore supports a long-term view that a trail should follow the rail route while respecting the property rights of owners.

Optional:

Name: RICK COATES

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study

Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

SAFETY IS UPMOST IMPORTANT, ESPECIALLY CROSSROADS.
(THE CROSS ROAD OCCIDENTAL RD/116 HWY IS AN EXAMPLE OF A VERY DANGEROUS CROSSING FOR BIKERS, PEDISTRIANS. MANY CARS DO NOT OBSERVE PEDS CROSSING LIGHTS AND TURN INTO THE CROSSING WHEN THE "GO" LIGHT FOR PED LIGHT IS ON)

Optional:

Name: SIBYL BUGARIN

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Thank you for including the equestrian activity on parts of this trail. I look forward to the connections to the Joe Rodoto trail & the Laguna trail to expand riding.

Optional:

Name: M. Murphy
Email or Phone: [redacted] 214.
(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

I cycle every day, mostly for exercise, because I have a desk job. I cycle along VLG, along Stony Point Rd, and almost everywhere. I do that because I grew up in New York City, and am therefore pretty cavalier about physical dangers! My wife and I moved here to raise a family in a safer more peaceful place. My friends tell me that I take my life into my hands whenever I bike along VLG. Again, I'm street smart, I can do that. I don't want my children to have to be that street smart, that ultra-alert or that "brave." Please put this path through. 😊

Optional:

Name: Stefan Wenger
Email or Phone: [redacted]
(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study

Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

Make sure that a long-term vision includes taking advantage of additional opportunities to expand the recreational route

Optional:

Name: Geoffrey Skinner

Email or Phone: _____

(Please print)

Please note that comments and information submitted become part of the public record.

Please turn in this card to a team member at the end of the workshop.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Petaluma-Sebastopol Trail Feasibility Study

Workshop #3 - Comment Card



SONOMA COUNTY REGIONAL PARKS

Please write your comments regarding the Petaluma-Sebastopol Trail Feasibility Study below:

I AM here tonight AS A VOICE OF LOCAL FAMILIES (of young & school-age children). Many of us cannot be as involved due to the demands of family life. Please consider — We do NOT feel safe allowing our children to ride along busy roads, highways. We SUPPORT and encourage OFF ROAD trails OR the MAXIMUM Safety bike lane (class IV?)

Optional:
Name: SARAH JANNESS
Email or Phone: _____
(Please print)

Please note that comments and information submitted become part of the

Please turn in this card to a team member at the end of the meeting.

Thank you for participating in the Petaluma-Sebastopol Trail Feasibility Study process!

Many cannot attend meetings, etc

Young families are the Residents who will be growing along with this proposal. We need to make Sebastopol bike-friendly to the MAXIMUM to address our growing traffic problem, for now and future generations.

Comments Received at February 1, 2018 Workshop

1. Sarah Jenness
 - a. Response: Comment noted. The survey noted that less than 25% of respondents have young children.
 - b. A Class I path (trail), whether parallel to a road or distant from adjacent roads, is separated from an adjacent travel lane by a minimum of five feet. In addition, physical barriers, buffers or other elements will be included in the final design to provide physical separation and safety.
2. Rick Coates
 - a. Response: Comment noted. Where public lands are available, trail segments have been proposed that are not adjacent to roads, including Segments C, D and portions of Segment 6.
3. Randy Johnson
 - a. Response: Comment noted. Ownership of former railroad lands is shown in Section 4.2.
4. Ken Cushman
 - a. Response: Comment noted.
5. John Cruz
 - a. Response: Difficulties with acquisition of former railroad lands is discussed in Section 4.2. Of the approximately 75 former rail parcels, 22 are in public ownership and discontinuous. Figure 7, presented at the April 2017 public workshops indicates routes initially considered but determined infeasible.
 - b. A Class I path (trail), whether parallel to a road or distant from adjacent roads, is separated from an adjacent travel lane by a minimum of five feet. In addition, physical barriers, buffers or other elements will be included in the final design to provide physical separation and safety.
 - c. Comment noted.
6. Marsha Sue Lustig
 - a. Response: comment noted.
 - b. Please refer to Section 4.2 for a discussion of railroad ownership issues and costs associated with railroad right of way acquisition.
 - c. An alignment utilizing the former railroad right of way (in the County portion) alignment would necessitate crossing 20 roads, including mid-block crossings. The trail would cross nineteen roads along the preferred alignment, with seven that either have traffic signals or planned traffic improvements.
7. Kay Hanlon Cruz
 - a. Response: comment noted.
8. Cate Hutton
 - a. Response: comment noted.

9. Cynthia Spigarelli
 - a. Response: comment noted.
10. Vibeke Maszk
 - a. Response: Comment noted. Roundabouts, signals and other traffic modifications would be completed under the direction of Caltrans, Sonoma County Transportation and Public Works Department, and/or Sonoma County Transportation Authority (SCTA).
11. Geoffrey Skinner
 - a. Response: Comment noted. Opportunities for future land acquisition and recreational trail implementation will continue to be evaluated when appropriate. The feasibility study is not intended to preclude future decision-making for future trail projects.
12. Stefan Wenger
 - a. Response: comment noted.
13. Sibyl Bugarian
 - a. Response: Safety at intersections, and minimizing road/trail crossings is a concern. Please refer to Section 8.3 for intersection design strategies.
14. M. Murphy
 - a. Response: Segments B, C and D would provide equestrian facilities; comment noted.

PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
COMMUNITY WORKSHOP
SIGN IN SHEET
DATE: February 1, 2018

PRINT NAME	ADDRESS	EMAIL ADDRESS OR TELEPHONE NO.
Robert Nunez		
Cate Hutton		
John Pfeiffer		
Mike Bonson		
Michael Murphy		
Steve & Barbara Tromble		
Fide COATES		
Patricia Webb		
Ken & Vibeke Maszk		
AL Yee shew wu		
JOHN MILLS		
Denver Booker		
STEVE LEVENBERG		
Priscilla Phew		
James Knight		
Joe Morgan		
JOHN EDER		
MARC CANIZZARO		

PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
COMMUNITY WORKSHOP
SIGN IN SHEET
DATE: February 1, 2018

PRINT NAME	ADDRESS	EMAIL ADDRESS OR TELEPHONE NO.
LYNN DEEDLER		
M. S. Lustig		
SIMON LOWINGS		
PEDRO MIRAS		
REBEKAH PRESTON		
DAVID KAFFUR		ET
Amie Windsor		
Kay Hanlon Cruz		
Sarah Gurney		on
John MACHADO		T
SARAH JENNESS		sm
JANE NIELSON		T
RANDY JOHNSON		ne
Dana Torrey		
Judy Russell		

PETALUMA SEBASTOPOL TRAIL FEASIBILITY STUDY
COMMUNITY WORKSHOP
SIGN IN SHEET
DATE: February 1, 2018

PRINT NAME	ADDRESS	EMAIL ADDRESS OR TELEPHONE NO.
Dan Swedenborg		
JAN GOLDSKI		
Pat Goldard		
JOHN CRUZ		
Dan Gurney		
Cindy O'Grady		
CRAIG BOBUTT		
Alisha O'Loughlin		
✓ Ross Randrup		✓
Sibyl Berman		
Cynthia Spigarelli		
Amy Loukonen		
Emilie Munsen		

DATE: February 1, 2018

ADDRESS

EMAIL ADDRESS OR TELEPHONE NO.

[illegible]



County of Sonoma Agenda Item Summary Report

Clerk of the Board
575 Administration Drive
Santa Rosa, CA 95403

Agenda Item Number: 16
(This Section for use by Clerk of the Board Only.)

To: Board of Supervisors

Board Agenda Date: February 6, 2018

Vote Requirement: Informational Only

Department or Agency Name(s): Regional Parks

Staff Name and Phone Number:

Ken Tam 565-3348

Supervisory District(s):

Second and Fifth

Title: Draft Petaluma Sebastopol Trail Feasibility Study

Recommended Actions:

Request comments from the Board on the Draft Petaluma Sebastopol Trail Feasibility Study by using this web link <https://www.surveymonkey.com/r/TCTNGB7>

Executive Summary:

Regional Parks secured a transportation planning grant from Caltrans and local match funds to complete the Petaluma Sebastopol Trail Feasibility Study (Study) by the end of February 2018. The project proposes to create a safe and separated pathway for pedestrians, bicyclists, and equestrians where feasible. The 15-mile long Trail is proposed to connect Sebastopol to Petaluma and provide connections to other existing and planned pedestrian and bicycle networks such as the Joe Rodota Trail, Laguna de Santa Rosa Trail, and SMART MUP (multi-use pathway). The plan is to provide more connectivity to areas of interest, to encourage residents to be healthier by walking and bicycling more, and to reduce vehicle emissions.

The Petaluma Sebastopol Trail (Trail) Project limits are broadly described in the County Bicycle and Pedestrian Plan and encompass a large area. A study is needed to determine the Trail feasibility and alternatives. The Study process included soliciting input at three public meetings, through an online survey, and meeting with stakeholders and representatives from the City of Sebastopol and City of Petaluma. The findings and recommendations of the preferred Trail alignment is identified in the Draft Study. A copy of the Draft Study is on file with the clerk and can be downloaded and reviewed from the following web page <http://sonomacounty.ca.gov/Parks/Planning/Petaluma-Sebastopol-Trail/>. The Board and public can provide comments on the draft Trail alignment by using this web link <https://www.surveymonkey.com/r/TCTNGB7>

Comments from the Board and the general public will be reviewed and addressed for the Final Study. Regional Parks will request that the Board of Supervisors accepts the Final Study at its February 13, 2018 meeting to meet grant obligations.

Discussion:

The Petaluma Sebastopol Trail concept was inspired by the route of the former Petaluma Sebastopol Railroad. However, much of the railroad right-of-way is privately owned, developed for other purposes, and not available for trail development. Therefore, a feasibility study is needed to explore and evaluate other options and alternatives and to determine the safest and most feasible route for the separated Trail.

The Study area includes approximately 13 miles of trail in the unincorporated areas of Sonoma County Supervisorial Districts 2 and 5, 1 mile in the City of Sebastopol, and 1 mile in the City of Petaluma. The Trail would provide bicycling, walking, jogging, horseback riding where feasible, and other recreational and commuting opportunities for residents of Petaluma, Sebastopol, and unincorporated areas such as Hessel and Cunningham.

In April 2015, the California Department of Transportation (Caltrans) awarded a \$209,436 Sustainable Transportation Planning Grant to Regional Parks to initiate the Study. The grant program required a local match of \$38,564 which consists of the following funding partners:

City of Sebastopol - \$6,564

City of Petaluma - \$1,000

Sonoma County Bicycle Coalition (including private donations) - \$11,000

Santa Rosa Cycling Club - \$5,000

Sonoma County Regional Parks - \$15,000

The total cost to fund the Study is \$248,000.

In May 2017, the County hired a consultant, Questa Engineering and their consulting team, to prepare the Study. The scope of the Study included identifying existing site conditions and public right of way, preparing benefits analysis, identifying existing demographics and interest groups, preparing a community survey to solicit input, preparing concepts and maps, facilitating community workshops and stakeholder meetings, collecting and responding to public comments, recommending a trail alignment, and preparing the draft and final Study. The Study area includes a 1-mile stretch from Sebastopol city limits to the Regional Parks' Joe Rodota Trail and 1-mile into Petaluma city limits to connect with its existing and planned bicycle network.

Public outreach included a press release, two stakeholder meetings, three community workshops, and online surveys available in English and Spanish to solicit input. Two stakeholder meetings were held on March 30, 2017. The community workshops were held on Wednesday, April 5, 2017 and Saturday, April 15, 2017. More recently, the draft Trail alignment was presented to the City of Petaluma Bicycle and Pedestrian Advisory Committee on January 3, 2018, Sonoma County Bicycle and Pedestrian Advisory Committee on December 20, 2017, and the general public on February 1, 2018. One more public meeting is scheduled on February 6, 2018 at the City of Sebastopol Council meeting.

After soliciting public input, evaluating existing site conditions and determining there is limited public right of way, it is recommended that the preferred alignment follow primarily the Highway 116 and Stony Point Road corridor and offer connections to existing and planned trails such as the Laguna de Santa Rosa Trail and SMART MUP. The findings and recommendations of the preferred Trail alignment are shown as six segments in the enclosed map and described as follows:

Segment 1: Highway 116. Connect to sidewalks and bicycle lanes within Sebastopol City limits.

Segment 2: Highway 116. From Sebastopol city limits to Llano Road, the preferred alignment is proposed on the north side of Highway 116, providing connection to Old Gravenstein Highway.

Segment 3: Highway 116. From Llano Road to Stony Point Road, the preferred alignment is proposed on the north side of Highway 116, providing a link to the Laguna de Santa Rosa Trail.

Segment 4: Stony Point Road. From Highway 116 to Mecham Road, the preferred alignment is proposed on the west side with potential off road connection on Laguna de Santa Rosa Trail.

Segment 5: Stony Point Road. From Mecham Road to Petaluma City limits, the preferred alignment is proposed on the south side of Stony Point Road.

Segment 6: Petaluma City limits. The preferred alignment is proposed to continue on the Petaluma Boulevard bike lanes, connect to the Petaluma River Trail, and end at the SMART MUP intersection.

