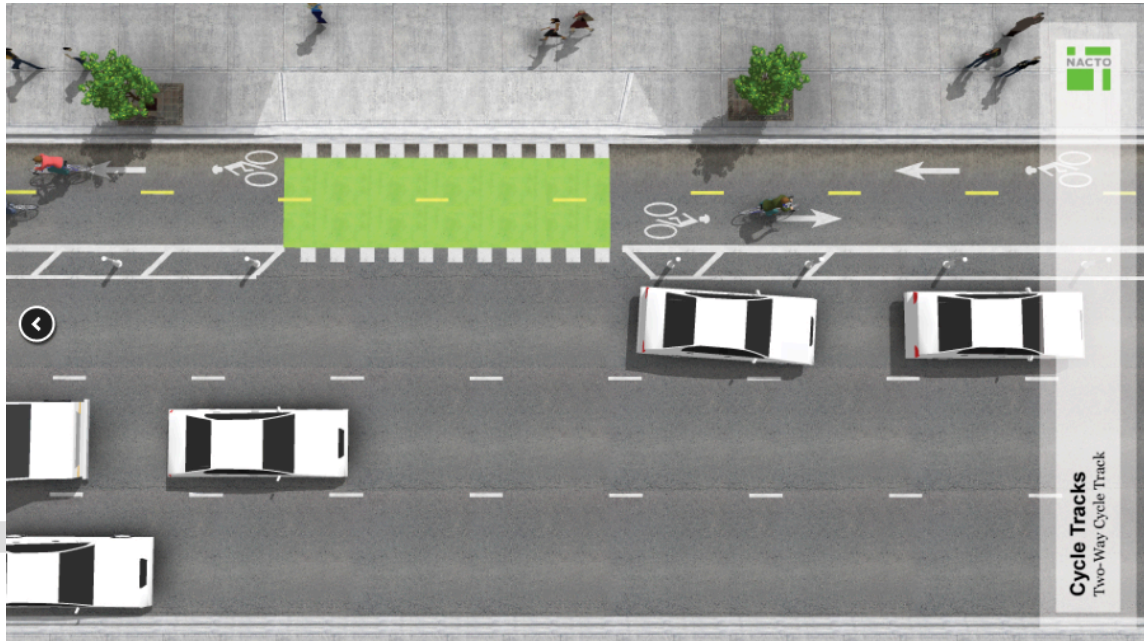


A Proposal For Making Menlo Park Truly Bike-Friendly, Soon.



The good news is Menlo Park has many other opportunities to make our community significantly more bike-friendly, ones that would benefit more residents, have less negative impact on motorists than El Camino bike facilities, meet less community resistance, cost less, and could be implemented much sooner, and I encourage our city council to invest in these bike network improvements now.

This decision would also preserve the opportunity to dedicate precious space on El Camino to future shared use by public and private shuttles, scooters, motorized bikes, motorcycles AND bicycles.

Dana Hendrickson
Editor
Re-Imagine Menlo Park

August 18, 2015

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Additional Information

*Cyclist Stress Analysis of El Camino Real in Menlo Park
(How Bike Facilities Would Appeal To Different Types Of Riders)*

www.reimaginemenlopark.com

Executive Summary

Seven years after creating a Vision Plan which included the goals of “creating greater east-west connectivity, town-wide” and “an integrated, safe and well-designed pedestrian and bicycle network very little has been done to solve the critical problems in Menlo Park’s bike network.

Current Situation

1. Menlo Park is currently studying the possible addition of either buffered bike lanes or physically separate bike paths to El Camino and has determined that either is feasible. The city must now decide whether to fund additional studies that would examine the desirability of one of these alternatives, complete an environmental impact report and create a detailed implementation plan and budget.
2. Critical problems in the existing Menlo Park Bike Network were identified in the 2004 Comprehensive Bike Network Development Plan and in 2012 included in the city’s Specific Plan. However, none of the major recommendations have been implemented and none are included in the city’s 2015/2016 budget.
3. The most critical bike network problems remain the lack of safe and convenient (a) east-west connections between two virtually separate bike networks - one on the east side of El Camino Real (“El Camino”) and another on the west side and (b) limited access to downtown destinations. Only Valparaiso and Glenwood, which run along the northern edge of Menlo Park, have bike lanes. There are none on other streets that cross El Camino on the west side, e.g., Oak Grove, Santa Cruz, and Menlo Avenues.
4. School-age children and young adults between the ages of 8 and 16 represent the largest existing and potential category of cyclists who would benefit from safe, comfortable and convenient city-wide access to popular destinations including schools, parks, businesses and Burgess recreational facilities. This group should be the primary beneficiary of new bike network improvements. Greater bike access and connectivity plus education programs would also greatly reduce the number of daily parent-driven car trips. Bike lanes on El Camino would not be suitable for most of these cyclists and separate bike paths would not eliminate most safety problems which occur at intersections, busy public driveways and shared turn lanes.

Assessment

1. The evaluation of potential bike facilities on El Camino should NOT be made in isolation. Rather, Menlo Park should consider BOTH alternative uses of this scarce resource and alternative opportunities to invest in and improve the Menlo Park bike network.
2. Public demographics, attitudes and available public and private transportation options will change dramatically during the next 20-30 years and this will change the ways El Camino could best serve the needs of both residents, non-residents and its businesses. Today Menlo Park is studying the trade-offs between dedicating scarce road space to automobiles and cyclists, but this is too narrow a perspective. It must broaden its view to include different types of users and modes of transportation, including public and private

shuttles, public and private buses, bikes, scooters, motorized bikes and motorcycles and extend its planning horizon out beyond current generations.

3. Bike facilities on El Camino would not greatly improve east-west bike network connectivity and downtown access because no bike facilities exist on streets that connect to and cross El Camino. The primary gaps include Menlo Avenue, University Avenue, a connection between Santa Cruz Avenue and Menlo Avenue, Oak Grove, and a connection between Santa Cruz Avenue and Oak Grove. Also for most cyclists the crossings at Menlo Avenue, Oak Grove and Valparaiso are neither safe nor comfortable.
4. Only a small number of riders - likely less than 1% of Menlo Park residents - would feel comfortable riding in El Camino BIKE LANES because this highway would remain a highly stressful biking environment due to the 35 mph speed limit and the number of vehicle lanes, shared merge lanes, public driveways and intersections lacking any type of traffic signals. Young children would not be appropriate, and the availability of convenient, less stressful north-south alternatives would further reduce the appeal of riding on El Camino.
5. Physically separate BIKE PATHS would appeal to more riders especially those traveling either southbound or northbound but there is no persuasive evidence that the number would be large, the cost of installation would be significantly higher than bike lanes, the number of public driveways and transit stops means the physical barriers could not be continuous, and the disruption of vehicle traffic by autos crossing bike paths would be significant.

Recommendations

1. Menlo Park needs to create a 20-year vision, strategy and plan for multi-mode transportation on El Camino before making any changes intended to significantly alter existing usage patterns. In the future bike usage might be supported but only in physically separated lanes that are shared with vehicles other than autos.
2. In the interim Menlo Park should NOT add dedicated bike facilities of any kind to El Camino Real as these would neither solve the most pressing problems in the existing bike network, i.e., the lack of safe, comfortable and convenient east-west connectivity, and access to downtown.
3. Funds already budgeted for the further study of El Camino bike facilities should be re-directed to bike network investments that would benefit many more cyclist, likely have less negative impact on motorists, meet less community resistance, cost much less, and be implemented more quickly. These improvements would close the most significant gaps in the existing bike network and require the sacrifice of fewer than 40 on-street parking spaces, a worthy trade-off. The specific improvements are described on page 10.
4. Menlo Park should NOT make any major changes to El Camino until the construction of commercial developments at 500 and 1300 ECR have been completed. Vehicle traffic patterns will likely be disrupted and post-construction traffic patterns might be significantly different than now.
5. No changes should be made to the Ravenswood/El Camino Real/Menlo Avenue intersection that do not accommodate desirable east-west bike network connectivity.

A Brief History

During the past nine years Menlo Park has repeatedly studied how it could improve the quality of services the city provides to residents who would prefer to ride bikes rather than use motor vehicles for many of their travels. It has also documented how to improve its formal bike network, and the primary recommendations have not changed.

- In 2006 Menlo Park published its first comprehensive bike network development plan assisted by Alta Plan+ Design a highly regarded bike network consultant that has also assisted Palo Alto as well as many other cities.
- In 2008 Menlo Park adopted its Vision Plan goals and two deal directly with the Menlo Park Bike Network. ([See Appendix 1](#))
 - Goal #2: Provide greater east-west, town-wide connectivity.
 - Goal #11: Provide an integrated, safe and well-designed pedestrian and bicycle network.
- In 2012, these goals were also included in the Menlo Park Specific Plan.

Unfortunately, little actual physical progress has been made and today the Menlo Park bike network remains effectively two poorly connected, separate bike networks, one on each side of El Camino Real. Only minor investments have been made.

Current Situation

As part of its on-going El Camino Real (ECR) Corridor Study Menlo Park has analyzed the feasibility of adding either bike facilities, i.e., bike lanes or separate paths to El Camino and determined either can be done without reducing the number of existing vehicle lanes on this multi-lane, vehicle artery ([See Appendix 2](#)). The Menlo Park Bike Commission believes El Camino should become the central network backbone which provides all types of cyclists much safer and convenient access to destinations downtown and on El Camino, as well as more general north-south and east-west connectivity, and the volunteer, city Transportation and Planning Commissions have expressed support for the bike lane alternative.

The Menlo Park City Council must now decide whether one of the bike facility alternatives warrants additional funding. It could authorize spending more than \$200,000 to estimate the potential demand for bike lanes and prepare an environmental impact report, a detailed implementation plan and construction budget. Funding for this additional work has been authorized and included in the City's 2014/2015 budget. The actual cost of installing bike facilities on El Camino has not been estimated nor budgeted but Caltrans might fund the lion's share.

WHEN bike facilities would actually be installed on El Camino is not yet knowable. The current ECR Corridor Study contract was signed in April 2013 and the city council does not intend to publically review the results of the concept (feasibility) phase until late August 2015 – over two years later. If by the start of 2016 Menlo Park decides to proceed with the next phase of its study the remaining planning could take another year, and then Caltran would need to study, prioritize, fund and schedule the actual installation. If this took another three years the bike

facilities would not be installed until 2019-2020.

