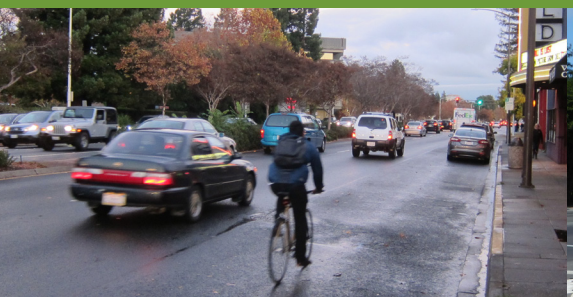
APPENDIX A

El Camino Real Corridor Study Community Survey Report

El Camino Real Corridor Study



Community Survey Report

February 2015

CITY OF
MENLO PARK

www.MenloPark-ElCamino.com

El Camino Real Corridor Study

Community Survey Report

February 2015

Prepared for
City of Menlo Park

by

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Executive Summary

This report presents the findings of the community survey conducted by the City of Menlo Park in the between June and September 2014 for the El Camino Real Corridor Study. The Study is an effort to evaluate potential transportation and safety improvements to the Menlo Park segment of El Camino Real. The study will consider alternatives for modifying the Corridor to allow for a possible addition of a bicycle lane and/or additional through lanes. Ultimately, the project will be consistent with the goals outlined in the El Camino Real/Downtown Specific Plan for balanced capacity, bicyclist and pedestrian connectivity, transit access, parking, and safety, as well as the City's Complete Streets Policy.

The online survey gauged participants' perceptions and priorities on a variety of transportation issues, including safety and the environment, walking, transit, vehicular travel, bicycling, and parking, and also sought participants' reactions to ideas for potential improvements along the corridor. Questions served as a follow-up to the first community workshop, and assessed community members' feelings on a number of statements and improvement ideas that arose during the workshop. The survey also provided a sense of how participants tend to travel along the corridor, why, when, and from where, thus giving the City context to interpret the other responses, and helping the City anticipate the needs that participants may have when accessing El Camino Real.

Analysis of the survey results revealed key issues related to transportation needs, traffic, and safety along El Camino Real. These are summarized as follows:

- ***Transportation Needs***

  Most respondents use multiple forms of transportation along El Camino Real—mainly a combination of driving, bicycling, and walking. They mostly travel the Corridor to access shopping and local businesses, and half of respondents use it to commute to work. Most of the survey respondents reported using the Menlo Park Caltrain Station. These Caltrain users tend to favor bicycling or walking to the station.

  Respondents desire multi-modal improvements along the Corridor regardless of which modes they currently use most. The majority agreed that if pedestrian and bicycling improvements were made, they would prefer to take advantage of those transportation options rather than drive.

  There may need to be a closer examination of public transit needs along the corridor. The sample of transit riders responding to the survey was too small to draw supportable generalizations. However, survey responses suggest that frequent transit riders—unlike frequent users of other transportation modes—are less willing or less able to drive as an alternative to transit, meaning that this group may have a greater need for non-automotive transportation options. Additionally, there were some open-ended responses from non-transit users that showed interest in improving public transportation along the corridor.

- ***Traffic***

  Traffic was a prevalent concern throughout responses to the open-ended questions. Respondents connected traffic conditions with a number of the Corridor's safety issues as frustrated drivers participate in risky behavior, such as running red lights, cutting through adjacent neighborhoods, and speeding. In discussing potential improvements to vehicle traffic, most respondents did not feel that vehicle capacity was a problem in the Corridor, and additional vehicle lanes on El Camino Real were not considered a desirable improvement. Respondents' explanations for traffic causes focused on bottlenecks at specific intersections or along specific segments of the Corridor due to signal timing and lane design. Problematic intersections tended to be those adjacent to major destinations (such as Menlo/Ravenswood) or which serve as connections for regional traffic (such as Sand Hill). Signalization changes were a desired improvement. According to the responses to the open-ended questions, important considerations for signal timing include crossing signals for pedestrians and cyclists and ensuring that signals facilitate east-west movement as well as north-south flow.