A copy of the Draft Study is on file with the clerk and can be downloaded and reviewed from the following web page <http://sonomacounty.ca.gov/Parks/Planning/Petaluma-Sebastopol-Trail/> The Board and public can provide comments on the Draft Study by using this web link <https://www.surveymonkey.com/r/TCTNGB7>. The transportation planning grant requires that the Board have an opportunity to comment on the Draft Study. Comments from the Board and the public will be reviewed and addressed in the Final Study. Regional Parks will request that the Board of Supervisors accepts the Final Study at its February 13, 2018 meeting to meet grant obligations.

Prior Board Actions:

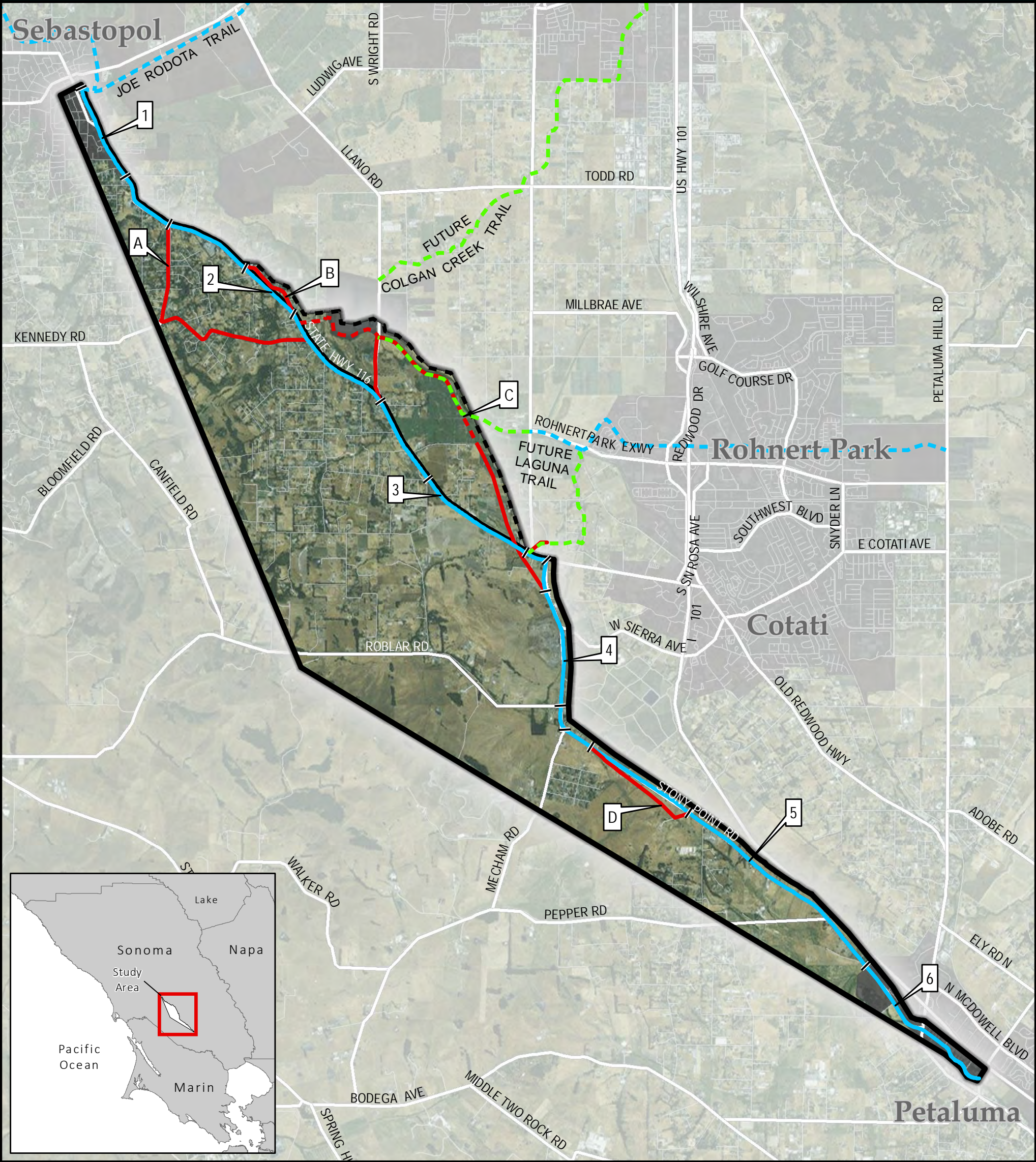
May 17, 2016, Board approved professional service agreement with Questa Engineering to prepare the Petaluma Sebastopol Trail Feasibility Study. August 11, 2015, by Resolution No. 15-0316 approved the funding agreement with Caltrans for the Petaluma Sebastopol Trail Feasibility Study and authorized the Regional Parks Director to execute all documents necessary to carry out and administer the grant. August 24, 2010, by Resolution No. 10-0636, adopted the 2010 Sonoma County Bicycle and Pedestrian Plan.

Strategic Plan Alignment	Goal 2: Economic and Environmental Stewardship
---------------------------------	--

This project supports planning for a non-motorized transportation and recreation facility while protecting natural resources to support a thriving economy.

Fiscal Summary			
Expenditures	FY 17-18 Adopted	FY 18-19 Projected	FY 19-20 Projected
Budgeted Expenses			
Additional Appropriation Requested			
Total Expenditures			
Funding Sources			
General Fund/WA GF			
State/Federal			
Fees/Other			
Use of Fund Balance			
Contingencies			
Total Sources			
Narrative Explanation of Fiscal Impacts:			
Total cost of the Feasibility Study is \$248,000 which was previously budgeted. There is no cost associated with this item.			
Staffing Impacts			
Position Title (Payroll Classification)	Monthly Salary Range (A – I Step)	Additions (Number)	Deletions (Number)
Narrative Explanation of Staffing Impacts (If Required):			
Attachments:			
Map			
Related Items “On File” with the Clerk of the Board:			
Draft Petaluma Sebastopol Trail Feasibility Study			

Petaluma - Sebastopol Trail Feasibility Study



Trail Alignment

- 1 - Sebastopol City Trails
- 2 - SR 116 City limits to Llano Road
- 3 - SR 116 Llano Road to Stony Point Rd
- 4 - Stony Point Road SR 116 to Mecham Road
- 5 - Mecham Road to Petaluma City Limits
- 6 - Petaluma City Trails

Connecting Trails

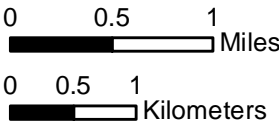
- A - Bloomfield Road Spur
- B - Old Gravenstein Hwy
- C - Laguna Trail Connection
- D - Stony Point Byway

Map Date: January 12, 2018

- Existing Trails
- Future Trails
- Precise Alignment TBD

- Study Area
- Laguna Connection Study Area

THIS MAP IS NOT A TRAIL GUIDE
This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this Map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.



10

Mayor

Patrick Slayter

City Council

Neysa Hinton, Vice Mayor

Michael Carnacchi

Una Glass

Sarah Glade Gurney



City of Sebastopol

Agenda Report Reviewed by:

City Manager/City Attorney

City Manager/City Attorney

Larry McLaughlin

City Clerk

Mary Gourley

Meeting Date:

Meeting of February 6, 2018

To:

Mayor and City Council

From:

Kenyon Webster, Planning Director

Subject:

Informational Presentation Regarding the
Petaluma-Sebastopol Trail Feasibility Study

Recommendation:

Receive Presentation, Provide Any Comments

Funding:

Currently Budgeted: ___ Yes ___ No X N/A

Introduction:

The Sonoma County Regional Parks Department has been conducting a feasibility study of a potential trail between Petaluma and Sebastopol. The study is in its final stage.

Sebastopol strongly supports pedestrian and bicycle improvements, as demonstrated by its implementation of the City's Bicycle and Pedestrian Master Plan.

Sebastopol has contributed funding to the Petaluma-Sebastopol study, since the concept is consistent with the City's circulation goals, including facilitating alternatives to the automobile.

Regional Parks will make a presentation to the City Council regarding the results of the study.

Background:

The Petaluma Sebastopol Trail project limits is broadly described in the County Bicycle and Pedestrian Plan and encompasses a large area. The Plan identifies a general start point and end point but does not specify the trail location. A study was needed to solicit public input and to evaluate existing site conditions for opportunities and constraints. The study is intended to help determine the trail feasibility and where the trail could be located. The feasibility study will help better define the project limits and provide guidance on future phases of development.

Challenges for trail development include private property ownership, limited public right of way, safety issues, environmental constraints, property acquisition, design and construction costs, and community concerns. Trail development on public rights of way can be expensive and difficult to accomplish; costs and challenges can be exponentially greater where substantial private property is needed for trails.

The project proposes to create a safe and separated pathway for pedestrians, bicyclists, and equestrians where feasible. The 13-mile long route would connect Sebastopol to Petaluma and would provide connections to other existing and planned pedestrian and bicycle networks such

as the Joe Rodota Trail, Laguna de Santa Rosa Trail, and SMART Trail. The plan is to provide more connectivity to areas of interest and to encourage residents to be healthier by walking and bicycling more and to reduce vehicle emissions.

Regional Parks secured a transportation planning grant from Caltrans to prepare and complete the Petaluma Sebastopol Trail Feasibility Study by the end of February 2018. The feasibility study included soliciting input from stakeholders and general public. The findings and recommendations of the preferred trail alignment is identified in the Draft Petaluma Sebastopol Trail Feasibility Study.

County Parks staff are seeking comments on the proposed trail alignment. Any comments will be reviewed and addressed as appropriate in the Final Petaluma Sebastopol Trail Feasibility Study. Regional Parks plans to request that the Board of Supervisors accept the Final Petaluma Sebastopol Trail Feasibility Study at its February 13, 2018 meeting, to meet grant obligations.

The Petaluma Sebastopol Trail is identified as a project in the 2010 County Bicycle and Pedestrian Plan. The concept was inspired by the route of the former Petaluma Sebastopol Railroad. However, much of the railroad right-of-way is privately owned and developed for other purposes. Therefore, a feasibility study was needed to determine the most workable route for the trail. The first phase of this project was to study the feasibility of developing an approximately 13-mile paved route connecting Petaluma and Sebastopol.

The proposed route is located within the unincorporated areas of Sonoma County Supervisorial Districts 2 and 5, the City of Sebastopol, and the City of Petaluma. The trail would provide bicycling, walking, jogging, and other recreational and commuting opportunities for residents of Petaluma, Sebastopol, and unincorporated areas such as Hessel and Cunningham. The study area encompasses a large area between Petaluma and Sebastopol. The proposed route would generally be 8 feet wide, and with community input, the feasibility study is intended to identify feasible trail alignments and alternatives.

The Feasibility Study is a major milestone. Once a feasible route is identified, work towards realization of the study could begin. Given funding and design challenges, this is expected to take a number of years.

Feasibility Study Grant:

In April 2015, the California Department of Transportation (Caltrans) awarded a \$209,436 Sustainable Transportation Planning Grant to Regional Parks to initiate the feasibility study. The grant program required a local match of \$38,564 which consists of the following funding partners:

City of Sebastopol - \$6,564

City of Petaluma - \$1,000

Sonoma County Bicycle Coalition (including private donations) - \$11,000

Santa Rosa Cycling Club - \$5,000

Sonoma County Regional Parks - \$15,000

The total costs to fund the feasibility study was \$248,000.

Sebastopol supported the County's grant applications, and as indicated, provided funding.

Study Process:

In May 2017, the County hired a consultant, Questa Engineering and their consulting team, to prepare the Petaluma Sebastopol Trail Feasibility Study. The scope of the study included identifying existing site conditions and public right of way, preparing benefits analysis, identifying existing demographics and interest groups, preparing community survey to solicit input, preparing concepts and maps, facilitating community workshops and stakeholder meetings, collecting and responding to public comments, recommending a trail alignment, and preparing draft and final feasibility study reports. The study area includes a 1-mile stretch from Sebastopol city limits to the Regional Parks' Joe Rodota Trail and 1-mile into Petaluma city limits to connect with its existing and planned bicycle network.

Public outreach included press releases, two stakeholder meetings, three community workshops, and online surveys available in English and Spanish to solicit input. Two stakeholder meetings were held on March 30, 2017. The community workshops were held on Wednesday, April 5, 2017 and Saturday, April 15, 2017. More recently, the draft trail alignment was presented to the City of Petaluma Bicycle and Pedestrian Advisory Committee on January 3, 2018, Sonoma County Bicycle and Pedestrian Advisory Committee on December 20, and to the general public on February 1, 2018. On February 6 the City of Sebastopol City Council will receive a presentation.

Proposed Alignment:

After soliciting public input, evaluating existing site conditions, and determining there is limited public right of way, the study recommends that the preferred alignment would follow primarily the Highway 116 and Stony Point Road corridor and offer connections to existing and planned trails such as the Laguna de Santa Rosa Trail and SMART Trail. The findings and recommendations of the Draft Petaluma Sebastopol Trail Feasibility Study are as follows:

Segment 1: Highway 116. Connect to bicycle lanes and sidewalks within Sebastopol City limits

Segment 2: Highway 116. From Sebastopol City limits to Llano Road, the preferred alignment would be on the north side of Highway 116, providing connection to Old Gravenstein Highway.