Decision Criteria

While it might initially appear the decision to add bike lanes to El Camino Real is a simple one, this is clearly not the case. Many issues and concerns must be addressed.

1. **BEST RESOURCE USE.** *Would dedicated bike facilities represent the best use of scarce real estate on El Camino?*

Menlo Park's 1.35 mile section of El Camino should be viewed a potential important link in FIVE separate local transportation networks, one for motorists, another for cyclists, a third for pedestrians, a fourth for public transit, and public health and safety organizations like fire departments and ambulance services. How bike facilities would likely impact other existing and future users is a critical consideration.

2. **SIGNIFICANT BIKE USAGE.** *Would a meaningful number of cyclists actually use El Camino bike facilities?*

There are many different types of cyclists, and they differ in skills, experience, maturity and their comfort riding in stressful environments. In Menlo Park, the majority of existing, potential and future bike riders are elementary and middle school children who want to travel to popular destinations like schools; the gym, swimming pool, library, and playing fields at Burgess Park; Nealon Park; and a variety of places downtown. How many parents would actually let their children ride in El Camino bike facilities if these alternatives were in-place?

3. **CYCLIST SAFETY.** *Would bike riding on El Camino be as safe as convenient alternative streets?*

Physically separate bike paths are generally much safer than conventional bike lanes but the number of intersections lacking traffic signals, shared merge lanes and sixty public driveways on El Camino would reduce the effectiveness of both types of bike facilities. Would El Camino still be much less safer than nearby alternatives?

4. **IMPACT ON OTHER USERS.** *Would bike lanes significantly impact the comfort, convenience and safety of motorists and pedestrians? Reduce the service levels of public safety organizations, e.g., fire departments, police, emergency medical services?*

Would motorists merging with cyclists cause other vehicles to back-up and encourage unsafe lane changes?

5. **CONFLICT AVOIDANCE.** *Would the addition of bike lanes intensify or reduce general hostilities and the frequency of unhealthy conflicts.*

Cyclists and motorists often experience negative interactions due to distractions, poor judgment, ignorance of the "rules of the road, and decisions to ignore them on the part of either party.

6. **COMMUNITY SUPPORT** *Will the addition of bike lanes on El Camino be supported by a clear majority of Menlo Park residents or become a controversial community issue that pits cyclists against non-cyclists.*

Can this be avoided? Will a special ballot be required to determine what the majority of residents want?

7. **BEST BIKE NETWORK INVESTMENT.** The Specific Plan identifies a small number of critical improvements to the existing Menlo Park bike network. *Should a large investment in El Camino bike lanes merit a higher priority than other ones based on value, trade-offs, timing and costs?*

Transportation & Bike Network Policies

Reaching a consensus on the transportation policies and priorities a community uses to guide its decision-making is extremely difficult. Residents have diverse and often conflicting visions, ideologies, values, interests, experiences, biases, understandings of transportation problems and solutions, and different views about the future and the potential positive and negative consequences of changes in the status quo. There are also local and regional considerations and multiple parties that can shape, impede, delay, advance, and fund Menlo Park's decisions. That said, the challenge of making good short and long term decisions is made much greater when a city lacks a clear set of transportation policies and priorities. Inattention, indecision, delays, sub-optimal decisions, community divisiveness, missed opportunities, and unnecessary costs are just some of the likely outcomes. The best Menlo Park can hope to do is create and communicate clear transportation policies and priorities, welcome public input and feedback, and ensure that residents understand the city's progress re: studies, decision-making, plans, and implementations. Ultimately, the city council must make decisions that BOTH reflect the interests and wishes of most Menlo Park residents AND minimizes the negative impacts on those who oppose a significant majority.

Unfortunately Menlo Park does not have a clearly defined set of transportation policies and priorities for its multi-modal transportation infrastructure, and more specifically El Camino and its bike network, and this hampers its efforts to make critical improvements and leads to more intense community divisiveness. Measure M, the Santa Cruz sidewalk controversy and the filed trial at the Ravenswood/Alma intersection are examples of what will likely happen with the issue of bike facilities on El Camino.

Menlo Park Bike Network Policy Recommendations

Menlo Park lacks both a comprehensive multi-modal transportation policy and an updated bike network development plan. Here are a set of policy recommendations that would help Menlo Park decide whether to add bike facilities to El Camino.

1. Transportation improvements will be evaluated based on how well they improve user safety, comfort and convenience and the type and scale of offsetting negative impacts.
2. Although Menlo Park will continue to support potentially beneficial regional transportation solutions its primary focus should be on local ones that address the needs of the majority of its residents. This reduces the city's dependence on other parties and allows it to accelerate the implementation of important local solutions.
3. Motorists will remain the primary users of El Camino for the next 20 years and changes that accommodate pedestrian and cyclist usage will be considered only if they do not negatively impact motorists in a significant way.
4. New transportation facilities on El Camino should support multiple modes of transportation other than cars and trucks, e.g. bikes, public transit, and 2-wheel motorized vehicles.
5. Improvements that help cyclists cross El Camino will be given a high priority.
6. New investments in the Menlo Park bike network should favor ones that serve children and young adults as they are the largest existing, potential and future bike users and increasing their participation in cycling will reduce the need for parents driving them to popular destinations.
7. Menlo Park is willing to sacrifice street parking both downtown and on El Camino in order to fix critical weaknesses in its formal bike network and better serve the needs of residents who prefer to travel to local destinations by bike rather than a car.

Assessment of The Existing Menlo Park Bike Network

Menlo Park will not be truly bike-friendly until two glaring problems are solved: the lack of safe and convenient (a) east-west connectivity between our two virtually separate bike networks - one on the east side of El Camino and the other on the west side and (b) access to downtown from either side. ([See Appendix 3](#)).

East-West Connectivity. The lack of safe, comfortable and convenient connectivity across El Camino severely limits cyclist travel from the west side to popular destinations on the east side, e.g., Encinal School, the train station, Menlo-Atherton High School, Burgess Park and city offices. Similarly, travel from the east side to downtown, Hillview School, Nealon Park., and the Safeway shopping mall is also severely limited. The Specific Plan identifies the need to provide safe and convenient connectivity and crossings on four corridors: Valparaiso/Glenwood, Oak Grove, Menlo/Ravenswood Avenues and when Stanford develops 500 El Camino at Middle Avenue. Today only the Valparaiso/Glenwood connection is in-place and it lacks a safe crossing at El Camino and the train tracks.

Downtown Access. While it is possible to safely and conveniently reach the edge of downtown

from the west side using Santa Cruz and Valparaiso no bike lanes enable travel to destinations within downtown between University and El Camino as Oak Grove, University and Menlo Avenues do NOT have requisite bike lanes. Both access to and within downtown from the east side of El Camino is much worse because of the poor east-west connectivity.

Primary Challenges

Downtown Parking. The biggest trade-off with installing bike lanes appears to be the potential loss of on-street parking downtown - about 150 spaces would be lost in order to add bike lanes on Oak Grove, Menlo and University Avenues. A potential long-term solution to the parking capacity problem is also in the Specific Plan, a parking structure, but when or if this will happen is unknown given the high cost - \$20+ million. Improved parking management might also provide short-term relief but an acceptable solution has not yet been found.

Crossing El Camino. Safe and comfortable east-west connectivity requires well-designed bike facilities on Menlo and Ravenswood Avenues and in at the El Camino intersection. The solution must alert, caution and control both motorists and cyclists and provide adequate visual and physical separation. A creative combination of street markings, signage, signals, road buttons, and raised biking surfaces will likely be required.

Santa Cruz – Menlo Avenues Connections. Today the Santa Cruz bike lanes end at University Avenue. The Specific Plan recommends a bike route between this intersection and Menlo Avenue but the short, narrow and busy segment of University between Santa Cruz and Menlo Avenue is NOT suitable for any type of bike facility. Also, the existing Menlo Avenue-University intersection near Draeger's is complex and busy so encouraging bike riders to use it is not a good idea.

Recommendations

1. **TRANSPORTATION PLAN.** Menlo Park needs to create a 20-plus year transportation plan for the city with special attention to El Camino. The plan should include a multi-generational vision, specific policies, strategies and development priorities for all modes of transportation. Menlo Park needs to decide how El Camino could best serve the changing transportation needs of its residents including the young professionals who will live in hundreds of new apartments at 500 ECR and 1300 ECR, and non-resident motorists who will continue to traverse Menlo Park on this highway. Changes to El Camino should encourage all users to take advantage of transportation modes other than single passenger autos including private shuttles, regional public and private buses, motorcycles, motorbikes, scooters AND bicycles.
2. **FUND HIGH PRIORITY BIKE NETWORK IMPROVEMENTS NOW.** The lack of a comprehensive transportation plan should not keep Menlo Park from making critical improvements to its bike network NOW. Our city should NOT invest additional funds in dedicated bike facilities on El Camino as the expected benefits in the next 10 years is highly uncertain and likely small (note 1). Instead, improving downtown access and east-west connectivity should be high priorities. These investments would benefit more riders, have less negative impact on motorists, meet less community resistance, cost much less, implemented more quickly and preserve El Camino space for more valuable uses.

Note 1: Using a well-accepted bike network design methodology, "cyclist stress analysis", for projecting bike facility usage less than 1% of Menlo Park residents (about

320) would feel comfortable using bike lanes on El Camino IF this street were the only convenient option, and fewer would actually do so because of the availability of less stressful ones. Note: most cyclists do NOT ride every day. If 40% rode on a typical day the number of daily cyclists on ECR would be less than 140 – not significantly greater than the current number. Also, bike lanes on El Camino Real would NOT be suitable for school age children so a primary community need would not be addressed.

(Note: in 2014 on average 17000 motorists drove and less than 100 cyclists rode on El Camino each day. About 25 cyclists crossed El Camino at the Ravenswood intersection.