- ***Safety***

  Safety in the Corridor was a major concern, particularly for those traveling by bicycle or on foot. Pedestrian safety and crossing improvements, bike lanes, bike parking, and landscaped buffers for pedestrians and cyclists were among the most desired improvements. Additionally, though travel by vehicle was considered the safest way to travel El Camino Real, vehicle safety improvements were still considered desirable. Open-ended responses indicated that vehicle safety may need to address driving behavior such as speeding, opportunistic use of turn lanes for passing purposes, running red lights, U-turns, and stopping in the intersection during red lights.

  Student safety and the safety of children using El Camino Real was a priority for respondents, regardless of whether or not respondents have children who need to cross El Camino Real for school. Nineteen percent of respondents have children who need to make this crossing, though responses to open-ended questions suggested that there were additional respondents who are uncomfortable with letting their children travel El Camino Real alone and use alternate means of getting them to school. Student safety concerns include traveling by foot and by bicycle, particularly at crossings.

These survey results were used to inform and refine a set of alternatives for consideration by the public. The alternatives present different combinations of roadway improvements, examining the potential for ideas such as additional travel lanes, buffered bike lanes, and separated bike lanes, which were evaluated by participants for the survey. Development of the alternatives also took into consideration various concerns and priorities expressed by community members in their survey responses, and seek to respond the issues summarized above. The next steps will be the further evaluation of the alternatives through a workshop and additional community feedback in order to formulate a preferred plan that reflects the community's needs for safety, efficiency, and transportation opportunities along the El Camino Real corridor.

1. Introduction

The City of Menlo Park is conducting the El Camino Real Corridor Study to evaluate potential transportation and safety improvements to El Camino Real in the City of Menlo Park. The study will consider alternatives for modifying the Corridor to allow for a possible addition of a bicycle lane and/or additional through lanes. Ultimately, the project will be consistent with the goals outlined in the El Camino Real/Downtown Specific Plan for balanced capacity, bicyclist and pedestrian connectivity, transit access, parking, and safety, as well as the City's Complete Streets Policy. Figure 1 shows the Study Area.

The City conducted an online survey during the initial phase of the Study, following the project's first community workshop. Survey questions were focused on learning how and why different members of the community use the El Camino Real Corridor and on eliciting feedback on potential improvements to the Corridor. Many of the questions were based directly on the ideas gathered at the first community workshop, and were intended to assess which of these ideas had the greatest appeal to the broader community. The survey was active between June 16 and September 12, 2014, during which time 309 community members participated. Initial results were presented at an open house on October 2, 2014, where seven additional responses were collected, for a total of 316 responses.

This report presents and analyzes the results of the survey. Appendix A contains the original survey questions as they appeared online. Appendix B contains the summary tables and cross-tabulations used in this analysis. A list of the open-ended responses provided for questions 9, 17, 18, and 19 can be found in Appendix C.

2. Methodology

The survey was conducted using SurveyMonkey, an online service, and was announced via the City's El Camino Real project website and e-mail announcements. The survey was also advertised using flyers distributed at local businesses and destinations, such as Downtown, the Caltrain Station and grocery stores; public spaces and events, including the Chamber of Commerce Summer Block Party, the Menlo Park Library, and the Arrillaga Family Gymnasium; and via school newsletters for local public and private schools. Results were exported from the site as summary files and cross-tabulations.

Questions included three general types of questions: multiple choice questions about respondents' location and habits; questions that asked respondents to rate their agreement with a given statement or to rate the desirability of a proposed improvement; and open-ended questions. Questions 1 through 9 were used in cross-tabulations to assess whether respondents' location or habits had a significant relationship to the ratings they assigned to different statements or improvements. Notable correlations are discussed in the analysis.