Segment 3: Highway 116. From Llano Road to Stony Point Road, the preferred alignment would be on the north side of Highway 116, providing a link to the Laguna de Santa Rosa Trail

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Segment 5: Stony Point Road. From Mecham Road to Petaluma City limits, the preferred alignment would be on the south side of Stony Point Road.

Segment 6: Petaluma City limits. The preferred alignment would continue on the Petaluma Boulevard bike lanes, connect to the Petaluma River Trail, and end at the SMART Trail intersection.

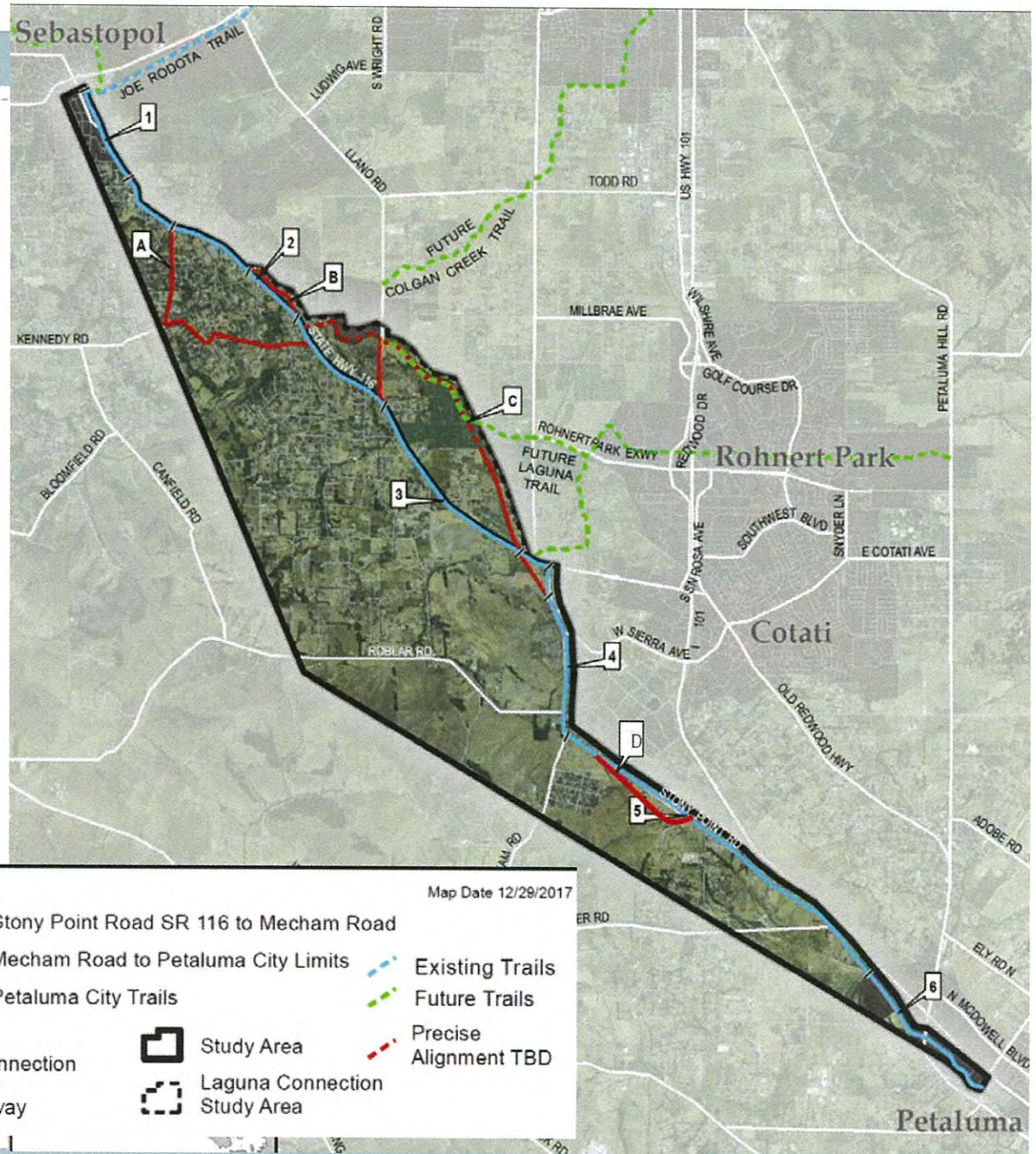
The Sebastopol segment will take advantage of the City's collaboration with Caltrans to implement bicycle lanes on Highway 116. In considering all options, the study concluded that this appears to be the most feasible choice for connecting the Petaluma-Sebastopol trail to the City's bicycle routes and other facilities.

Comments on the proposed alignment will be reviewed and addressed as appropriate for the Final Petaluma Sebastopol Trail Feasibility Study. Regional Parks will request the Board of Supervisors to accept the Final Petaluma Sebastopol Trail Feasibility Study at its February 13, 2018 meeting, to meet grant obligations.

Attachments:

Trail alignment options map
City of Sebastopol alignment

Preferred Alignment



Trail Alignment

- 1 - Sebastopol City Trails
- 2 - SR 116 City limits to Llano Road
- 3 - SR 116 Llano Road to Stony Point Rd
- 4 - Stony Point Road SR 116 to Mecham Road
- 5 - Mecham Road to Petaluma City Limits
- 6 - Petaluma City Trails

Connecting Trails

- A - Bloomfield Road Spur
- B - Old Gravenstein Hwy
- C - Laguna Trail Connection
- D - Stony Point Byway



Study Area



Laguna Connection Study Area

Map Date 12/29/2017

Existing Trails

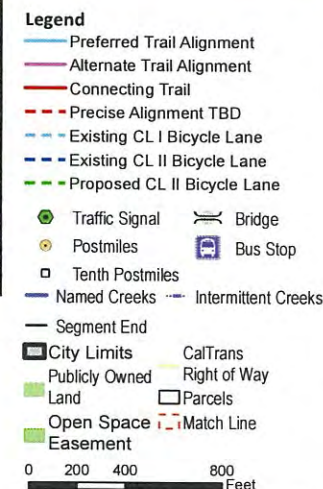
Future Trails

Precise Alignment TBD



SONOMA COUNTY REGIONAL PARKS

Petaluma - Sebastopol Trail Feasibility Study



Sheet 8-1

Projects				
Number	Name	Description	Length feet	Length miles
1	SR116 Sebastopol City	Class II	16,900	3.2
2A	SR116 Cooper Road-Bloomfield	Class I, Class IV	3,300	0.6

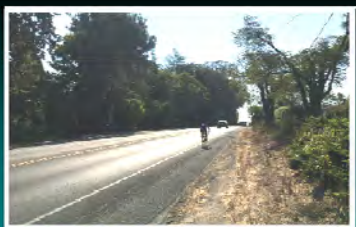
THIS MAP IS NOT A TRAIL GUIDE

This map is a preliminary planning tool and does not constitute an adopted Bicycle or Pedestrian Plan. Many of the routes or staging areas identified on this map are simply proposed for further study and are not open to the public for any purpose. This map does not convey any right to the public to use any trail routes shown, nor does it exempt any person from trespassing charges.



8-1: Segment 1. SR 116 City of Sebastopol

Petaluma-Sebastopol Trail Feasibility Study



February 6, 2018



SONOMA COUNTY REGIONAL PARKS

1

Introduction

- This is a **long range planning study**
- Evaluate options for a multi-use trail to connect Sebastopol and Petaluma
- Trail is identified in Sonoma County Bicycle and Pedestrian Plan and other transportation and land use plans.
- Funded by a Caltrans Sustainable Transportation Planning Grant (State funds) with local match funds from the County, City of Sebastopol, City of Petaluma, Sonoma County Bicycle Coalition, and Santa Rosa Cycling Club.
- Key element of the Study is Community and Stakeholder Outreach.

February 6, 2018



SONOMA COUNTY REGIONAL PARKS

2

Study Area

Rodota Trail, SR116 and Stony Point Road south and west to Corona Road

Connecting route along SCWA pipeline and Laguna de Santa Rosa

Incorporate trail plans within cities of Sebastopol and Petaluma.



February 6, 2018



SONOMA COUNTY REGIONAL PARKS

3

What is the Petaluma Sebastopol Trail Feasibility Study?



- Community Initiated Study
- Determine most feasible preferred trail alignment
- Provide connections to existing and planned bicycle and pedestrian networks and other destinations
- Address safety concerns about walking and bicycling on rural roads
- Provide bicycling, walking, recreational and equestrian opportunities

Concept inspired by former Railroad
However, **most railroad right-of-way is now privately owned**, developed for other purposes, and not available, so another alignment is needed.

February 6, 2018



SONOMA COUNTY REGIONAL PARKS

4

Former Railroad



- 75 + Parcels
- 16 Public parcels
- 22 Merged parcels (not a separate lot)
- 7 absentee owners
- 20 are classified as vacant

February 6, 2018



SONOMA COUNTY REGIONAL PARKS

5



February 6, 2018



SONOMA COUNTY REGIONAL PARKS

6

Outreach

- Nine meetings and workshops
- Outreach to owners and stakeholders
- Website comments
- Survey (432 responses)



February 6, 2018

SONOMA COUNTY REGIONAL PARKS

7

Survey Results

- Safety is key concern
- Over 90% want a safe place to walk, bicycle, or ride a horse and connect to other trails
- Most live in Sebastopol, Hessel and Petaluma
- 50 residents live outside study area
- Most popular roads for bicycling or walking are Bloomfield and Roblar Road
- Less than 25% have children in local schools
- Four respondents ride a horse along this route

February 6, 2018

SONOMA COUNTY REGIONAL PARKS

8

Initial Trail Routes Identified



February 6, 2018

SONOMA COUNTY REGIONAL PARKS

9

Issues and Opportunities

- Privately owned (former railroad) lands not available
- Roads in Hessel and Cunningham are narrow
- SR 116 is busy and noisy
- There is encroachment into public right of way (fences, utilities, driveways)
- Sensitive wildlife habitat
- Cultural/Historic Resources
- Explore Sonoma County Water Agency right of way
- Explore use of public lands, easements and road right of way
- Provide commuter-friendly route
- Provide low-speed recreational route for hikers, equestrians, families
- Caltrans SB1 Funding for improvements along SR116

February 6, 2018

SONOMA COUNTY REGIONAL PARKS

10

6 Trail Segments

- 1: City of Sebastopol
- 2-3: SR 116 Multi Use Path
- 4-5: Stony Point Road
- 6: City of Petaluma

4 Connecting Trails

- A: Bloomfield Road/Lone Pine Rd.
- B: Old Gravenstein Hwy
- C: Laguna Trail Connection
- D: Stony Point Byway



February 6, 2018

SONOMA COUNTY REGIONAL PARKS

11

Trail Types

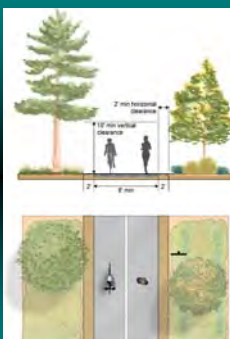
SONOMA COUNTY REGIONAL PARKS


12

Class I - Bike Path

Proposed Class I Bike Path Locations:

- Portions of SR 116
- Laguna Connector Trail
- Old Gravenstein Highway
- Portions of Stony Point Road
- Stony Point Byway



February 6, 2018  SONOMA COUNTY REGIONAL PARKS 13



West County Trail at Andy's Market

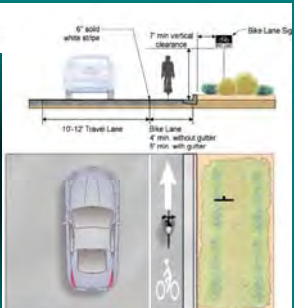



February 6, 2018  SONOMA COUNTY REGIONAL PARKS 14

Class II - Bike Lane

Locations:

- City of Sebastopol
- Bloomfield/Lone Pine
- Llano Road
- Roblar Road
- Stony Point Road
- Portions of City of Petaluma




February 6, 2018  SONOMA COUNTY REGIONAL PARKS 15

Class III - Bike Route

Proposed Class III Bike Route Locations:

- Hessel Road
- Blank Road
- Canfield Road
- Other rural roads

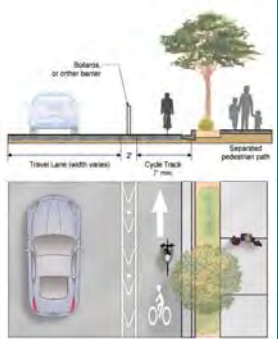



February 6, 2018  SONOMA COUNTY REGIONAL PARKS 16

Cycle Track


Cycle Track Locations:

- Transition from developed areas
- Separate sidewalk for pedestrians



February 6, 2018  SONOMA COUNTY REGIONAL PARKS 17

Trail Alignment Maps

February 6, 2018  SONOMA COUNTY REGIONAL PARKS 18

Segment 1: Sebastopol



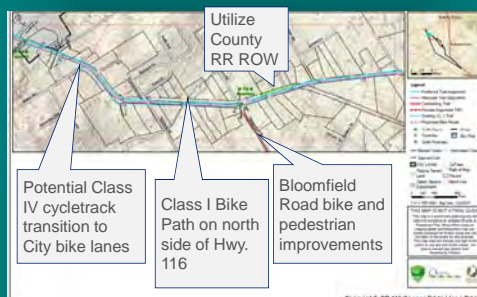
February 1, 2018



SONOMA COUNTY REGIONAL PARKS

19

Segment 2: Cooper Rd. to Llano Rd.