Physically separate BIKE PATHS would appeal to more riders especially those traveling either southbound or northbound but there is no convincing evidence the numbers would be large, the cost of installation would be significantly higher than bike lanes, the number of public driveways and transit stops means the physical barriers could not be continuous, and the disruption of vehicle traffic by autos crossing bike paths would be high.

3. TRUE BIKE NETWORK DEVELOPMENT PLAN. Unlike neighboring cities, e.g., Atherton and Palo Alto, Menlo Park does not have a bike network plan that identifies, scores and prioritizes individual projects that would improve its existing bike network. Therefore, neither residents nor city government know how and when specific improvements will be made nor how they will be funded - more than 10 years after it created its first comprehensive bike network plan. The Atherton bike network master project list is a good example of what I needed. ([Appendix 4](#))
4. PARKING VERSUS BIKE FACILITIES. The only way to de-couple the timing of important bike network improvements from either a new parking structure or dramatically improved parking management system is to find creative solution that sacrifice less existing parking than projects in the Specific Plan, and fortunately there are.

PROPOSAL

Concept

Implement a combination of bike lanes on sections of University, Menlo, and Santa Cruz Avenues and bike routes on Live Oak and Crane Streets to provide safer, more convenient and less stressful east-west connectivity across El Camino Real and access to downtown. These additions to the city bike network are a subset of the east-west-connections included in the Specific Plan. There is also a significant variation as the design bypasses an unsafe section of

Benefits

- Near-term implementation (2017-2018).
- Would not disrupt vehicle traffic
- Sacrifices a small number of downtown parking spaces less than 50 out of a total of 1595 = 3% - would be lost ([Appendix 8](#)). Also, 21 spaces on the south side of Menlo and 8 on University are currently not included in the city downtown parking district, i.e., parking times are not regulated. So, these are effectively free all day parking spaces – no permits required.

Key Components

Menlo-Ravenswood Connectivity

Phase 1

(Consider both 2-way and 1-way bike lanes; the later would require the elimination of parking spaces on BOTH sides of effected streets. See Appendix 8B)

- a. Add 2-way buffered bike lanes on University between Middle and Live Oak,
- b. Add either a bike lane or bike route on Live Oak between University and Crane
- c. Add 2-way buffered bike lanes on Menlo Avenue from Crane to a point between Doyle and El Camino Real where there is a 2-way to 1-way bike lane transition
- d. Extend the 1-way bike lanes on Menlo Avenue across El Camino Real and close the existing gaps on Ravenswood between the intersection and Laurel.
- e. Make the ECR crossing at Menlo Avenue as bike friendly as possible, e.g., raised painted bike lanes, cyclist-controlled signal for managing vehicle right turns onto ECR, delay crossing vehicles so cyclists get a 15 to 20 (?) second head start

Santa Cruz – Menlo Connectivity

- f. On Santa Cruz Avenue extend bike lanes to University on the north side and Crane on the south side.
- g. On Crane add a bike route between Santa Cruz Avenue and Live Oak.

Middle Avenue Bike Route

- h. Add bike route signage and street markings on Middle Avenue between Olive Street and the entrance to the Safeway. (Today this one-mile section of Middle has only a half dozen School Bike Safety Route signs and the meaning is unclear to many motorists and cyclists)

Phase 2

- i. Consider converting bike lanes on Menlo, Ravenswood and University Avenues to physically separate bike paths using raised green lanes, and possibly, flexible stanchions

Location	Existing Bike Facilities	Proposed Bike Facilities
Ravenswood	North side - bike lane between Noel and Laurel Streets	Add bike lanes between Noel and El Camino Real
	South side - bike lane gap between Alma and JLPA*	Close gap with bike lanes
Ravenswood/ECR Intersection	None	
Menlo Avenue	NONE - sharrows markings in vehicle lanes	2-Way buffered bike lanes between Crane and a point between Doyle and El Camino Real where there is a transition to 1-way bike lanes.(south side)
Crane Street	None	Add bike route between Live Oak and Menlo
		Add bike route between Santa Cruz Avenue and Menlo Avenue
University Avenue	NONE - sharrows markings in vehicle lanes	Add 2-way bike lanes between Middle Avenue and Live Oak Street (west side)
Middle Avenue	None - total of 5 school bike safety route signs	Add bike route signs between Olive and a spot near Safeway entrance
Santa Cruz Avenue	None east of University Avenue	Add 2-way buffered bike lanes between University Avenue and Crane Street(south side)



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Appendix 1 – Menlo Park Specific Plan Goals

The El Camino Real/Downtown Specific Plan builds upon the Phase I Vision Plan, as unanimously accepted by the City Council on July 15, 2008. The Vision Plan's twelve goals are:

Maintain a village character unique to Menlo Park.

#2

Provide greater east-west, town-wide connectivity.

Improve circulation and streetscape conditions on El Camino Real.

Ensure that El Camino Real development is sensitive to and compatible with adjacent neighborhoods.

Revitalize underutilized parcels and buildings.

Activate the train station area.

Protect and enhance pedestrian amenities on Santa Cruz Avenue.

Expand shopping, dining and neighborhood services to ensure a vibrant downtown.

Provide residential opportunities in the Vision Plan Area.

Provide plaza and park spaces.

#11

Provide an integrated, safe and well-designed pedestrian and bicycle network.

Develop parking strategies and facilities that meet the commercial and residential needs of the community.

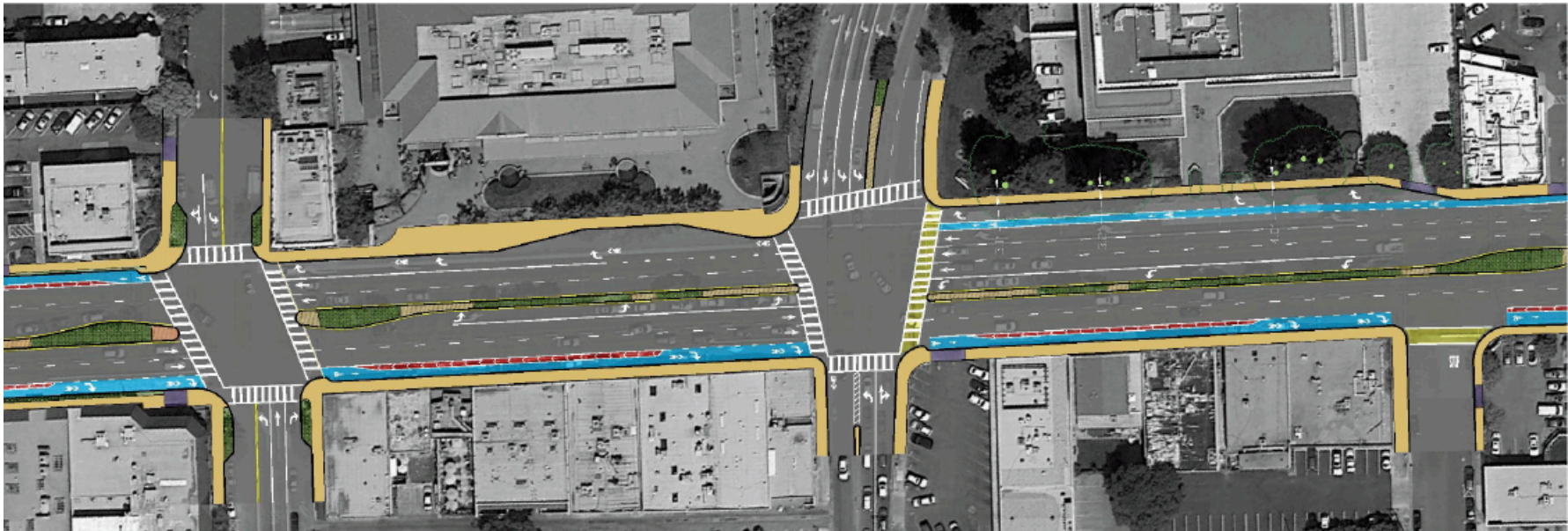
Appendix 2A – El Camino Bike Lane Illustration – Aerial View

This drawing illustrates how bike lanes could integrate into El Camino Real on the stretch near the Ravenswood and Santa Cruz Avenue intersections.



Appendix 2B – El Camino **Separate Bike Path** Illustration – Aerial View

This drawing illustrates how physically separated bike paths could integrate into El Camino Real on the stretch near the Ravenswood and Santa Cruz Avenue intersections.



Appendix 3A – TWO Existing Menlo Park Bike Networks

On the east side of El Camino a grid of bike-friendly streets includes bike-lane enabled ones like Middlefield, Laurel, Alma, Glenwood, Oak Grove, Ravenswood and Willow, and on the west side, the bike grid includes the Alameda, Valparaiso, and Santa Cruz. On both sides, there are also dozens of neighborhood streets that serve as popular paths, e.g., Olive, Middle, San Mateo, Fremont, and an even a bike path through Nealon Park between Middle and Roble.