3. Survey Results

LOCATION

Questions 1 and 2 asked participants where they live or work in relation to the El Camino Real Corridor—in Menlo Park within a half-mile of the Corridor, in Menlo Park farther than a half-mile from the Corridor, outside of Menlo Park within a half-mile of the Corridor, or none of the above (outside of Menlo Park, farther than a half-mile from the Corridor). Responses are described in Chart 1 and Table 1 for where participants live, and Chart 2 and Table 2 for where participants work.

The majority of survey respondents live in Menlo Park, with the largest portion of respondents (47 percent) living in Menlo Park within a half-mile of the Corridor. The next-largest portion of respondents (32 percent) lives in Menlo Park, but farther than a half-mile from the Corridor. For participants living outside of Menlo Park, more live within a half-mile of the Corridor (13 percent) than beyond (8 percent).

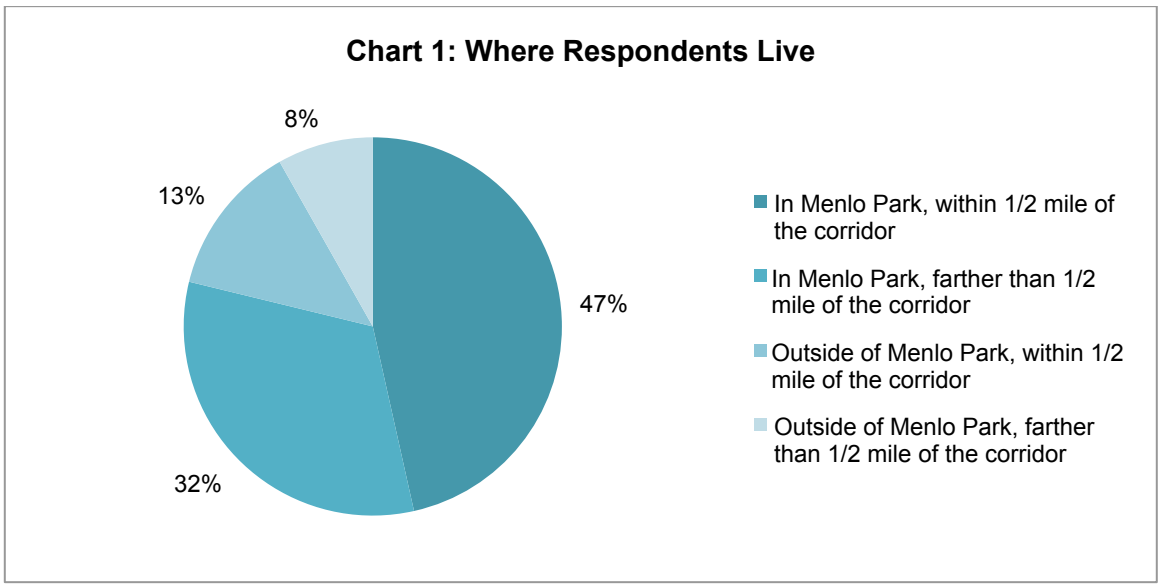

Table 1: Where Respondents Live

Location	*Number of Respondents*	*Percent of Total*
In Menlo Park, within 1/2 mile of the Corridor	147	47%
In Menlo Park, farther than 1/2 mile of the Corridor	102	32%
Outside of Menlo Park, within 1/2 mile of the Corridor	41	13%
Outside of Menlo Park, farther than 1/2 mile of the Corridor	26	8%
Total	316	100%

Figure 1: Study Area

LEGEND
● Study Intersection

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Conversely, the majority of survey respondents work outside of Menlo Park, with the largest portion (43 percent) working outside of the city and farther than a half-mile from the Corridor. Those working outside of Menlo Park but within a half-mile of the Corridor constitute the second-largest portion, at 32 percent.

For those working in Menlo Park, the majority live in the same location category as their workplaces.