February 1, 2018



SONOMA COUNTY REGIONAL PARKS

20

Segment 2: Cooper Rd. to Llano Rd.



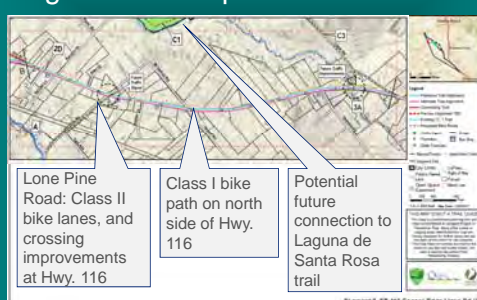
February 1, 2018



SONOMA COUNTY REGIONAL PARKS

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Segment 2: Cooper Rd. to Llano Rd.



February 1, 2018



SONOMA COUNTY REGIONAL PARKS

22

Staging Areas

Existing Staging Areas:

- Stony Point Road at Laguna de Santa Rosa Trail
- Petaluma River Trail at Corona Road

Consider additional staging:

- Old Gravenstein Hwy. at SR 116
- Old Llano Road at SR 116
- Petaluma River at Stony Point Road

February 6, 2018



SONOMA COUNTY REGIONAL PARKS

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Preliminary Costs

Trail Type	Miles	Cost (millions)
Class I Recreational Route, separate from road	5.6	\$9.5
Class I /Class IV, Commuter Route, near adjacent road	15.9	\$22.5
Class II/III Improvements	6.5	\$1.5
Total	28	\$33.5

Implementation of many of these segments may be incorporated into roadway, flood control and habitat restoration projects.

February 6, 2018



SONOMA COUNTY REGIONAL PARKS

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Project Timeline and Final Steps

June–December 2017: Preparation of Draft Feasibility Study Report
January 3, 2018: Petaluma Bicycle and Pedestrian Advisory Committee Presentation
February 1, 2018: Community Workshop Presentation
February 6, 2018: Draft Feasibility Study to Board of Supervisors
February 6, 2018: Sebastopol City Council Presentation
February 13, 2018: Final Feasibility Study to Board of Supervisors

February 6, 2018



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Thank You



Questions?

February 6, 2018

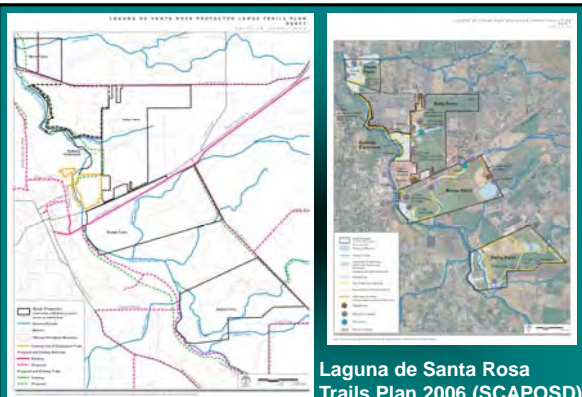


26

Additional Slides



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Multiuse Path Examples (cont'd)



Napa Valley Vine Trail



Multiuse Paths (w\ guardrails)



Lake Tahoe Sawmill Path



Columbia River Hwy Trail



Bike Lanes (Class II)



Fairfax, CA



Austin, TX



Separated Bikeway / Cycle Track (Class IV)



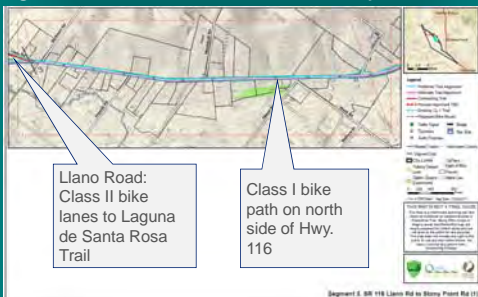
Reno NV



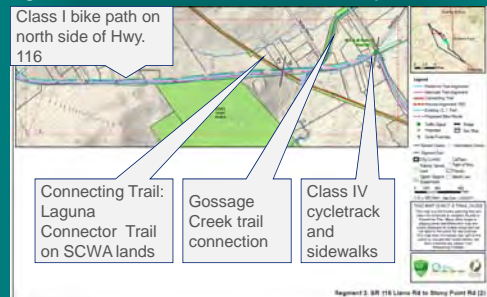
Reno NV



Segment 3: Llano Rd. to Stony Point Rd.



Segment 3: Llano Rd. to Stony Point Rd.



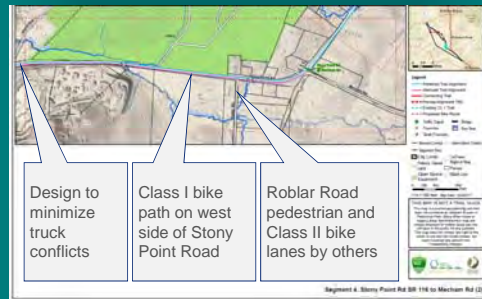
Segment 4: Stony Point Rd. to Mecham Rd.



February 1, 2018

SOLICITA COUNTY REGIONAL PARKS

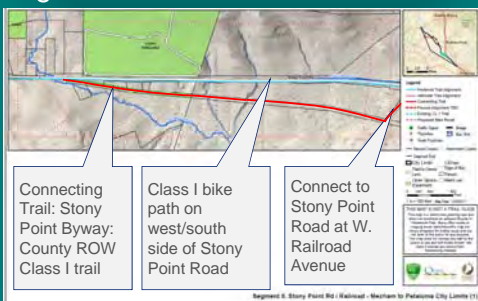
Segment 4: Stony Point Rd. to Mecham Rd.



February 1, 2018

SOLICITA COUNTY REGIONAL PARKS

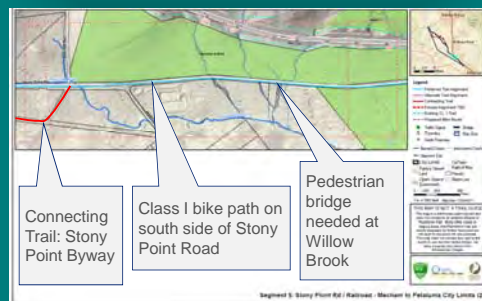
Segment 5: Mecham Rd. to Petaluma



February 1, 2018

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Segment 5: Mecham Rd. to Petaluma



February 1, 2018

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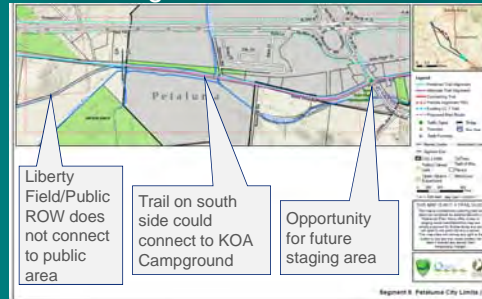
Segment 5: Mecham Rd. to Petaluma



February 1, 2018

SOLICITA COUNTY REGIONAL PARKS

Segment 6: Petaluma



February 1, 2018

SOLICITA COUNTY REGIONAL PARKS

Segment 6: Petaluma

Pedestrian crosswalk improvements; provide bike/pedestrian facilities when bridge is rebuilt

Denman Reach Trail 80-90% complete

Use Old Corona Road undercrossing to avoid Corona Road conflicts

February 1, 2018

SUNTERA COUNTY REGIONAL PARKS

Segment 6: Petaluma

Use Old Corona Road undercrossing to avoid Corona Road conflicts

Complete trail on existing berm

Connect to SMART Trail

February 1, 2018

SUNTERA COUNTY REGIONAL PARKS

Other Comments Received

Ken Tam

From: Ken Tam
Sent: Friday, January 26, 2018 6:48 PM
To: 'imgroanup'
Subject: RE: Bike trail

Hello Pat,

Thank you for the comments. The feasibility study recommends that the preferred trail alignment follow Highway 116 and Stony Point Road. The trail alignment does not use Jewett Road. I hope this clarifies the trail alignment. If you have any other questions or comments, please let me know or you can come to the community workshop on February 1 at the Sebastopol Veterans Building.

Ken

Kenneth Tam, Park Planner II
Sonoma County Regional Parks Department
2300 County Center Drive, Suite 120A
Santa Rosa, Ca 95403
707-565-3348 work
707-579-8247 office fax
707-565-3642 planning fax
ken.tam@sonoma-county.org
1-26-2018

-----Original Message-----

From: imgroanup [mailto:imgroanup@yahoo.com]
Sent: Thursday, January 25, 2018 3:02 PM
To: Ken Tam <Ken.Tam@sonoma-county.org>
Subject: Bike trail

Hello Ken,

I live on Lori Lane, off of Jewett Rd. I am not pleased there will be a bike trail behind me. There is a long grove of trees that will be cut. There are redtails, great horned, salamanders, and rare newts that for years make the grove their home. The trees offer winds breaks, shade, privacy, noise reductions for the home owners that are adjacent to the trees. Jewett Road is a narrow country road that is in poor condition. It is the primary route for our Liberty Valley fire dept. for responding to calls north of their Liberty Rd. station. At present the responding engines have to negotiate this narrow road. Vehicle regularly risk sideswiping each other. Now with Trump opening our coastline to drilling Jewett Rd. will be used as major segway to the ocean. This increase of traffic to the ocean alone is a negative impact, now add increase of traffic for building and use of the proposed path.

The current proposal plans for th route is to parallel Stoney Point Rd. then turn on to Jewett Rd. Trail users that do not want to use a major thorough fare of Stoney Pt. will park at on Jewett and begin their journey from there. I am concerned fences will go up along the pathway. We have deer, coyote, turtles in the creek, rabbits, weasels, salamanders, farm animals, and newts that require a safe passage to survive. The path will be a barrier for safe passage.

I looked online and there is no place I saw there was an increase in home values with adjacent public trails. In fact my realtor friends tell me it is hard to sell a home along a trail. There are studies that indicate increase in crime after a pathway was built.

How wide of a swatch of land is necessary to build a trail? How will it be maintained, patrolled, address potential parking on Jewett by the users, protection of nature, and paid for. I do not believe an unprejudiced impact study has been done that addresses these concerns.

Please use the Smart Train land. Do not disturb nature just because a few people want a path.

Pat Goddard
12 Lori Lane
Petaluma, CA 94952
707-481-6969

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Ken Tam

From: Ken Tam
Sent: Friday, February 09, 2018 4:27 PM
To: 'Marsha Sue Lustig'
Subject: RE: Comments regarding proposed preferred bike route along Stony Point Road and CA St Route 116

Hi Marsha,

Thank you for providing comments. Your comments have been included in the trail study.

Thanks
Ken

Kenneth Tam, Park Planner II
Sonoma County Regional Parks Department
2300 County Center Drive, Suite 120A
Santa Rosa, Ca 95403
707-565-3348 work
707-579-8247 office fax
707-565-3642 planning fax
ken.tam@sonoma-county.org

From: Marsha Sue Lustig [mailto:mslustig@comcast.net]
Sent: Tuesday, February 06, 2018 10:12 AM
To: Ken Tam <Ken.Tam@sonoma-county.org>
Subject: Comments regarding proposed preferred bike route along Stony Point Road and CA St Route 116

Hi Ken,

I just heard that you had not received this email that I recently sent to Lynda Hopkins.

Please include the email below in your public information packet for next week's agenda item on the Petaluma-Sebastopol bike and pedestrian connector.

Thank you,

Marsha Sue

Begin forwarded message:

From: Marsha Sue Lustig <mslustig@comcast.net>
Subject: Comments regarding proposed preferred bike route along Stony Point Road and CA St Route 116
Date: February 4, 2018 at 10:45:15 PM PST
To: Sarah Gurney <sarahgurney.seb@gmail.com>, Lynda.Hopkins@sonoma-county.org, Patrick Slayter <ps.sebcc@gmail.com>, Glass Mayor Una <una.glass.seb@sonic.net>

Cc: Mary Gourley <mgourley@cityofsebastopol.org>

Dear Supervisor Hopkins, Mayor Slayter, Councilmember Gurney and Councilmember Glass,

Please consider our comments below to be a part of the public record and share them with your fellow board members, staff, and other appropriate committees and the public.

Thank you for considering the plight of the bicyclist and pedestrian in Sonoma County. While CALTRANS, the County and the cities are under mandate to treat “alternative” modes of transportation as equals to the car, we know that change is difficult and often very slow. Our local farsighted vision to undertake the (sometimes arduous) preservation measures of the last thirty years within Sonoma County has yielded much of the bounty of beauty and respite that we enjoy today. We are so proud of our community.