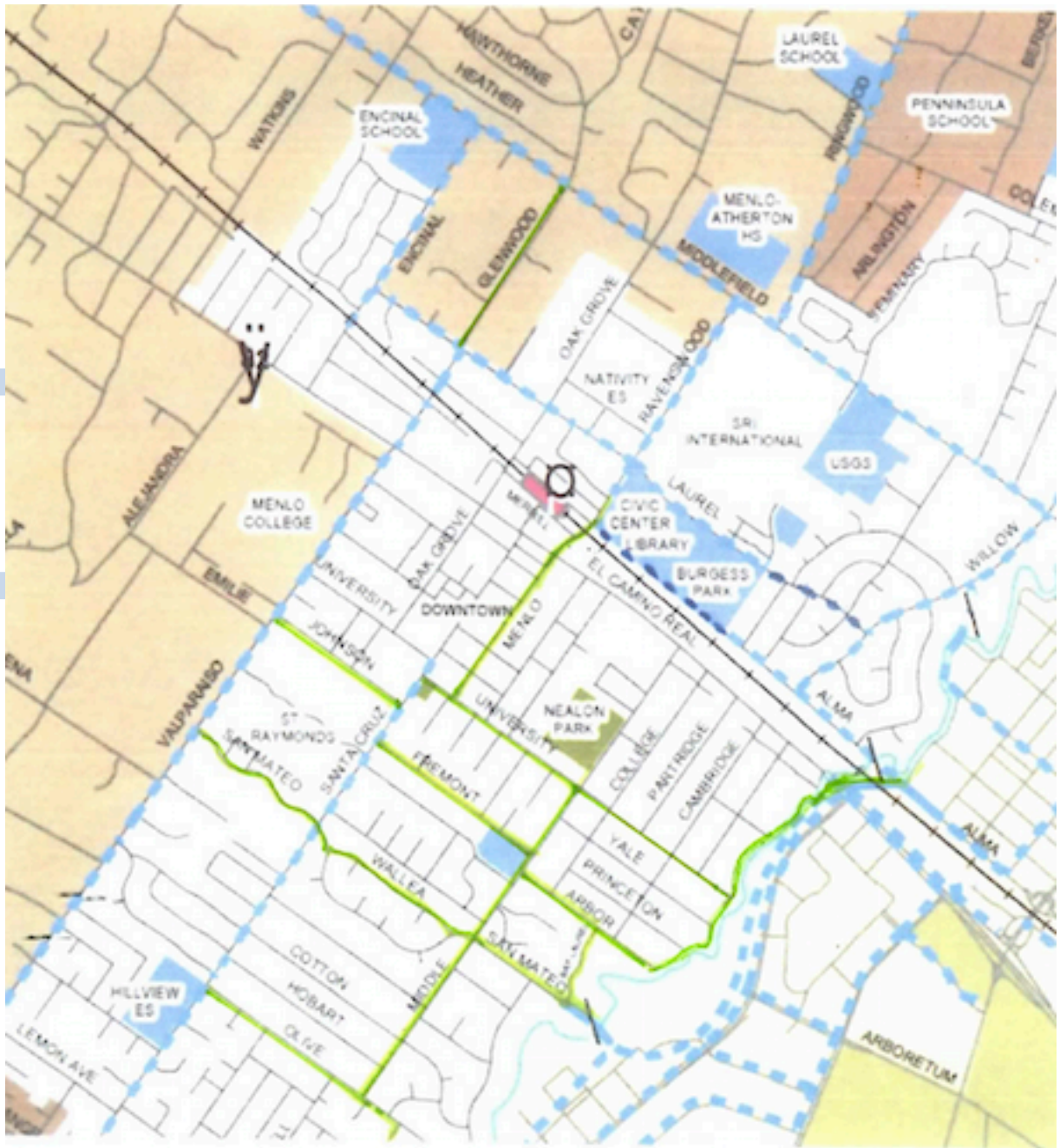
Blue = Street has either a bike lane or bike route



Appendix 3B - Existing Menlo Park Bike Network + Popular Routes

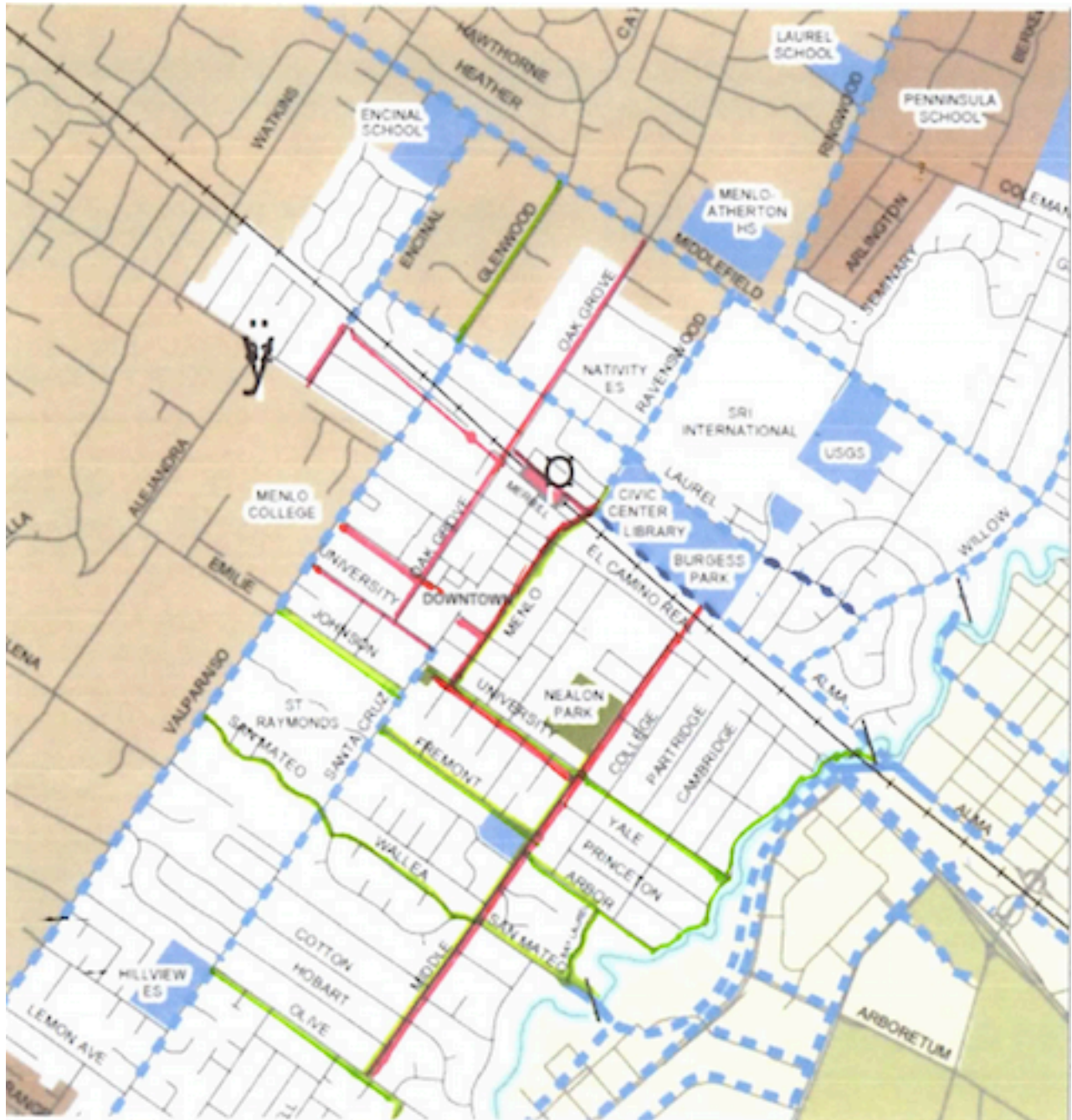
Cyclists currently use a number of “off-network” streets to reach popular destinations both inside and outside Menlo Park. Both University and Menlo Avenues have “shareway” markings in the vehicle lanes. These simply remind users to share the road and are not true bike facilities.

Blue = Street has either a bike lane or bike route **Green** = Street is popular but does not have bike facilities



Appendix 3C - Menlo Park Bike Network + Popular + Specific Plan

Blue = Street has either a bike lane or bike route **Green** = Street is popular but does not have bike facilities
Red = Specific Plan Recommendations (2012) (excludes El Camino Real)



Appendix 3D – MP Bike Network – Street Directory

	Existing Facilities	Popular	Specific Plan
Alameda De Pulgas	Bike Lane		
Alma	Bike Lane		Extend to Oak Grove
Arbor		Yes	
Crane			Bike Route
El Camino Real			Bike Lane
Fremont		Yes	
Garwood Way			Bike Route*
Johnson		Yes	
Laurel	Bike Lane		
Menlo		Shareway**	Bike Lane
Merrill			Bike Route
Middle		Yes	Bike Lane***
Middlefield	Bike Lane		
Oak Grove			Bike Lane
Olive		Yes	
San Mateo		Yes	
Santa Cruz	Bike Lane		
University		Shareway	Bike Lane
Valparaiso	Bike Lane		
Wallea		Yes	
* Encinal-Oak Grove connection will cross Greenheart property at 1300 ECR.			
** A shareway provides no cyclist protection; simply reminds motorists to share the road			
** Will extend across ECR and 500 ECR and pass under Caltran tracks to Alma.			

Appendix 3E – Current Bike Network Service Levels

The following table rates how poorly the existing Menlo Park bike network serves the needs of cyclists who start trips on either side of El Camino and travel to popular city destinations on the opposite side. Travel to Safeway from either side is discouraged by the lack of bike facilities on Middle between University and the entrance to Safeway.

	Origin of Travel		Must Cross
	East Side	West Side	El Camino
Popular East Side Destinations			
Burgess Park (Playing fields, gym, tennis courts, pool)	Good	Poor	West Siders
Schools			
Encinal (k-5; 746 students)	Good	Poor	West Siders
Laurel (k-3; 444)	Good	n/a	
Nativity (k-8; 275)	Good	Poor	West Siders
Peninsula (k-8; 252)	Good	Poor	West Siders
M-A High School (2100)	Good	Poor	West Siders
Library	Good	Poor	West Siders
City Government	Good	Poor	West Siders
El Camino (both sides)	Good	Fair	West Siders
Train Station	Good	Poor	West Siders
Popular West Side Destinations			
Schools			
Oak Knoll (k-5; 739)	n/a	Good	n/a
Hillview (6-8; 879)	n/a	Good	n/a
Menlo Middle (6-8; 219)	Good	Good	East Siders
Menlo Upper (9-12; 576)	Good	Good	East Siders
St Raymond's (k-8; 306)	Good	Good	East Siders
Sacred Heart Prep (k-12; 1180)	Good	Good	East Siders
Downtown	Poor	Fair	East Siders
El Camino (both sides)	Good	Fair	East Siders
Nealon Park	Poor	Good	East Siders
Safeway Shopping Mall	Poor	Fair	East Siders

Appendix 4A – Atherton Bike Network Master Plan Project List & Priorities

View original document is at <http://ca-atherton.civicplus.com/DocumentCenter/View/1906>

The following criteria were used to identify the highest ranking projects in this Plan (listed in Table 7). Each criterion was given a score (1,2,3) based on qualitative assessment of conditions and issues, with the highest scoring projects ranked the highest.

Safety

How well does a project address a known safety issue or location with collision history, or will otherwise result in reduced collision or exposure to injury from potential collisions? Is it along a suggested route to school?