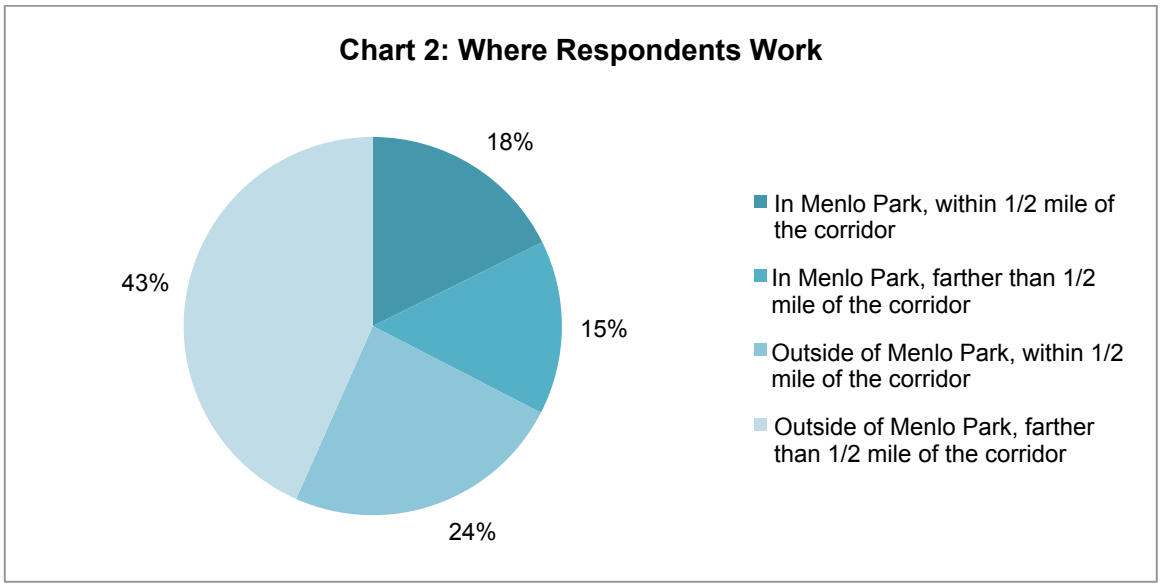

Table 2: Where Respondents Work

Location	*Number of Respondents*	*Percent of Total*
In Menlo Park, within 1/2 mile of the Corridor	56	18%
In Menlo Park, farther than 1/2 mile of the Corridor	47	15%
Outside of Menlo Park, within 1/2 mile of the Corridor	76	24%
Outside of Menlo Park, farther than 1/2 mile of the Corridor	137	43%
Total	316	100%

REASONS TO TRAVEL ON EL CAMINO REAL

Question 9 asked participants why they typically travel on El Camino Real. The question offered five general categories of activities—travel for shopping, patronizing local businesses, travel to and/or from work, travel to and/or from school, and for physical activity—as well as an "other" response that allowed for an open-ended answer. Respondents were asked to check all that applied, and many selected more than one response.

As shown in Chart 3 and Table 3 below, the most common reason that respondents visit El Camino Real is to travel for shopping, at 75 percent of respondents. Sixty-nine percent of

respondents travel to patronize local business, and 50 percent travel for work. Smaller percentages use it to travel for school (19 percent) and for physical activity (17 percent).

Within each category, the largest share of respondents tended to live in Menlo Park, primarily within half a mile of the El Camino Real Corridor. For those who travel for shopping, local businesses, work, or school, 45 to 50 percent of respondents live in Menlo Park within a half-mile of the Corridor, while another 25 to 40 percent live in Menlo Park farther than a half-mile from the Corridor. The smallest percentages of respondents for each response category live outside of Menlo Park farther than half a mile from the Corridor. Among those who use El Camino Real for physical activity, over 90 percent live in Menlo Park.