We recently attended the County Regional Parks public meeting in Sebastopol to review this project, which appears to be headed for a quick County approval. We remain convinced that while the route along Hwy.116 and Stony Point Rd. may be the most “expedient” in terms of currently available ROW, and possibly less hostile property owners, it is not in the best interest of most potential future users.

Now is the time to dream of our future. A chance to work toward the exceptional. The two main roads along the route, Hwy.116 and Stony Point Rd., will never be a pleasant experience or accessible to our youth or our elders. We and our friends are fairly serious walkers averaging approximately fifty miles each week and have also biked all over our County. Juxtaposing non-car travelers next to those high speed roads will not be an enjoyable experience. It will not provide the connection to nature and tranquility that are experienced on our few existing trails/bike paths. We sometimes walk from Sebastopol to Forestville, and there is no comparison between the section of Hwy.116, known as the Andy’s Market section, (similar and nicer than much of what is being proposed), as well as the existing trail sections on the old railroad ROW. The Andy’s Market section is loud and unpleasant and must be *endured*.

Why would you select a project simply based upon ease of acquisition? This project is so many years away as to allow us to dream big. We understand that there are vocal, threatening neighbors and owners on the old parcels that the County sold off years ago. Nonetheless, your constituents are counting on you to fight for our best interests - to take a stand for our children.

We would be honored to hike with you in order to share our experience of the different types of walking opportunities afforded your citizens in West County.

Thank you for your consideration of our comments,

Marsha Sue Lustig

John Eder

Sebastopol Residents (over 25 years, Sonoma County - 40 years)

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Ken Tam

From: Denver Booker <denverb@uber-bike.com>
Sent: Monday, February 05, 2018 8:42 AM
To: Ken Tam
Subject: Re: Community Workshop - Draft Petaluma Sebastopol Trail Feasibility Study

I came to the workshop to look and listen. I left impressed with the work that has been done.

Like some of the people there I also like the idea of a more scenic trail, but truthfully I prefer having both. The Class I separated, but alongside the highway, will undoubtedly encourage more to bike, and anything that gets more bikes in use is a plus and will also ultimately increase demand for more scenic options as well.

We will have to wait and see what the Highway 116 improvements and path look like but the numerous street/driveway crossings present an impediment. Cyclists that prefer a faster pace will probably choose to use the road shoulder intermittently instead of the path - especially if there are stop signs at every road/driveway crossing. Maybe the stop signs would only be at major road intersections (much like the West County Trail where it parallels Highway 116) in which case a cyclist could transition from the path to the road shoulder and be able to maintain speed and momentum through the intersection. I'm not being critical of the path here, just pointing out that for some cyclists it may be less desirable than the road shoulder.

Ride on!

On Mon, Jan 22, 2018 at 6:29 PM, Ken Tam <Ken.Tam@sonoma-county.org> wrote:

The Sonoma County Regional Parks Department is hosting a community workshop to present the findings and recommendations of the Draft Petaluma Sebastopol Trail Feasibility Study. Maps of the draft trail alignment will be available for review. Participants will have an opportunity to ask questions and provide comments.

The Petaluma Sebastopol Trail Feasibility Study evaluated the feasibility of developing a 15-mile paved trail connecting the cities of Petaluma and Sebastopol and providing connections to other existing and planned pedestrian and bicycle networks. The primary objective of the Study is to determine the safest and most feasible route for a paved trail for use by pedestrians, bicyclists, and equestrians where possible. The Study process included soliciting public input at two stakeholder meetings and two community workshops held in March and April 2017. Comments were also collected through an online survey.

The community workshop is scheduled for Thursday February 1, 2018 from 5:30 to 7pm in the Dining Room at the Sebastopol Veterans Memorial Building, 282 S High Street in Sebastopol. Please see attached flyer.

For more information about the project, please contact Regional Parks Planner Ken Tam at [707-565-2041](tel:707-565-2041) or ken.tam@sonoma-county.org or visit the project webpage <http://sonomacounty.ca.gov/Parks/Planning/Petaluma-Sebastopol-Trail/>

Ken

Kenneth Tam, Park Planner II

Sonoma County Regional Parks Department

2300 County Center Drive, Suite 120A

Santa Rosa, Ca 95403

[707-565-3348](tel:707-565-3348) work

[707-579-8247](tel:707-579-8247) office fax

[707-565-3642](tel:707-565-3642) planning fax

ken.tam@sonoma-county.org

1-22-2018

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Denver Booker

Owner | Uber Bike LLC / Sebastopol Bike Center
denverb@uber-bike.com

(707) 829-2688 Shop
(707) 494-4420 Mobile
<http://www.uber-bike.com>
<http://www.sebastopolbike.com>

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To: Sonoma County Supervisors, Sonoma County Parks
From: John W. Cruz
1204 Enos Ave.
Sebastopol, California
95472

Date: February 6, 2018

Subject: Comments on the Draft Petaluma Sebastopol Trail Study

Comments on the Draft Petaluma Sebastopol Trail Study

Intro

I respectfully offer these comments on the Draft Petaluma Sebastopol Trail Study dated January 12, 2018 and ask that they be made part of the public record.

The Sonoma County Parks Dept. and Questa Engineering deserve lots of credit for preparing a substantial report with an amazing amount of crucial info in a short period of time. Parks organized and ran many effective public meetings dealing with this highly contentious issue. They accepted and distributed public input quickly. In the draft trail study Parks and Questa documented the increased public safety from rail trails and made clear that it is not the policy of Parks to use eminent domain for trails, two of the key arguments of the trail opponents.

Summary

Unfortunately the draft trail study ignores much of the public input and recommends a trail alignment that does not meet the recreation and transportation objectives stated in the report itself. The recommended alignment along state highway 116 and Stony Point Rd. is unsafe, unpleasant, and will not be used by many people for recreation. The draft ignored the overwhelming public sentiment for a trail along the old railroad right of way in favor of an alignment along 116/Stony Point Rd. and did not analyze the railroad alignment alternative. The parks representatives acknowledged what is obvious – that Caltrans right of way is insufficient for a Class I trail and there have been many encroachments onto it. Property owners along the 116/Stony Point Rd. route were not included in the stakeholders meetings. For these reasons and those detailed below I recommend that the County Supervisors do not accept this draft recommendation without modification and proceed with an objective analysis of multi-use trail alternatives. Obviously private ownership of much the old RR right of way is a huge challenge but the 116/Stony Point Rd. also has a very difficult set of challenges and at best will fail to fully meet the stated objectives of the trail.

The draft study did not look in detail at the feasibility of the route along the RR and only considered the viewpoint of those along the former RR property. The preferences of the broader community who overwhelmingly favor the route on the RR, people with children or grandchildren who do not consider the 116/Stony Point Rd. route safe or property owners along the 116/Stony Point were inadequately considered.

Detailed Comments

Comments on the Stakeholders Selection

It is unclear how the stakeholders have been selected. At the initial meeting March 1, 2017, besides Parks and Questa Engineering the attendance list is all the RR Property owners association, except for one other individual. Why were others not invited? This gives the appearance of closed decision making without soliciting inputs from the entire community. Since the final recommendation is so close to the desires of the RR Property owners association, it appears that the further public participation was not fully considered. I was on the board of the Sonoma County Bicycle Coalition at the time and do not recall that organization was aware of this initial meeting scheduled or taking place.

The draft study does not indicate how has it been determined that the RR Property Owners Association represents all property owners on the old RR right-of-way. There is nothing in the draft report that establishes that this organization represents all or a majority of the Railroad property owners, yet the report assumes it speaks for all property owners and is given a special seat at the table, like at the March 1, 2017 meeting.

Caltrans is a stakeholder and should they have been included in the process. The draft report contains a preliminary or notional trail design for the 116/Stony Point route alignment yet it does not seem that Caltrans was involved. Has Caltrans approved this alignment or design? Will Caltrans or Sonoma County Parks be the lead agency? Which agency will have final approval? These issues should be covered before the report is completed. It is especially critical that Caltrans agree to the Class I alignment proposed in the draft study, otherwise the 116/Stony Point Rd. alignment may not be a Class I trail.

In several places the study states that even if one property owner opts out of the trail then it is not possible to have to have a trail at all. Neither the Joe Rodota Trail or the West County Trails are built on continuous railroad right-of-way. Both have on-road segments and other segments where the original railroad right-of-way was unavailable and are still highly successful much used trails. The draft report is deficient because it made this assumption about continuity which is not supported by factual information.

Comments on How the Stated Objectives are not Satisfied

The objectives of the study were not satisfied by the recommendation of the study. As stated in the report, the Objectives of a multi-use trail are the following:

- o Facilities to serve rapid trail use, such as bicycle commuting and pedestrian connections to local destinations*
- o Facilities to provide recreational opportunities for relaxed bicycling, walking, and equestrian use*
- o Improvements to local, low-volume roads to better delineate areas for pedestrians and bicyclists and to serve local destinations such as schools.*

The second objective is poorly met by the recommended 116/Stony Point trail alignment. The facilities trail users said they wanted in the public survey conducted as part of the draft study are not satisfied by the alignment recommended in the study. All stated objectives are probably better met by a rail trail alternative.

Selection of the Highway 116/Stony Point Trail Alignment over the Railroad Right-of-Way

No rationale for rejection of the RR right-of-way alternative is presented except for the opposition of the

railroad property owners organization. There is no effort documented in the study to determine the actual sentiments of all owners of the old RR property. Statements from the RR property owners association to the effect that “all property owners I spoke with” are opposed to the alignment of the trail on the old RR property are found in the draft report. When was this done? How was this documented? How many individuals were contacted? What exactly were they asked? The opinions of the property owners should be sought by Parks itself in a fair way without reinterpretation by an intermediary.

The relative safety of the two primary alternatives was not considered in the selection process. Nobody with kids or grandkids will like a ride on a Class I trail along 116/Stony Point alignment and many of the Joe Rodota and West County trail users are parents with children. The 116/Stony Point trail will also be unattractive to visitors and pedestrians. It will be used primarily by hardcore road riders and commuters.

The unsafe and uncomfortable placement of the trail along 116/Stony Point Rd. described in the draft study will not support the recreational objectives of the trail. The stretch of the West County Trail along 116 is tolerated because it's one unattractive stretch along an otherwise excellent trail. A nasty trail all the way is another thing. Perception is very important – the trail on 116/Stony Point Rd. will be perceived as unsafe by many potential users with high speed traffic nearby, large trucks, many road crossings and stretches without physical separation from vehicles.

Comments on the Public Opinion Survey

The recommendation of the study is very inconsistent with public opinion survey in the report, beginning on Page 3. The survey shows the public wants recreational facilities – over 91% of the respondents said their primary use of the trail would be for recreation. Their message is loud and clear. Yet the alignment that is the safest and best satisfies the recreational needs of the community is not even considered in the draft study.

The recommended trail alignment does not reflect the wishes of the public expressed in the survey data. The items with the greatest mismatch between the draft alignment and survey data summary are discussed below.

Survey Summary Says:

Primary interest in the trail is for recreational use, over 90% and to improve safety for pedestrians, bicyclists and motorists

The proposed trail along 116/Stony Point has poor recreational value, much less than the RR right-of-way. The safety of the 116/Stony Point route is not examined or compared to that of the RR right-of-way even though the data should be available for the trail types. The 116/Stony Point alignment certainly is perceived to be less safe. No data is presented to show how safe a trail like this actually is, given the parts that will not be Class I, the many driveway crossings and some busy street crossings. It is unlikely to be safer than the RR ROW alternative. Adding a few short “recreational” stretches does not necessarily satisfy the public interest in recreational use expressed by over 91% respondents in the survey. The results of a follow-up survey to see how well people like the draft proposal and if people would prefer another alternative should be included in the final version of the report.

Survey Summary Says:

Over 80% of respondents do not currently use SR 116 or Stony Point Road for pedestrian travel, and 60% do not bicycle along this route. Four respondents ride a horse along this route.

One interpretation of this response is that it reflects the perception that this is a dangerous, nasty route and is a poor location for a trail. Parts of the route on SR 116/Stony Point Road will differ from the highway is only by likes painted on the shoulder.

Survey Summary Says:

An overwhelming concern is bicycle/pedestrian user safety due to high speed roads and potential vehicle conflicts.

Here is the safety issue again. How safe will the proposed alignment be and how safe will people perceive it to be? Why was the trail on the RR right-of-way dismissed without a comparison of its relative safety?

Survey Summary Says:

Over 90% want a safe place to walk, jog, bicycle, or ride a horse, and 86% want connections to other trail systems such as Laguna de Santa Rosa and Rodota trails.

The public wants safe trails, stated here yet again. Connections to other trails are included in the draft recommendation. The follow up survey of can determine how safe the people in the area think the two trail alternatives are and if connections to other trail systems are sufficient.

Survey Summary Says:

Almost half would use the trail once or twice a week, or once a month; some would use weekdays or weekends, primarily in the morning.

Likely a trail at some distance from fast traffic and fewer road crossings would be used more. Less than 10% of survey respondents said they would use the trail daily, suggesting a trail will not be heavily used for commuting, indicating little public interest in the “high speed” direct path along 116/Stony Point.

Trail Safety

The survey results in the draft report and public comments at the public meetings make clear that the number one concern of trail users is safety. The draft report does not provide information about either the safety of trail Classes as proposed or as compared to the rail trail alternative. This information should be provided and the cumulative safety of the proposed trail compared to a trail far from the highway should be included in the final report.