Usage

Will the project contribute to increased walking and bicycling? Will the project upgrade an already heavily used existing facility?

Gap Closure

Does the project link to existing bikeways/walkways or substantially implement new priority corridors?

Cost

What does the project cost relative to its benefits, and is there an existing capital project, such as a planned roadway repaving project, to help minimize cost?

Feasibility / Phase-ability

Is the project achievable with minimal risk and/or can it be further broken down into more achievable phases? What actions are necessary to identify or resolve outstanding issues?

Multiple Benefits

Does the project contribute to improving more than one mode of travel? Does it address other known Town priorities, such as drainage, or otherwise create synergies?

Competitiveness

Are there funding sources available or potentially available based on assessment of grant funding competitiveness or partnership opportunities

29 Appendix 4B– Atherton Bike Network Master Plan Project List & Priorities

View original document at <http://ca-atherton.civicplus.com/DocumentCenter/View/1906>

Town of Atherton Bicycle and Pedestrian Master Plan - Master Projects List							Prioritization Table										
Street or Intersection	Start	End	Proposed Facility	Length	Planning Level Estimate	Project Description	Agency Coordination Required	Agencies/Adjacent Community	Safety	Usage	Bay Closure	Cost	Feasibility	Multiple Benefits	Community Support	Timeline	
El Camino Real Improvements (Grand Boulevard Greenway)																	
GBG - 1	El Camino Real	Selby Lane	Fifth Ave	Class I	.23 miles	\$1,450,000	Includes Class I trail Selby Lane to southbound bus stop; hybrid pedestrian signal; median, bus stop and crosswalk enhancements	Yes	Caltrans / North Fair Oaks	3	3	3	2	3	3	3	20
GBG - 2	El Camino Real	Atherton Ave	Encinal Ave	Class I	.62 miles	\$2,250,000	Includes Class I trail improvements to Atherton/Fair Oaks Intersection; hybrid pedestrian signal, median, bus stop and crosswalk enhancements at Watkins Ave/Isabella Ave. Potential for phasing with lower initial costs	Yes	Caltrans/Menlo Park	3	3	3	3/1	2	3	2	19/17
Class I Trails / Pathways (Bay to Ridge Greenway)																	
TR - 1	Watkins Ave	Caltrain	Middlefield Rd	Class I	.41 miles	\$435,000	Modify existing flood channel to widen and convert existing walkway into Class I shared use trail	Potential	Resource Agency permitting	2	3	3	2	3	3	3	19
TR - 2	Middlefield Road	Watkins Ave	Marsh Rd	Class I	.12 miles	\$100,000	One side of roadway, with grading	No		3	3	2	2	3	3	3	19
TR - 4	Holbrook-Palmer Park	Watkins Ave	Fenton Gables	Class I	250'	\$50,000	Shared use path extension through corner of park to Felton Gables pathway, requiring extensive grading and resurfacing. Cost estimate is placeholder.	Yes	Fenton Gables (County)	2	3	3	2	3	3	3	19
Class II Bike Lanes																	
BL - 1	Middlefield Rd	San Mateo County (North Fair Oaks)	City of Menlo Park	Class II (Enhanced Bikeway)	1.49 miles	\$1,550,000	Widen bike lane by improving shoulder conditions; re-stripe with high-visibility green markings at conflict zones and increased signage/wayfinding. Potential for phasing and targeted lower-cost improvements	May not be required, but strongly encouraged	Menlo Park, North Fair Oaks	3	3	2	3/1	3	3	3	20/18
BL - 2	Valparaiso Ave	N Lemon Ave	El Camino Real	Class II (Enhanced Bikeway)	1.3 miles	\$0	Green bike lane improvements to be included in upcoming Valparaiso Ave Safe Routes to School project (already funded)	Yes	Menlo Park, West Menlo Park (County)	3	3	2	2	3	3	3	19
BL - 3	Glenview Ave	Laurel Ave	Middlefield Rd	Class II (new)	2000'	\$295,000	Widen shoulders to install min 4' wide bike lanes	No	Menlo Park	2	3	3	2	2	3	3	18
Class III Bicycle Boulevards / Shared Bikeways																	
BB - 1	Elena Ave - Atherton Ave	Austin Ave	Valparaiso Ave	Class III	1.0 miles	\$70,000	Bike boulevard treatments, including minor intersection/traffic calming improvements	No	Menlo Park	2	2	3	3	3	3	3	19
BB - 2	Austin Ave	Selby Ln	Atherton Ave	Class III	.75 miles	\$90,000	Bike boulevard treatments, including medium intersection/traffic calming improvements	No		2	2	3	3	3	3	2	18
Corridor Feasibility Studies																	
STUDY - 1	El Camino Real	Selby Lane	Valparaiso Ave	Class III	1.6 miles	\$100,000	Travel lane reduction and Class I trail feasibility study from Selby Lane to Valparaiso Ave, with recommended approach to environmental and Caltrans approval including litely segment phasing	Yes	Caltrans/Menlo Park/County	3	3	3	3	3	3	3	21
STUDY - 2	Bay to Ridge Gw	El Camino Real	Bay Road	Class III/II	1.15 miles	\$50,000	Trail/pathway feasibility study and preliminary design along Marsh Road from Bay Road to Middlefield Avenue, and from Middlefield Ave/Watkins to the Dinkelspiel Station Lane/Caltrain tracks	Yes	Menlo Park/County/Facebook	3	2	3	3	3	3	3	20
Intersection Improvements																	
INT - 1	Middlefield Rd & Oak Grove Ave			Complete Intersection		\$250,000	Complete Streets enhancements to improve safety and performance of all modes; signal adjustments including potential lead pedestrian interval, new curb ramps with drainage inlet modifications and ADA landing areas, bus stop improvements, roadway widening and re-striping to meet Class II bike lane standards and vehicle turn radius requirements	Yes	Menlo Park	3	3	3	2	2	3	3	19
INT - 3	Middlefield Rd & Glenwood Ave			Crosswalk, median island, intersection corner access improvements		\$75,000	Pedestrian crossing and intersection daylighting/ADA improvements. North side pathway maintenance and safety markings. Consider possible center median island on the west leg of intersection and other access control measures for Linden Avenue	No		3	3	2	3	2	3	3	19

Appendix 5A – Recommendation #1: Menlo/Ravenswood Connection

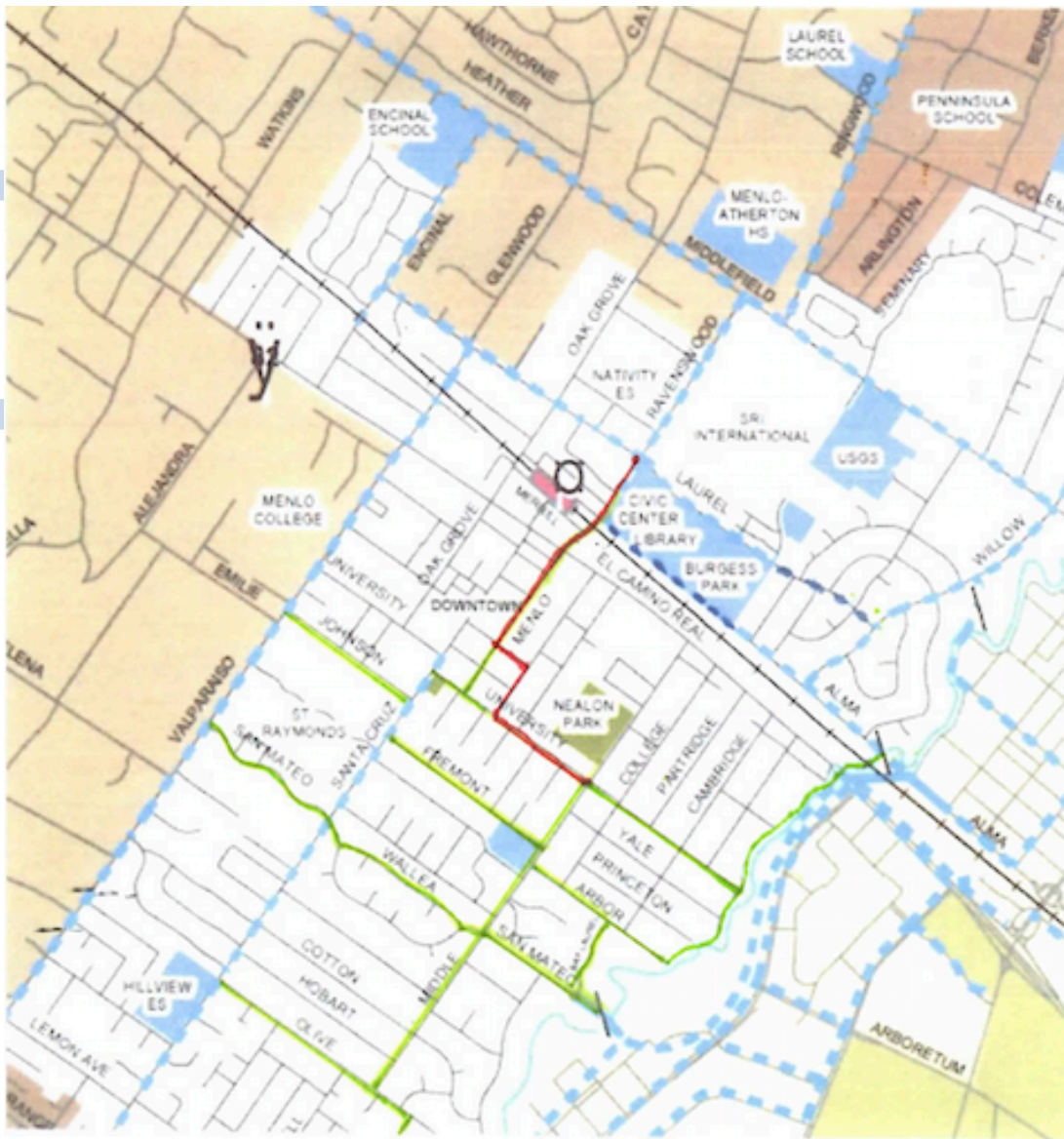
Provides east-west connectivity and downtown access via Menlo and University Avenues