The "other" responses tended to fall into one of six general categories of responses:

1. To connect to other cities in the region
2. To access the library and recreation center
3. For events and children's activities
4. To cross from east to west
5. To visit friends and family
6. To access services

A full list of the open-ended responses can be viewed in Appendix C.

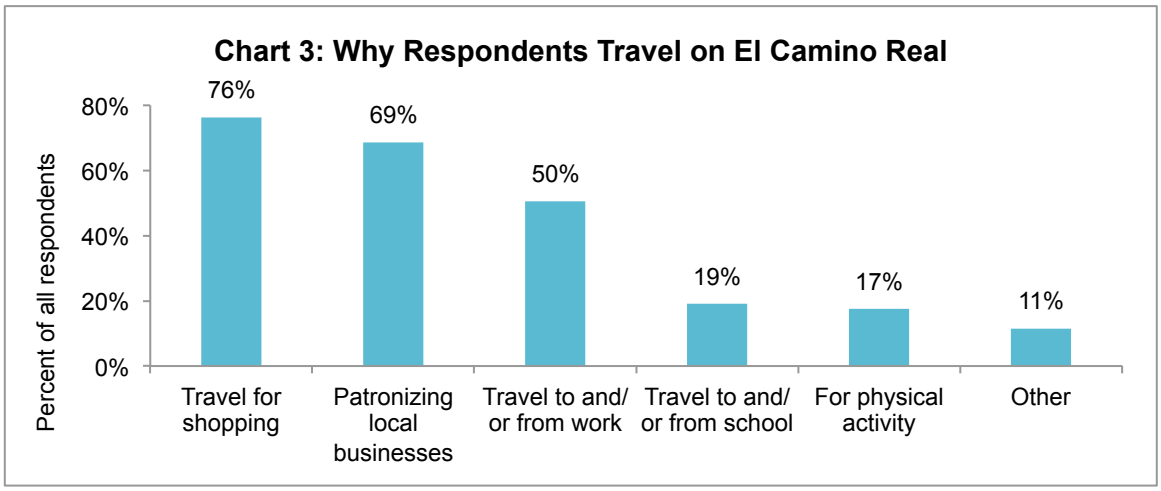

Table 3: Why Respondents Travel on El Camino Real

Reason	*Number of Respondents*	*Percent of Total*
Travel for shopping	240	76%
Patronizing local businesses	216	69%
Travel to and/or from work	159	50%
Travel to and/or from school	60	19%
For physical activity	55	17%
Other	36	11%
Total	315	

TRANSPORTATION MODES

Questions 3 through 8 asked respondents about their use of various modes of travel on El Camino Real. Questions 3 through 6 focused on the frequencies with which participants drive a vehicle, ride a bike, use local bus transit, or walk along El Camino Real.

The majority of respondents use multiple forms of transportation to access El Camino Real. In fact, only 22 percent of respondents exclusively drive along El Camino Real, only 5 percent exclusively bicycle there, and less than 1 percent exclusively walks (only one respondent). No respondents use bus transit as their only form of transportation along El Camino Real.

Chart 4 and Table 4 describe the percentage of respondents who use each of the four modes at least sometimes compared to those who stated that they "almost never" use each mode. As each respondent may select multiple modes, each column shows a percentage of the total number of respondents. The transportation mode used by the largest share of survey respondents was driving, with 84 percent of respondents driving El Camino Real at least a few times a week. Walking and bicycling each have similar shares of respondents, with 61 percent of respondents walking and 60 percent bicycling at least sometimes on weekends. Comparatively few respondents, only 6 percent, use bus transit service along El Camino Real.