How About the Highway 116/Stony Point Property Owners

There seems to be no input from property owners along 116 – their voice is important and they should be heard. It has been documented in meetings and the report that Parks does not use eminent domain to take peoples homes or property to create trails which is great. Caltrans on the other hand may use eminent domain for the eventual widening and realignment of 116 whether or not there is a trail along it.

Both the draft report and county staff in public meetings have acknowledged there is not enough Caltrans right-of-way along 116 for a Class I trail all the way. This was stated most recently in the meeting on 2/1/18 in response to a question by former Sebastopol councilman John Eder. There is no information in the draft recommendation covering the width of the 116/Stony Point Road Caltrans right-of-way segment by segment. The route shown is notional because the actual width of the Caltrans ROW along the recommended path was not compared to the requirements of the Class I trail. Until these details are worked out it is not possible to evaluate the feasibility or cost of the 116/Stony Point trail route.

County staff acknowledges there have also been encroachments onto the Caltrans property including, driveways, mailboxes and utilities. Are structures are also present on Caltrans property? Parks has not gone through the Caltrans maps in detail to know the full extent of encroachments. A prudent course would be to understand the extent of these encroachments and width of Caltrans right-of-way on the 116/Stony Point Rd. route before recommending it.

No Comparison of Trail Alternatives

The report is deficient because it arbitrarily selects one alternative for analysis without a rationale for dismissing other alternatives that are superior in some respects. The map on Page 87 simply indicates that no further analysis was done for the trail route along the railroad. Obviously the private ownership of the railroad right-of-way is a major challenge but the 116/Stony Point Route with insufficient Caltrans right-of-way presents unknown private ownership issues too.

Previously the section of the trail from Stony Point Rd. to Petaluma was proposed to go along the old railroad, now it is along Stony Point Rd. At early meetings the stretch of the trail was proposed to go through the flea market which was willing to cooperate in establishing the trail but that is not in the proposed plan either. No rationale is presented for the elimination of these safe, attractive routes.

Trade Study Table 7-2 (Page 90)

This matrix is an excellent example of how a trade study may be used to provide any answer desired. No reference is made to a standard procedure used preparing this Table. Is there a standard process in Civil Engineering as there are in other engineering disciplines?

There are two big problems with this Table. First, no rationale is presented for the selection of criteria (columns) or for the ratings (cells), they are entirely subjective. The criteria “User Experience” is rated too high given proximity of traffic, road crossings and public input thus should be mostly or all red. Same for the criteria “Aesthetics/Visual Resources “. Segments where it is unlikely that Caltrans has sufficient right-of-way for a Class I trail should be red. Breaking the analysis into segments makes sense since each has a unique set of characteristics but there is no weighted rollup to allow comparison of this entire alternative to others.

Second, no trade study Table is present for the route along the railroad right-of-way.

Examining the Table on Page 90 in detail, safety it should be it's own criteria, not lumped into “User Experience”. Safety and recreational value are the two features the public wants most and should be weighted

heavily.

The Table does not indicate what the availability of ROW rated against – fully separate Class I or otherwise and the Table provides no quantitative values for the ratings in each cell.

Miscellaneous Comments

Page 108: Caltrans design standards discussed on this page place a “special emphasis on safety”. It is likely the greatest safety impact is from the choice of alignment. It is not clear how the “special emphasis on safety” is incorporated in the recommended alignment.

Page 110: The study states a 12 – 15 foot total width is required for Class I, Figure 1003.1B. How much of the Caltrans ROW along Highway 116 supports this trail width. Without a detailed survey this can't be determined. Without property acquisition it is likely the trail will not be Class I as advertised and lack physical separation from the highway.

Page 125: The use of eminent domain is not included in how Caltrans may acquire land to widen or relocate 116/Stony Point Rd to accommodate a trail. Is this an omission or will this not be done or will 116 not be moved if existing Caltrans ROW is not wide enough. The draft is ambiguous without clarity on this critical issue.

Page 129: The study assumes no land acquisition costs. This is inconsistent with statements at public meetings and the draft study document. Without private land acquisition it is unlikely that the Class I trail mileage indicated can be constructed. A safe and separate Class I trail is one of the major selling points of the recommended feasibility study and stressed throughout the document.

Thank you for your attention,

John W. Cruz, Ph.D.

Ken Tam

From: Ken Cushman <kencushman@gmail.com>
Sent: Tuesday, February 06, 2018 5:56 PM
To: Ken Tam
Subject: Re: Community Workshop - Draft Petaluma Sebastopol Trail Feasibility Study

Ken,

Thanks for the presentation of the new bike lanes/paths. I look forward to all the new plans that you guys are planning. Petaluma to Sebastopol, Highway 12/Valley of the Moon, and River Road all sound great and I know would get lots of use. Hopefully the SMART people will take responsibility for building the bike path parallel to the train that was promised when we voted in the tax increase. It's really appalling how little of that path has been built.

I'd also like to take you up on your offer to forward the bike lanes near me that really need to be swept to the proper person/department. Here are my top lanes for now, some are city responsibility and some are county:

- Western to Spring Hill -- both the section from the Petaluma city limits down to about Fair, AND the county section from city limits to Spring Hill need sweeping in both directions.
- D Street - both the section from the Petaluma city limits down to Petaluma Blvd, AND the county section from the city limits to the Marin County line.
- I Street - from the Petaluma city limits down to Sunnyslope.
- Stony Point - from Petaluma to the construction mess near Hearn
- Petaluma Hill Rd - alongside Rohnert Park
- Dry Creek Rd -- from Canyon Rd to the dam visitor center

I'm sure I'll run into more in the future, but these would be a great start. Thanks!

Ken Cushman

On Mon, Jan 22, 2018 at 6:29 PM, Ken Tam <Ken.Tam@sonoma-county.org> wrote:

The Sonoma County Regional Parks Department is hosting a community workshop to present the findings and recommendations of the Draft Petaluma Sebastopol Trail Feasibility Study. Maps of the draft trail alignment will be available for review. Participants will have an opportunity to ask questions and provide comments.

The Petaluma Sebastopol Trail Feasibility Study evaluated the feasibility of developing a 15-mile paved trail connecting the cities of Petaluma and Sebastopol and providing connections to other existing and planned pedestrian and bicycle networks. The primary objective of the Study is to determine the safest and most feasible route for a paved trail for use by pedestrians, bicyclists, and equestrians where possible. The Study process included soliciting public input at two stakeholder meetings and two community workshops held in March and April 2017. Comments were also collected through an online survey.

The community workshop is scheduled for Thursday February 1, 2018 from 5:30 to 7pm in the Dining Room at the Sebastopol Veterans Memorial Building, 282 S High Street in Sebastopol. Please see attached flyer.

For more information about the project, please contact Regional Parks Planner Ken Tam at [707-565-2041](tel:707-565-2041) or ken.tam@sonoma-county.org or visit the project webpage <http://sonomacounty.ca.gov/Parks/Planning/Petaluma-Sebastopol-Trail/>

Ken

Kenneth Tam, Park Planner II

Sonoma County Regional Parks Department

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1-22-2018

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Q1 Please provide your comments in the text box below.

Answered: 13 Skipped: 0

#	RESPONSES	DATE
1	This study shows that a bike path CAN be built from Sebastopol to Petaluma. The route makes sense, as long as it is a few feet from busy Stony Point Road. I say--let's build the path! I would definitely use it.	2/25/2018 7:23 PM
2	Design and completion of a Petaluma-Sebastopol Bicycle Trail is vitally important to the health of our community. As a world class bicycle destination, cyclists are at risk sharing roads with an increasingly preoccupied and frankly dangerous motoring public. The SMART Train and associated pathway are transforming our region. We need to complete the network and build this trail. The time for action is now!	2/23/2018 8:25 PM
3	We enthusiastically support the trail. We live within walking distance of where a trail might go, and would use it regularly to go into Sebastopol. As it is, the only safe way to get into the city limits is to drive. I am certain we are among thousands of residents along the proposed route who would eschew driving on busy HWY116 for a pleasant bike ride or walk for daily errands. This is among the best methods available to reduce pollution, traffic and accidents in our area and improve the overall health of the community. On balance, it is far more cost effective for the county long-term than the status quo.	2/23/2018 8:54 AM
4	Currently, many people bike on the 116 and appears quite dangerous, especially in places where the shoulder is narrow. Constantly watching for cyclists on this narrow and fast route is harrowing. This off-road is a great idea and will make bike commuting much safer.	2/19/2018 10:20 PM
5	How about accessibility for equestrians? Are we not part of the recreational community as well? Horses have and do play a significant role in the economics of Sonoma County and are an integral part of life in Petaluma, Sebastopol and points in between. Please allow for equestrians too!	2/18/2018 10:55 AM
6	I really appreciate a trail being made from Petaluma to Sebastopol. Thank you	2/18/2018 10:13 AM
7	please include equestrians for use of trails	2/16/2018 8:32 PM
8	Does the trail have to be paved? Can't it be a softer surface, easier on the feet? Also, I would like this to be open to equestrians. A 26 mile "out and back" would be a perfect conditioning ride!	2/16/2018 5:19 PM
9	I strongly oppose the use of Bloomfield and Lone Pine Rds. as detours for the proposed 116 bike trail. There has been more than 1 fatality and several crashes at the intersection of Baker Ln. and Bloomfield. It's extremely dangerous for vehicles to turn either left or right from Baker. The mailboxes on the right block visibility, as well as the curve on the left. And most vehicles driving both ways on Bloomfield exceed the speed limit. The proposed light at Lone Pine and 116 is a good plan, but one is also needed at Sparkes Rd and 116. The wait there to enter 116 is ridiculous, and that's just waiting for vehicle traffic. I am a Regional Parks member and have lived on Baker Ln. for 45 years. Again, this is a terrible proposal, for cyclists, hikers, and vehicle drivers..and at a cost of \$2 million per mile. Please rethink this plan. Sharon Giglio	2/11/2018 11:24 AM
10	We would have to close our business if you commandeered our parking lot for the bike path. We need to bring in big trucks on a regular basis to service our business and there isn't room if you take our property for a bike path. Not only will the six people who work here lose their jobs, it will be a big hit to all of the Sonoma County Wholesale Nurseries that we buy our plants from. We also regularly donate to all of Fire Department, School Fundraisers and other non-Profit benefits as well as	2/10/2018 9:43 PM
11	This would be a wonderful trail for horseback riding as well. Will there be a dirt path alongside for horses?	2/6/2018 8:06 PM
12	Please take care of our roads and traffic congestion before you go building something else you will not be able to afford to maintain. How will this be paid for? Where are the funds to maintain the path? How will this affect traffic at cross roads?	2/6/2018 4:36 PM

13 Thank you Ken and all for the hard work you have completed thus far in reference to the Sebastopol/ Petaluma bike trail. Obviously it has been difficult to satisfy all of the concerns and desires of the community at large. As a member of the Railroad Property Owners Partnership i have sent the below informational letter and opinion to our group, copying you: Needless to say I was pleased to see that the Hwy116 option as mostly a class 1 (barrier or buffer from hwy) was recommended. It really is the only option that makes any sense. I did take away some interesting information however. The first bit of info was an almost but not quite guarantee that the county is not set up to buy property from landowners who do not want to sell. One of the Park reps did admit however, that they had in the past done so, but it was a very last resort. Secondly the proposed "bike trail"- after all, who would ride a horse or push a stroller along the route, thankfully has a few small "recreational trails" sprouting from it. These range as short as 1 mile to a few miles along stony point south of Meecham road. I did not see parking addressed for either of these, but may have missed it. Thirdly, the proposed project will cost \$33.5 million bucks! This after devastating fires rendered the county and many residents and businesses unanticipated financial losses. Evidently, and interestingly, the Parks receive \$3600 from each building permit issued. I wonder if that is still in the budget with reduced building permit costs post fire. Fourth interesting fact is that Caltrans will be responsible for maintaining the class 1 portions of the trail. That makes me wonder why this is a County Parks project in the first place. As a parks pass holder and foundation supporter I would much rather see my contributions go toward usable well maintained existing parklands and projects other than simple bike paths. There was much talk from some of the attending bike community that many of them will not feel safe, and thus not use the proposed trail. Well, okay. There are others. Lastly, there was mention that there still is an intended Parks bond to be included in June voting. Personally I like to support and use the Parks. I am just afraid that the lobbying by one group has swayed the direction of our park's future developments. Just a FYI: A few years ago the Sonoma County Horsemen's Association sponsored a study of revenue added to the county coffers. The Equine community is agriculturally second to grapes in revenue shared with the county. Every time you see a truck pulling a horse trailer or a feed store stack of hay, think of the sales taxes being paid in fuel, tires, truck and trailer purchases, tack purchases, etc. etc. Think of the jobs all of those provide to local people. Over \$11 million dollars from those purchases during the year of the study went directly to the county in taxes paid. Also, its pretty hard to hide a truck and trailer at a trailhead without a paid park pass, unlike the many cars lining the streets with bike racks. I wonder how much a bike rack costs and contributes.