Two-way bike lanes on Menlo Avenue between Crane* and Doyle Streets and hopefully across El Camino to Laurel Street

Two-way bike lanes on University between Middle & Live Oak

Bike route (or lanes) on Live Oak between University and Crane*

Bike route on Crane between Live Oak and Menlo and Santa Cruz

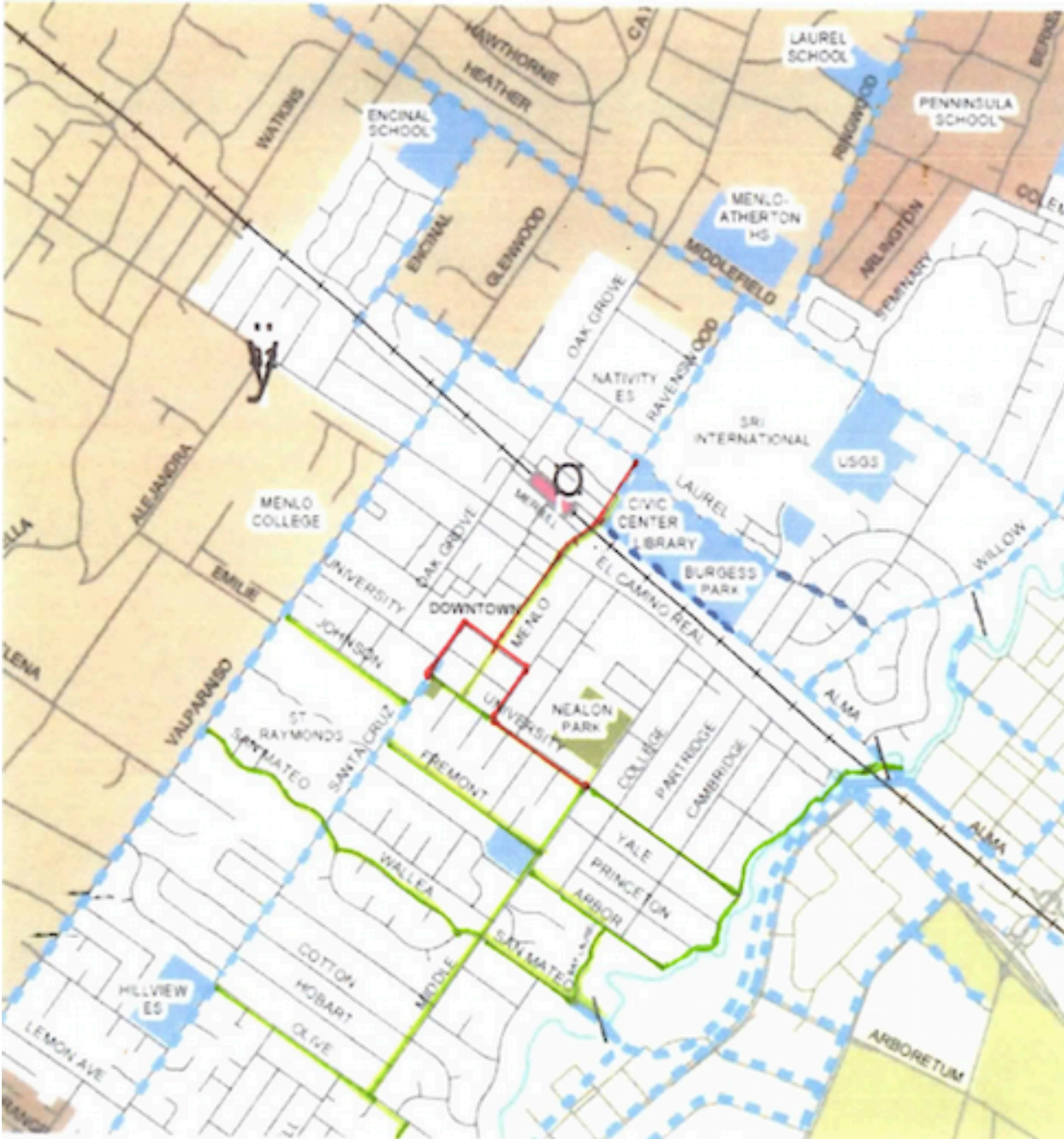


Appendix 5B – Recommendations #1 & 2 – Santa Cruz/Menlo Connection

Provides cyclists who use Santa Cruz Avenue BOTH east-west connectivity and downtown access via Menlo Avenue.

Add 2-Way buffered bike Lanes on the right side of Santa Cruz Avenue between University and Crane

Avoids University between Santa Cruz and Menlo Avenues. This segment is not suitable for bike lanes or routes and school-age children.

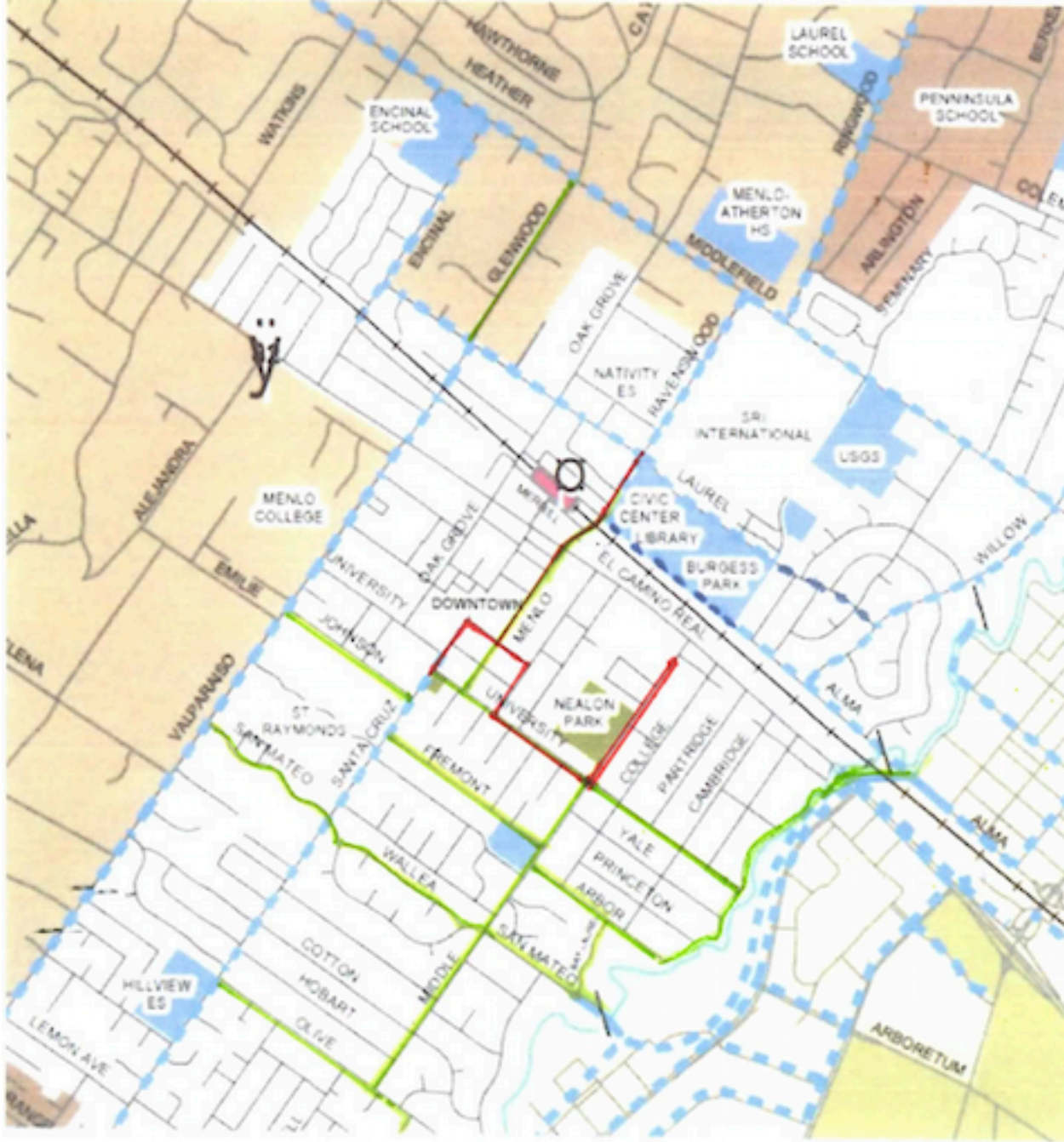


Appendix 5C – Recommendation #3 (shown with 1 & 2)

Designate Middle Avenue a bike route with appropriate signage and street markings from Olive to the Safeway shopping mall.

Reminds motorists to share street with cyclists; also reinforces message that Menlo Park is bike-friendly.

Can convert to bike lane when “middle Avenue” track underpass is built.