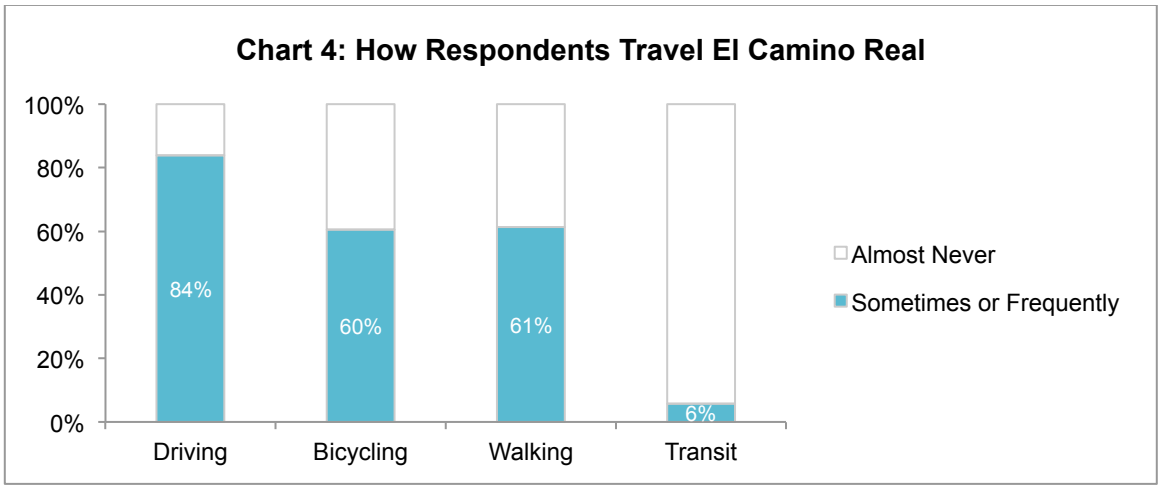

Table 4: How Respondents Travel El Camino Real

Transportation Method	*Number of Respondents*	*Percent of Total*
Driving	265	84%
Bicycling	191	60%
Walking	194	61%
Transit	18	6%
Total Respondents	316	

Driving

Driving was the most common form of transportation among survey respondents, with 84 percent driving El Camino Real at least a few times a week. Most respondents who drive on El Camino Real drive on a daily basis, with nearly 50 percent of respondents driving on the Corridor at least once a day. Chart 5 and Table 5 describe the frequency with which respondents drive El Camino Real.

Those driving most frequently tend to live in Menlo Park and work outside of Menlo Park. Following the overall trend for reasons respondents visit El Camino Real, those driving at the highest frequencies tend to be visiting for shopping, to patronize local businesses, and to commute to work. Those driving a few times a week are more likely traveling to shop (75 percent) and patronize local businesses (68 percent) and commute (39 percent), than to travel for school or physical activity, though the percentage of commuters is still much lower than among those driving multiple times a day. If a respondent drives and travels El Camino Real for work, he or she is more likely to be driving multiple times a day.

A majority of the respondents who drive along El Camino Real travel the Corridor using other forms of transportation in addition to driving, mainly bicycling and walking. For instance, 55 percent of drivers also bike, 62 percent also walk, and 4 percent also use bus transit. Over a quarter of drivers at all frequencies walk along or across El Camino Real at least a few times a week.

Of those 16 percent of respondents who almost never drive El Camino Real, most use an alternative form of transportation to access the Corridor, with bicycle being the most common form. Ninety percent of those not driving ride a bicycle on El Camino Real at least sometimes, with 82 percent of those not driving bicycling several times a week or daily. Sixty-one percent of those not driving walk along El Camino Real; 29 percent of those not driving walk several times a week or daily. Fourteen percent of those not driving use bus transit along the Corridor; only six out of seven respondents use transit several times a week, and one uses transit mostly on weekends.