2/6/2018 4:27 PM

Other Comments Received on Draft Study
(as of February 9, 2018)

1. Sonoma County Bicycle and Pedestrian Advisory Committee, December 20, 2017 (notice)
2. City of Santa Rosa January 25, 2018 (notice)
3. Pat Goddard January 25, 2018
 - a. Response: The alignment does not go on Jewett Road, or south of Jewett on the former railroad alignment. That portion of the alignment (between Jewett and Petaluma City Limits) was dropped due to private property issues, and conflicts with structures. The current alignment is on Stony Point, with an option to create an off street route that would end at the terminus of W. Railroad Avenue.
4. Marsha Sue Lustig, February 6, 2018
 - a. Response: comment noted. The feasibility study does not preclude consideration of future trail opportunities.
5. Denver Booker, February 6, 2018
 - a. Response: comment noted. Please refer to Section 8.3 for intersection design strategies.
6. John Cruz, February 7, 2018
 - a. Summary comments, noted.
 - b. Stakeholder selection: Two listening sessions were held with representatives invited from a broad range of community interests. The following community representatives attended the two listening sessions:
 - Ken Tam, Sonoma County Regional Parks
 - Steve Ehret, Sonoma County Regional Parks
 - Margaret Henderson, Questa
 - Jeff Peters, Questa
 - Tom Abrams, Santa Rosa Cycling Club
 - Kenyon Webster, City of Sebastopol
 - Jeff Stutsman, City of Petaluma
 - Patricia Webb, Petaluma Pedestrian and Bicycle Advisory Committee (PBAC)
 - Sean Walling, Petaluma PBAC
 - Melissa Hatheway, Petaluma PBAC
 - Jim Fain, Sebastopol Trailmakers
 - Erick Ratliff, Sonoma County Pedestrian Advisory Committee
 - Sarah Gurney, Sebastopol City Council
 - Alisha O'Loughlin, Sonoma County Bicycle Coalition
 - Seana L.S. Gause, Sonoma County Transportation Authority
 - Lynn Deedler
 - Will Hutchinson, RProp
 - Jan Godoski, RProp
 - Girardo Martinez, Jr.
 - Deborah Preston, RProp

- c. The Railroad Property owners group has asserted a membership of 200 persons. In addition, members of the study team spoke with approximately one dozen people who stated that they were owners of railroad lands. Please refer to the Workshop minutes.
- d. Caltrans is a study sponsor, and representatives from Caltrans attended the public workshops. The Caltrans design process is complex, and will likely be a partnership of multiple stakeholders, including Caltrans, Sonoma County Transportation and Public Works Department, and/or Sonoma County Transportation Authority (SCTA). Roadway improvement projects within Caltrans facilities are required to incorporate active transportation facilities, and this study provides recommendations for how that can be accomplished.
- e. Please refer to Section 4.2 regarding railroad land continuity. Although conceivable that piecemeal acquisition of railroad parcels may be possible, it is likely that significant detours onto local roads would be needed to make a continuous connection between Sebastopol and Petaluma, which is the project goal. Unfortunately, most of the roads in Hessel and Cunnningham are rural roads that do not have sufficient width to safely accommodate bicycle and pedestrian facilities. Section 9.8 contains a discussion of "Bicycle Advisory Lanes" which is currently being discussed at the national level as an option for low volume rural roadways to delineate areas for bicycle use. However, this is in early planning stages and considered experimental, and does not provide pedestrian facilities.
- f. Objectives: comment noted.
- g. Individual owners of railroad property spoke with study team members individually, through notes on maps, and/or comments made during public workshops. Please refer to the meeting notes and sign in sheets in this Appendix. The Caltrans process precludes offers to purchase property for facilities in advance of a defined project; at this level (feasibility study) such a discussion is premature. Please refer to Section 4.2 for additional information regarding railroad ownership.
- h. Comments on trail alignment: the Study recommends almost six miles of recreational trail that is well-separated from adjacent roads, as well as a Class I path that is adjacent to, but separate from, adjacent roads. It is anticipated that this network of trails and paths, combined with bicycle and pedestrian improvements to local roads that serve residents, schools and destinations, will provide opportunities for many different types of trail users.
- i. Survey summary: comments noted. The survey queried perceptions about the local roadway and trail network use in its current condition, not a projection about future use of a trail that is well designed with safety features to separate users from adjacent areas.
- j. Highway 116 Right of Way: As discussed in the workshop, the right of way along Hwy 116 varies, and in some areas should be sufficient to accommodate Class I facilities within existing Caltrans-owned lands. In other areas, additional right of way may be needed, and would be obtained as part of a transparent and structured Caltrans process. Property owners within the study area (which includes Hwy 116) were notified with a combination of mailings, electronic notification, newspaper publication, and/or other notification.
- k. Comparison of trail alternatives: comments noted. Segment D, Stony Point Byway, is proposed on a one mile section of public right of way south of Mecham Road, and was not eliminated. A route through the flea market would not make a complete trail connection, and would terminate at a local road that is insufficient for bicycle and

pedestrian facilities. Likewise, County owned lands in the Petaluma area and along Roblar Road (Liberty Field) terminate at developed properties, creating a spur trail that does not serve the project purpose of a continuous alignment between Sebastopol and Petaluma. However, this study does not preclude future local trail implementation of segments such as these.

- l. "Trade Study Table": comments noted. Utilization of a ranking matrix is one of the tools to determine and select trail alignments, and is not a standardized process.
 - m. Miscellaneous comments: noted.
 - i. A detailed survey would be part of the next steps in trail design and implementation. For improvements along Hwy 116, this would likely be coordinated with planned traffic improvements as a coordinated project. Next steps are discussed in Section 11.1.
 - ii. The Caltrans process includes use of eminent domain when needed as part of a complete roadway system.
 - iii. A section on land acquisition costs has been added. Please refer to Section 4.2.
7. Ken Cushman, February 7, 2018
- a. Bike lane cleanup: comments noted
8. Val Kasnick
- a. Equestrian facilities would likely be accommodated on the proposed six miles of recreational trail route.
9. No Contact Information
- a. Comment noted. Respondent would like roads and traffic to be managed. It is anticipated that many of the trail improvements will be incorporated into multi-benefit projects in a coordinated effort.
10. Priscilla Cohen
- a. Comments noted. Six miles of trail suited for equestrian use is proposed.

Appendix B: Biological Resources and Sensitive Species with Potential to Occur

Potential Special-Status Plant Species and Sensitive Natural Communities in the Study Area

Scientific Name Common Name	Status Federal/State	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Astragalus Tener var. Tener</i> Alkali Milk- vetch	S2/1B.2	Alkaline Playas, Valley and foothill grassland (adobe clay), vernal pools.	Present	Presence of species documented inside the 3-mile buffer.
<i>Navarretia leucocephala ssp bakeri</i> Baker's navarretia	S2/1B.1	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. Elevations: 5-950 meters.	Present	Presence of species documented inside the 3-mile buffer.
<i>Lasthenia burkei</i> Burke's goldfields	FE/SE S1/1B.1	Vernal pools, meadows and seeps (mesic)	Present	Presence of species documented inside the 3-mile buffer.
<i>Rhynchospora californica</i> California Beaked-rush	Not Listed S1/1B.1	Bogs and fens, lower montane coniferous forest, meadows and seeps (seeps), marshes and swamps (freshwater)	present	Presence of species documented inside the 3-mile buffer.
<i>Downingia pusilla</i> Dwarf downingia	S2/2B.2	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. Elevations: 1-485 meters.	Present	Presence of species documented inside the 3-mile buffer.
<i>Allium peninsulare var franciscanum</i> Franciscan onion	S2.2/1B	Cismontane woodland, valley and foothill grassland. Clay soils; often on serpentine, dry hillsides. Elevations: 100-300 meters.	Present	The study area is significantly lower than this species' elevation range.
<i>Potentilla hickmanii</i> Hickman's Cinquefoil	FE	Native grassland meadows openings in pine forests, coastal bluff native perennial grasslands, and under pine trees in duff. The key to the habitat for this species, is the decomposed granite substrate that lies directly under the very fine-grained grassland topsoil.	Present	Sonoma County population reclassified to another species. No longer believed to exist in Sonoma county.
<i>Legenere limosa</i> Legenere	Not Listed S1B.1	Vernal pools and other moist habitats below 610 meters elevation	Present	Many historical occurrences extirpated. Threatened by grazing, road

				widening, non-native plants, and development
<i>Plagiobothrys mollis</i> Petaluma Popcorn-flower	Not Listed S1A	Marshes and swamps (coastal salt), valley and foothill grassland (mesic)	Last observed in 1932. Presumed extirpated by agriculture.	Presence of species documented inside the 3-mile buffer.
<i>Sidalcea calycosa ssp. rhizomata</i> Point Reyes checkerbloom	Not Listed	Marshes and swamps (freshwater near coast).	Present	Not observed since 1880 (Congdon)
Round-headed Beaked-rush	Not Listed	Freshwater marsh.	Present	Not observed since 1945 (Baker) and (Howell).
Round-headed filaree	Not Listed	Cismontane woodland, valley and foothill grassland.	Present	Not observed since 1880 (Congdon)
<i>Blennosperma bakeri</i> Sonoma sunshine	FE/SE S1.2/1B	Vernal pools, valley and foothill grassland. Endemic to sonoma county. Vernal pools and swales. Elevations: 10-100 meters.	Present	Presence of species documented inside the study area.
<i>Campanula californica</i> Swamp Harebell	Not Listed S2.2/1B	Bogs and marshes.	Habitat destroyed in 1970's	Possibly extirpated.
<i>Carex albida</i> White Sedge	FE/SE	Wet meadows and marshes.	Not observed since 1939.	Habitat remains; possibly extirpated.
<i>Delphinium luteum</i> Yellow Larkspur	FE/SR S1.1/1B	Chaparral, coastal prairie, coastal scrub, North-facing slopes 1 - 100 meters.	Last observed in 1925	Presumed extant; habitat remains.
SENSITIVE NATURAL COMMUNITIES				
Coastal and valley freshwater marsh	S2.1			Presence of habitat documented inside the 3-mile buffer.
Northern hardpan vernal pool	S3.1			Presence of habitat documented inside the 3-mile buffer.
Northern vernal pool	S2.1			Presence of habitat documented inside the 3-mile buffer.

Key to Special Status Codes

Status: Federal/State

FT = Federally Threatened

FC = Federal Candidate Species

FE = Federally Endangered

FS = Federally Sensitive

SSC = CDFG Species of special Concern

SC = State Candidate Species

SE = State Endangered

ST = State Threatened

SR = State Rare

SS = State Sensitive

FP = Fully Protected

SP = CDFW Special Plant List

CNPS California Rare Plant Rank

1A = Presumed Extinct in California

1B = Rare, Threatened, or Endangered in California and elsewhere

2 = Rare, Threatened, or Endangered in California and elsewhere

3 = Need more information: (A Review List)

4 = Plants of Limited Distribution: (A Watch List)

CNPS California Rare Plant Rank Threat Code Extension:

.1 = Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)

.2 = Fairly endangered in California (20-80% occurrences threatened)

.3 = Not very endangered in California (<20% of occurrences threatened)

Potential Special-Status Animal Species in the Study Area

Scientific Name Common Name	Status Federal/State	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Rana Draytonii</i> California red-legged frog	FT	Found in and near sheltered backwaters of ponds, marshes, springs, streams and reservoirs. Optimal habitat is deep pools with dense stands of overhanging willows and an intermixed fringe of cattails.	Potential habitat present	Population declining due to degradation and loss of habitat. Protecting existing populations and restoring and creating habitat are parts of recovery plan.
<i>Syncaris pacifica</i> California Freshwater shrimp	FE/SE	Preference for perennial streams below 100 meters elevation with predominately low gradient flows.	Potential habitat present	Current documented range is 17 stream segments in Sonoma, Napa and Marin counties. Highly fragmented population.
<i>Actinemys marmorata</i> Western Pond turtle	Not Listed ICUN Red List "vulnerable"	Found in permanent and intermittent waters, including marshes, streams, rivers, ponds and lakes. Basking sites required.	Potential habitat present	Species at risk of further habitat destruction.
<i>Coccyzus americanus</i> Yellow-billed Cuckoo, Western DPS	FT	Found in deciduous forests, preferring dense shrubs and trees.	Potential habitat present	First observed in 1911. Survey in 1972 unsuccessful. Possibly extirpated locally.