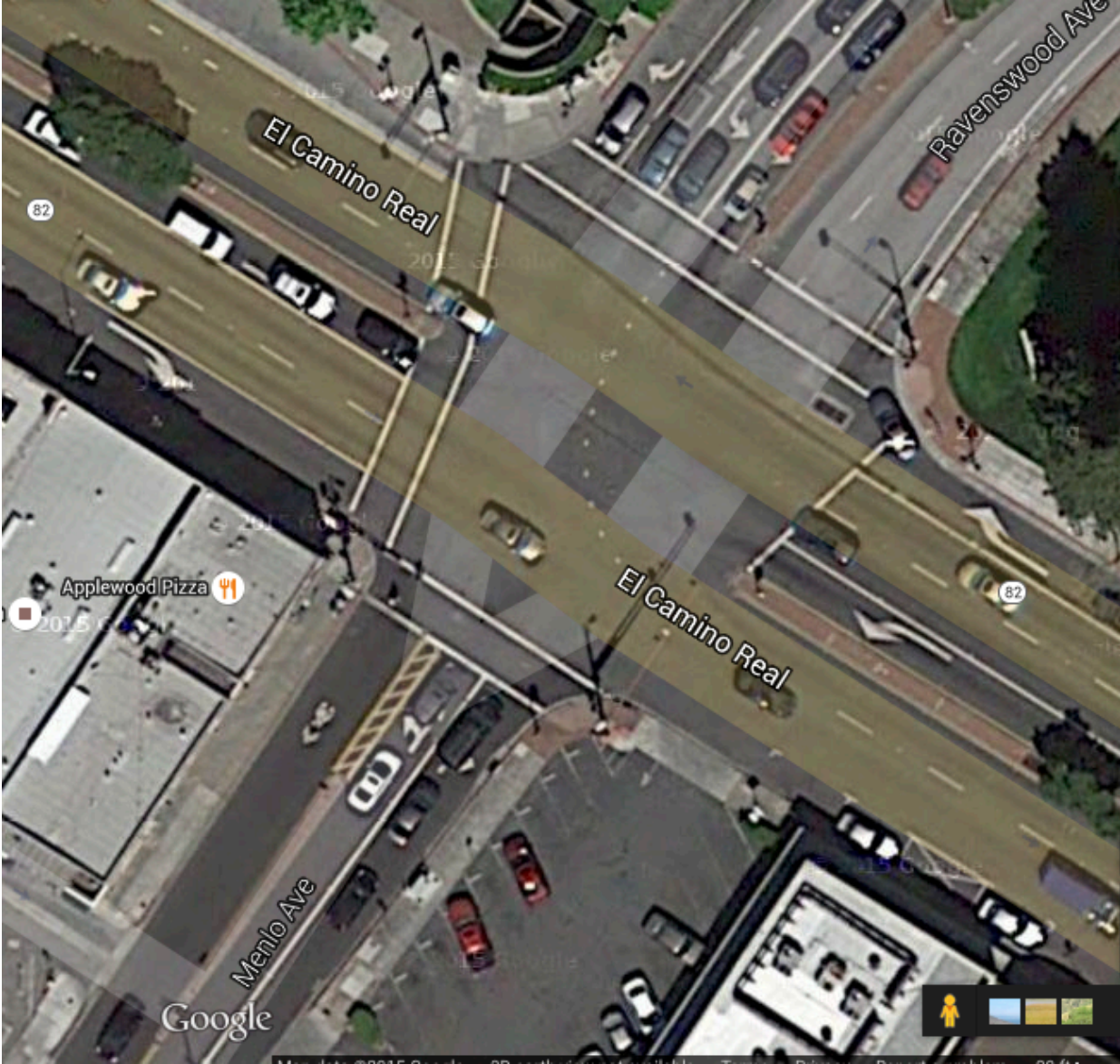
Appendix 6 – Improved Bike Network Service Level

The following table rates how well the improved Menlo Park bike network would serve the needs of cyclists who start trips on either side of El Camino and travel to popular city destinations.

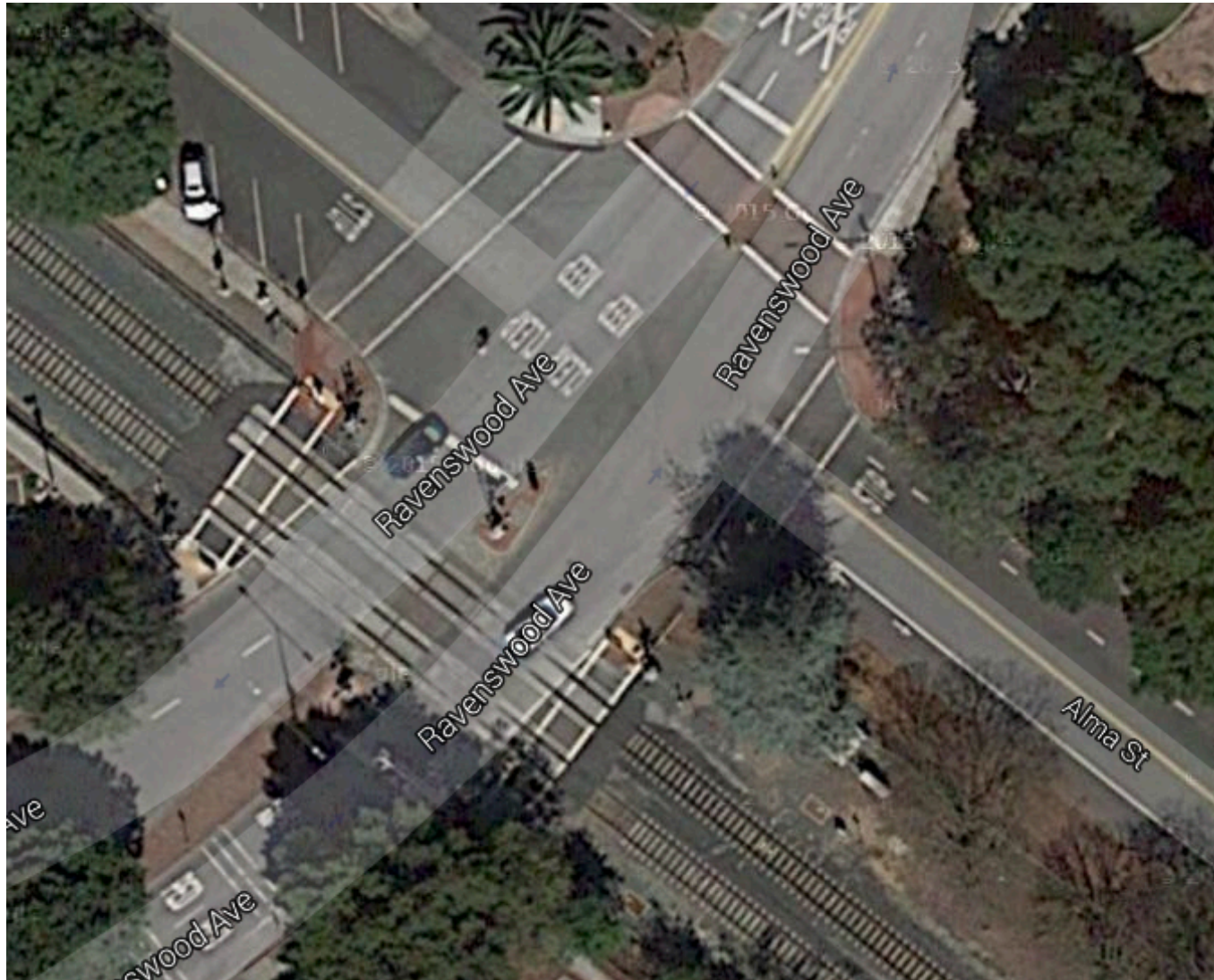
Popular Destinations	Network Rating			Needed Improvements
	Point of Origin		Crossing ECR	
	On East Side	On West Side		
Burgess Park	Good	Good	Good	Bike Lanes on Menlo Avenue from Crane to ECR and crossing tracks Bike route on Crane from Menlo Ave to Live Oak
Nealon Park	Good	Good	Good	Bike Route on Live Oak between University and Crane Bike Lanes on University between Middle and Live Oak
Library	Good	Good	Good	Same as above
City Government	Good	Good	Good	Same as above
Downtown	Good	Good	Good	Same as above.
El Camino	Fair*	Fair*	Fair*	Same as above Note: Cyclists can ride to nearest ECR intersection using side streets and then walk bike on sidewalks to destination.
Safeway Shopping Mall	Good	Good	Good	Same as above Bike route on Middle from University to Safeway
Train Station	Good	Good	Good	Same as for downtown

* Still need to add bike lanes on Oak Grove from University to Laurel

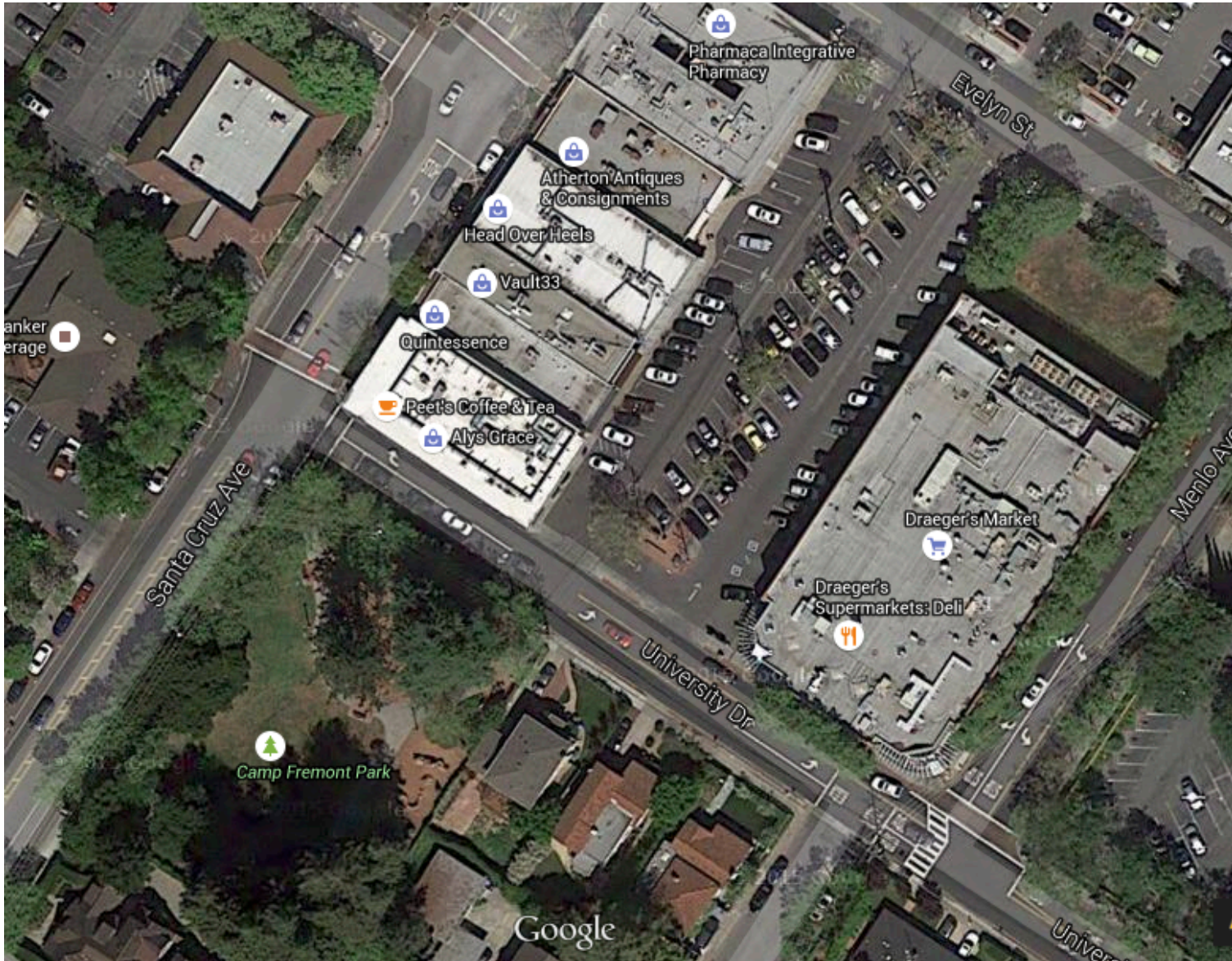
Appendix 7A– Primary Design Challenges: El Camino Real – Ravenswood – Menlo Intersection



Appendix 7B– Primary Design Challenges: Ravenswood Train Tracks & Alma Intersection



Appendix 7C– Primary Design Challenges: Santa Cruz & University Intersection



Appendix 8A – Existing Street Parking On Menlo, University and Oak Grove

There are about 1600 downtown parking spaces in Menlo Park including 1400 in the parking plazas, and 685 are used by motorists who have daily parking permits. That leaves about 500 available for short-term use. This is a breakdown of existing on-street parking spaces on the three streets that the Specific Plan recommends have bike lanes.