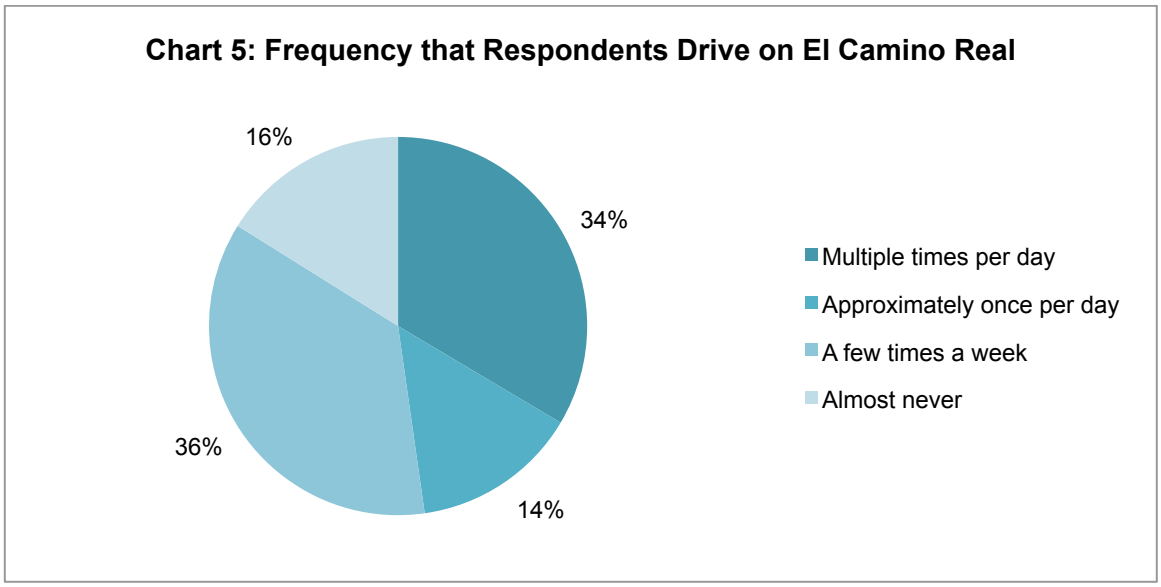

Table 5: Frequency that Respondents Drive on El Camino Real

Frequency	*Number of Respondents*	*Percent of Total*
Multiple times per day	106	34%
Approximately once per day	45	14%
A few times a week	114	36%
Almost never	51	16%
Total	316	100%

Walking

Walking was the second-most common form of transportation among respondents, with 61 percent walking along or across the Corridor at least sometimes. Among those who walk, more tend to do so on weekends (26 percent of respondents) or several times per week (25 percent of respondents), while a smaller portion walks on a daily basis (10 percent). Chart 6 and Table 6 describe the frequency that respondents walk along or across El Camino Real.

Respondents who walk along El Camino Real are more likely to live in Menlo Park within a half mile of the Corridor (84 percent of those walking live in this area), and are far less likely to live outside of Menlo Park farther than half a mile from the Corridor. There is no significant pattern that describes where they tend to work.

Reasons that those who walk along El Camino Real have for traveling the Corridor follow the overall trend, with most traveling for shopping and patronizing local businesses, followed, to a lesser degree, by travel to and from work. There is a difference, however, among those who walk El Camino Real on a daily basis, for which 55 percent of respondents who walk the Corridor

selected physical activity as a reason that they travel there (a higher percentage than among respondents in general).

Most of the 38 percent of respondents who almost never walk El Camino Real access the Corridor using a vehicle or a bicycle, while few use bus transit. Eighty-three percent of those who do not walk the Corridor tend to drive. Forty percent tend to use bicycle, with most cycling several times per week or daily. Only 2 percent said that they use bus transit on El Camino Real.

Most of the respondents who do walk along El Camino Real also travel the Corridor using other transportation modes, generally driving or bicycling. Eighty-four percent also drive, while 73 percent also bike.

Survey participants were also asked if they had children who have to cross El Camino Real to get to school, to which 19 percent of respondents said yes. Thirty-seven percent of these respondents also walk at least several times per week, 27 percent walk mostly on weekends, and 37 percent almost never walk.