Key to Special Status Codes

Status: Federal/State

FT = Federally Threatened

FC = Federal Candidate Species

FE = Federally Endangered

FS = Federally Sensitive

SSC = CDFG Species of special Concern

SC = State Candidate Species

SE = State Endangered

ST = State Threatened

SR = State Rare

SS = State Sensitive

FP = Fully Protected

SP = CDFW Special Plant List

Appendix C: Preliminary Project Costs

APPENDIX C

Petaluma Sebastopol Trail Study

Construction Costs

Table - 1
Rapid Route - Sebastopol to Petaluma City Limits

SEGMENT #	Segment Name	Trail Costs														Other Trail Improvements			SUBTOTALS	Design/ Environmental/ CM 20%	TOTALS	
		Trail Type														Pedestrian Bridges and Special Structures	Trailhead Improvements					
		1 (\$160/LF)		2 (\$210/LF)		3 (\$290/LF)		4 (\$350/LF)		5 (\$60/LF)		6 (\$15/LF)		7 (\$410/LF)			Trail Subtotals	(\$50,000/EA)				
		LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost			Cost				EA
	Rapid Route - Sebastopol to Petaluma City Limits																					
1	Sebastopol Ave To Cooper Rd.		\$0		\$0		\$0		\$0		\$0	200	\$3,000		\$0	\$3,000			\$0	\$3,000	\$750	\$3,750
	Segment 1 Summary	0	0	0	0	0	0	0	0	0	0	200	3,000	0	0	3,000	0.00	0	0	3,000	750	3,750
2A	Cooper Rd. to Bloomfield Rd.		\$0	3,300	\$693,000		\$0		\$0		\$0		\$0		\$0	\$693,000	100,000.00		\$0	\$793,000	\$198,250	\$991,250
2B	Bloomfield Rd. to Old Gravenstein Way		\$0		\$0	4,500	\$1,305,000		\$0		\$0		\$0		\$0	\$1,305,000			\$0	\$1,305,000	\$326,250	\$1,631,250
2C	Old Gravenstein N. to Old Gravenstein S.		\$0	1,100	\$231,000	2,300	\$667,000		\$0		\$0		\$0		\$0	\$898,000			\$0	\$898,000	\$224,500	\$1,122,500
2D	Old Gravenstein S. to Lone Pine Rd.		\$0	1,600	\$336,000	0	\$0		\$0		\$0		\$0		\$0	\$336,000			\$0	\$336,000	\$84,000	\$420,000
2E	Long Pine Rd. to Llano Rd.		\$0	3,300	\$693,000	3,300	\$957,000		\$0		\$0		\$0		\$0	\$1,650,000	200,000.00		\$0	\$1,850,000	\$462,500	\$2,312,500
	Segment 2 Summary	0	0	9,300	1,953,000	10,100	2,929,000	0	0	0	0	0	0	0	0	4,882,000	300,000.00	0	0	5,182,000	1,295,500	6,477,500
3A	Llano Rd. to Hessel Rd.		\$0	1,200	\$252,000	3,400	\$986,000		\$0		\$0		\$0		\$0	\$1,238,000			\$0	\$1,238,000	\$309,500	\$1,547,500
3B	Hessel Rd. to Laguna Connector		\$0	1,000	\$210,000	5,500	\$1,595,000		\$0		\$0		\$0		\$0	\$1,805,000	150,000.00		\$0	\$1,955,000	\$488,750	\$2,443,750
3C	Laguna Connector to Stony Pt. Rd.		\$0	1,000	\$210,000		\$0		\$0		\$0		\$0		\$0	\$210,000			\$0	\$210,000	\$52,500	\$262,500
	Segment 3 Summary	0	0	3,200	672,000	8,900	2,581,000	0	0	0	0	0	0	0	0	3,253,000	150,000.00	0	0	3,403,000	850,750	4,253,750
4A	Stony Pt. Rd. to Roblar rd.		\$0	3,300	\$693,000	4,400	\$1,276,000		\$0		\$0		\$0		\$0	\$1,969,000	100,000.00		\$0	\$2,069,000	\$517,250	\$2,586,250
4B	Roblar Rd. to Mecham Rd.		\$0		\$0	1,300	\$377,000		\$0		\$0		\$0		\$0	\$377,000			\$0	\$377,000	\$94,250	\$471,250
	Segment 4 Summary	0	0	3,300	693,000	5,700	1,653,000	0	0	0	0	0	0	0	0	2,346,000	100,000.00	0	0	2,446,000	611,500	3,057,500
5A	Mecham Rd. to Stony Pt. Byway		\$0		\$0	1,600	\$464,000		\$0		\$0		\$0		\$0	\$464,000	200,000.00	1	\$50,000	\$714,000	\$178,500	\$892,500
5B	Stony Pt. Byway to Railroad Ave.		\$0	1,000	\$210,000	5,000	\$1,450,000		\$0		\$0		\$0		\$0	\$1,660,000	100,000.00		\$0	\$1,760,000	\$440,000	\$2,200,000
5C	Railroad Ave. to W. of Denman Rd.		\$0	1,900	\$399,000	9,000	\$2,610,000	1,000	\$350,000		\$0		\$0		\$0	\$3,359,000			\$0	\$3,359,000	\$839,750	\$4,198,750
	Segment 5 Summary	0	0	2,900	\$609,000	15,600	\$4,524,000	1,000	\$350,000	0	\$0	0	\$0	0	0	\$5,483,000	\$300,000.00	1	\$50,000	\$5,833,000	\$1,458,250	\$7,291,250
	Segments 1-5 Summary	0	0	18,700	\$3,927,000	40,300	\$11,687,000	1,000	\$350,000	0	\$0	200	\$3,000	0	0	\$15,967,000	\$850,000	1	\$50,000	\$16,867,000	\$4,216,750	\$21,083,750

Table - 2
Rapid Route - Petaluma Area Segment

SEGMENT #	Segment Name	Trail Costs														Pedestrian Bridges and Special Structures	Trailhead Improvements (\$50,000/EA)		SUBTOTALS	Design/ Environmental/ CM 20%	TOTALS	
		1 (\$160/LF)		2 (\$210/LF)		3 (\$290/LF)		4 (\$350/LF)		5 (\$60/LF)		6 (\$15/LF)		7 (\$410/LF)			Trail Subtotals					
		LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	Cost	EA			Cost				
	Rapid Route - Petaluma Area Segment Costs																					
6A	W. of Denman Rd. to Petaluma Blvd N.		\$0	4,700	\$987,000		\$0		\$0		\$0		\$0		\$0	\$987,000	150,000.00	1	\$50,000	\$1,187,000	\$296,750	\$1,483,750
6B	Petaluma Blvd. N. to Bailey Ave.		\$0	700	\$147,000		\$0		\$0		\$0		\$0		\$0	\$147,000			\$0	\$147,000	\$36,750	\$183,750
6C	Idustrial Ave. to Old Corona Rd. (Denman Reach)		\$0	1,100	\$231,000		\$0		\$0		\$0		\$0		\$0	\$231,000			\$0	\$231,000	\$57,750	\$288,750
6D	Old Corona Rd. to SMART Trail	6,900	\$1,104,000		\$0		\$0		\$0		\$0		\$0		\$0	\$1,104,000	150,000.00		\$0	\$1,254,000	\$313,500	\$1,567,500
6E	Old Corona Rd. to Petaluma River Trail (Outlet Mall)	500	\$80,000		\$0		\$0		\$0		\$0		\$0		\$0	\$80,000	150,000.00		\$0	\$230,000	\$57,500	\$287,500
6F	Along Capri Creek and Hwy 101	3,900	\$624,000		\$0		\$0		\$0		\$0		\$0		\$0	\$624,000			\$0	\$624,000	\$156,000	\$780,000
	Segment 6 Summary	11,300	1,808,000	6,500	1,365,000	0	0	0	0	0	0	0	0	0	0	3,173,000	450,000.00	1	50,000	3,673,000	918,250	4,591,250

Rapid Route Subtotal (Segments 1-6)

Trail Types:

1. New Class I - Not along roadway
2. Less difficult Class I - Along major roadway
3. Moderately difficult Class I - Along major roadway
4. More Difficult Class I - Along major roadway
5. Class II - Along City street or rural road
6. Class III - Along City street or rural road
7. Class IV - Cycle track along major roadway

Notes:

1. Seg #1 - Already funded, allowance for connection
2. #6C - 85% constructed, connection needed at Petaluma Blvd. North
3. #6E - 95% constructed, allowance for connection

APPENDIX C Petaluma Sebastopol Trail Study

Construction Costs Continued

Table - 3

Relaxed Route

SEGMENT #	Segment Name	Trail Costs														Pedestrian Bridges and Special	Trailhead Improvements		SUBTOTALS	Design/ Environmental/ CM 20%	TOTALS	
		1 (\$160/LF)		2 (\$210/LF)		3 (\$290/LF)		4 (\$350/LF)		5 (\$60/LF)		6 (\$15/LF)		7 (\$410/LF)			Trail Subtotals	EA				Cost
		LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost							
Relaxed Route																						
A	Bloomfield Rd. to Lone Pine Rd. @ SR116		\$0		\$0		\$0		\$0	13,100	\$786,000		\$0		\$0	\$786,000			\$0	\$786,000	\$196,500	\$982,500
	Segment A Summary	0	0	0	0	0	0	0	0	13,100	786,000	0	0	0	0	786,000	0.00	0	0	786,000	196,500	982,500
B	Old Gravenstein N. To Old Gravenstein S. (Along O. Gravenstein Rd.)	3,700	\$592,000		\$0		\$0		\$0		\$0		\$0		\$0	\$592,000	200,000.00	1	\$50,000	\$842,000	\$210,500	\$1,052,500
	Segment B Summary	3,700	592,000	0	0	0	0	0	0	0	0	0	0	0	0	592,000	200,000.00	1	50,000	842,000	210,500	1,052,500
C1	SR 116 along Llano Rd.	2,000	\$320,000		\$0		\$0		\$0		\$0	2,000	\$30,000		\$0	\$350,000	150,000.00		\$0	\$500,000	\$125,000	\$625,000
C2	Llano Rd. Area	3,300	\$528,000		\$0		\$0		\$0		\$0		\$0		\$0	\$528,000		1	\$50,000	\$578,000	\$144,500	\$722,500
C3	Llano Rd. to Laguna de Santa Rosa		\$0		\$0		\$0		\$0	4,200	\$252,000		\$0		\$0	\$252,000			\$0	\$252,000	\$63,000	\$315,000
C4	Near Laguna De Santa Rosa	9,300	\$1,488,000		\$0		\$0		\$0		\$0		\$0		\$0	\$1,488,000			\$0	\$1,488,000	\$372,000	\$1,860,000
C5	Near Stony Pt. Road	2,700	\$432,000		\$0		\$0		\$0		\$0		\$0		\$0	\$432,000	150,000.00		\$0	\$582,000	\$145,500	\$727,500
	Segment C Summary	17,300	2,768,000	0	0	0	0	0	0	4,200	252,000	2,000	30,000	0	0	3,050,000	300,000.00	1	50,000	3,400,000	850,000	4,250,000
D	Stony Pt. Rd. Area near Railroad Ave.	6,400	\$1,024,000		\$0		\$0		\$0		\$0		\$0		\$0	\$1,024,000	200,000.00		\$0	\$1,224,000	\$306,000	\$1,530,000
	Segment D Summary	6,400	1,024,000	0	0	0	0	0	0	0	0	0	0	0	0	1,024,000	200,000.00	0	0	1,224,000	306,000	1,530,000
Relaxed Route Subtotal (A-D)		27,400	\$4,384,000	0	0	0	0	0	0	17,300	\$1,038,000	2,000	\$30,000	0	0	\$5,452,000	\$700,000.00	2	\$100,000	\$6,252,000	\$1,563,000	\$7,815,000

Table - 4

Cost Summary (Tables 1-4)

SEGMENT #	Segment Name	Trail Type														Pedestrian Bridges and Special	Trailhead Improvements		SUBTOTALS	Design/ Environmental/ CM 20%	TOTALS	
		1 (\$160/LF)		2 (\$210/LF)		3 (\$290/LF)		4 (\$350/LF)		5 (\$60/LF)		6 (\$15/LF)		7 (\$410/LF)			Trail Subtotals	(\$50,000/EA)				
		LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost	LF	Cost			Cost				EA
	TOTALS	38,700	\$6,192,000	25,200	\$5,292,000	40,300	\$11,687,000	1,000	\$350,000	17,300	\$1,038,000	2,200	\$33,000	0	\$0	\$24,592,000	\$2,000,000.00	\$4	\$200,000	\$26,792,000	\$6,698,000	\$33,490,000

APPENDIX C Petaluma Sebastopol Trail Study

Construction Costs Continued

Table 5 - Summary

PRELIMINARY COST ESTIMATE			
Segment	STREET	Length (LF)	Construction Cost
1	SR116		\$3,750
2A	SR116		\$991,250
2B	SR116		\$1,631,250
2C	SR116		\$1,122,500
2D	SR116		\$420,000
2E	SR116		\$2,312,500
3A	SR116		\$1,547,500
3B	SR116		\$2,443,750
3C	SR116		\$262,500
4A	Stony Point Road		\$2,586,250
4B	Stony Point Road		\$471,250
5A	Stony Point Road		\$892,500
5B	Stony Point Road		\$2,200,000
5C	Stony Point Road		\$4,198,750
6A	Stony Point Road		\$1,483,750
6B	Petaluma Blvd. North		\$183,750
6C	N/A		\$288,750
6D	Old Corona Road		\$1,567,500
6E	N/A		\$287,500
6F	N/A		\$780,000
A	Bloomfield Road, Lone Pine Road		\$982,500
B	Old Gravenstein HWY		\$1,052,500
C1	N/A		\$625,000
C2	N/A		\$722,500
C3	Llano Road		\$315,000
C4	N/A		\$1,860,000
C5	N/A		\$727,500
D	Railroad Ave. extension N/A		\$1,530,000
TOTAL COST			\$33,490,000