The parking spaces on University Avenue and the south side of Menlo Avenue are NOT in the downtown parking district, i.e., there are no parking time limits.

Block	Menlo Ave		Oak Grove		University	
	Existing		Existing		Existing	
	North	South	North	South	East	West
ECR-Doyle	0	0				
ECR-Hoover			5	8		
Doyle-Curtis	10	6				
Hoover-Chestnut			6	6		
Curtis-Chestnut	7	7				
Chestnut-Crane	6	8	9	8		
Crane-Evelyn	8	1				
Evelyn-University	3	1				
Crane-University			13	19		
Middle-Live Oak						
Live Oak-Menlo					7	9
Street Side Total	34	23	33	41	7	9
Street Total	57		74		16	

Appendix 8B - Impact on Downtown Parking

Recommendation 1: The addition of 2-way Buffered Bike Lanes on Menlo between Crane and ECR and on University between Middle and Live Oak would remove **twenty-eight** street parking spaces.

Block	Menlo Ave		Oak Grove (west)		University*		Santa Cruz**		Total
	Existing		Existing		Existing		Existing		
	North	South	North	South	East	West	North	South	
ECR-Doyle	0	0							
ECR-Hoover			5	8					
Doyle-Curtis	10	6							
Hoover-Chestnut			6	6					
Curtis-Chestnut	7	7							
Chestnut-Crane	6	8	9	8					
Crane-Evelyn	8	1						7	
Evelyn-University	3	1						8	
Crane-University			13	19					
Middle-Live Oak									
Live Oak-Menlo					7	9			
Street Side Total	34	23	33	41	7	9			
Street Total	57		74		16				
Lots Parking Spaces									
Evelyn Option		22			7			8	37
Crane Option		21			7			15	43

* The impacted parking spaces on University are NOT considered as part of the 1600 spaces in the downtown parking district.

** The Santa Cruz 2-Way Bike Lanes can be extended to either Evelyn or Crane. The later provides greater access to downtown in exchange for 6 lost parking spaces => 7 lost on Santa Cruz and 1 gained on Menlo Avenue

Recommendation 2:

Option 1: Add 2-way buffered bike lanes on the south side of Santa Cruz Avenue between University and Crane. Provides better downtown access and east-west connectivity via Crane bike route between Valparaiso, Santa Cruz and Menlo Avenues This would eliminate 15 street parking spaces.

=> **Total parking loss for the three Recommendations is 42.**

Option 2: Add 2-way buffered bike lanes on the south side of Santa Cruz Avenue between University and Evelyn. This would eliminate 8 additional street parking spaces.

=> **Total parking loss for three Recommendations is 34.**

Appendix 9 – Street Configurations With Buffered 2-Way Bike Lanes

This table illustrates how streets could be re-configured to accommodate bike lanes.

Streets	Parking Lane 1	Vehicle Lane 1	Vehicle Lane 2	Parking Lane 2	2-Way Bike Lane	Bike Lane Buffer	Bike Route	Total Required	Street Width
University (Note 2)	6	9.5	9.5		8	2		35	35
Live Oak (Note 3)	6	10	10	6	8	2		42	42
Crane (Note 4)	6	10	10	6			X	32	38.5
Menlo (Note 5)	6	9.5	9.5		12	2		39	39
Menlo (Note 6)		15	23					38	38
Menlo (Note 7)		9	19		8	2		38	38
Evelyn	6	9	9	6			X	30	30
Santa Cruz (Note 8)	6	12	12		10	2		42	42
Middle	11.5	9.5	9.5	11.5				40	40
NOTES:									
1. Bike Lanes are 2-directional; signs and street markings; bike speed limit (10 mph?)									
2. Between Middle and Live Oak									
3. Between University and Crane									
4. Between Live Oak and Menlo									
5. Between Crane and Doyle									
6. Existing between Doyle and El Camino is split 2 lanes eastbound = 23 feet and 1 lane westbound = 15 feet									
7. Existing: Between University and Doyle									
8. Between University and Crane									

Appendix 10– Cost-Benefit Comparison

- Bike Lanes on El Camino Real
- Bike Lanes on Menlo Avenue and University; bike routes on Crane per the Specific Plan
- 2-way bike lanes on one side of sections of Menlo Avenue, University and Live Oak; bike routes on Crane

Decision Criteria	EL Camino Real	Recommendations
Best Use of ECR Real Estate	Unlikely	No Effect
East-West Bike Network Conectivity	Poor	Good
Downtown Bike Access	Poor	Good
# of Cyclists Served	Maximum of 140 per day	Hundreds
Cyclist Safety	Good*	Better
Environmental Impact	Tree Removal**	None Identified
Negative Impact On Other Users	Moderate	Low
Motorist-Cyclist Conflict	Moderate	Low
Community Resistance	Moderate-to-High	Low-to-Moderate
Earliest Install	2019-2020	2016-2017
Lost Short-term Parking Spaces	25-30	43
Perentage of Short-term Spaces***	2.7%-3.3%	4.7%
* There is not enough space to extend bike lanes from Ravenswood to Santa Cruz on the east side of El Camino Real		
* Tree Removal: Up to 11 heritage redwoods and 7 street trees for bike lanes and 1 heritage and 7 street trees for separated bike paths		
** Lost Parking Spaces: Menlo: 21 University: 7 Santa Cruz: 15		
**Existing Downtown Parking Spaces: 1595 Total - 685 Daily Permits = 910 Short-term		

Appendix 11 - Overall El Camino Real Bike Lane Stress Rating

Using the “weakest link” test a bike lane on El Camino Real would be rated as a LTS 4 meaning these facilities would generally appeal only to the “strong and fearless” category of cyclists, 1.5% of the typical bike community. A detailed Cyclist Stress Analysis for El Camino Real is available at [XXXX](#)

	ECR Segments	Street Width (Lanes)	Bike Lane Width	Maximum Speed Limit	Bike Lane Blockage	Multilane Including Turn Lanes	Intersections Right Turns		Public Driveways	Overall Stress Rating
							Signal	No Signal		
1	Encinal - Valparaiso	LTS 2	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 4	LTS 4
2	Valparaiso - Oak Grove	LTS 2	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 4	LTS 4
3	Oak Grove - Santa Cruz	LTS 2	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 4	LTS 4
4	Santa Cruz - Ravenswood	LTS 2	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4
5	Ravenswood - Live Oak	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4
6	Live Oak - Robles	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4
7	Robles - Middle	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 4	LTS 4
8	Middle - College	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 4	LTS 4
9	College - Partridge	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4
10	Partridge - Cambridge	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 4	LTS 4
11	Cambridge - Harvard	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4
12	Harvard - Creek	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4
13	Creek-Sand Hill/Alma (Palo Alto)	LTS 3	LTS 1	LTS 3	n/a	LTS 4	LTS 3	LTS 3	LTS 3	LTS 4

Re-Imagine Menlo Park

Re-Imagine Menlo Park is dedicated to Menlo Park residents who want our city to become a more beautiful, safe and vibrant community and believe that public investment in the areas defined in the Specific Plan should be based on facts, sound assumptions and solid reasoning, not ideology, intuition, and personal biases. The editor is a 30-year resident who raised his family here and considers Re-Imagine Menlo Park a personal investment in its future.

My objectives are

- To encourage residents to actively support efforts to make “downtown” a more appealing place to shop, dine, socialize, walk, and enjoy community activities.
- To educate myself and other residents on city policies and regulations as well as individual public investment opportunities.
- Encourage residents to develop their own well-informed positions re: potential public and private investments in Menlo Park.
- To share what I believe would make downtown and El Camino Real more valuable community resources.

Author

Dana Hendrickson, the editor of Re-Imagine Menlo Park, is an avid cyclist and ex-Silicon Valley executive who has enjoyed living in Central Menlo Park with his family since 1985. His wife Lisa is an active leader in the local nonprofit community and recently stepped aside from 15 years of service as the president of Avenidas, the Palo Alto senior service organization and Senior Day Care Facility. She is currently leading a large-scale effort to transform the main center facilities and add new services that will not only meet the needs of current seniors but also appeal to the next generation of tech-savvy individuals. Our son Brian works in strategic supply-chain management at Apple and lives with his wife Farrell in San Francisco; our son Mark is a contract chief technology officer and product management specialist for U.S. start-ups and lives in Barcelona Spain. For seven years Dana has supported the families of severely disabled Iraqi and Afghanistan veterans with a national non-profit that he founded in 2008, Dana has also built homes one-a-week on the Peninsula for five years with Habitat for Humanity, and currently assists seniors who can no longer drive. Re-imagine Menlo Park reflects his personal volunteer commitment to help residents make well-informed decisions about the future quality of life in our city.