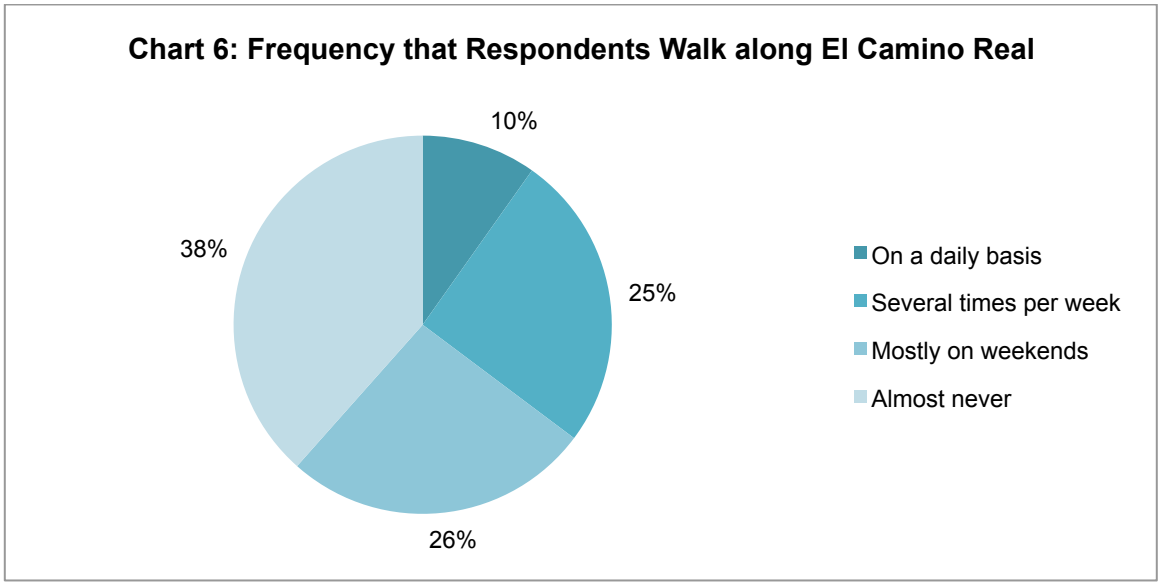

Table 6: Frequency that Respondents Walk along El Camino Real

Frequency	*Number of Respondents*	*Percent of Total*
On a daily basis	31	10%
Several times per week	80	25%
Mostly on weekends	83	26%
Almost never	121	38%
Total	315	100%

Bicycling

Bicycling was the third-most common form of transportation among respondents, with just three respondents fewer than walking. Sixty percent of respondents bike along El Camino Real at least sometimes. Most respondents who bike do so on a weekly basis, with 22 percent of respondents biking several times a week and another 19 percent biking on a daily basis. Chart 7 and Table 7 describe the frequency with which respondents bicycle along El Camino Real.

Those cycling most frequently are more likely to live in Menlo Park and work outside of Menlo Park, though those cycling on a daily basis are also generally more likely to live and work within half a mile of the Corridor.

Reasons that bicyclists on El Camino Real may visit the Corridor are similar to the overall trend, with the exception of those cycling daily – for those cycling at this frequency, the most common reason to travel El Camino Real is travel to and from work (74 percent), just barely more common than travel for shopping (72 percent). At least half of those cycling several times a week or mostly on weekends travel for work. If a respondent bikes and travels El Camino Real for work, he or she is more likely to be cycling on a daily basis.

Of those 40 percent of respondents who almost never cycle along El Camino Real, most drive to access the Corridor.

A majority of the respondents who bike along El Camino Real travel the Corridor using other forms of transportation in addition to biking, mainly driving and walking. There is nearly the same number of those driving (76 percent of bicyclists) as those walking (74 percent of bicyclists). Generally, cycling and driving frequencies appear inversely related, with those driving more often cycling less often and vice versa.

Chart 7: Frequency that Respondents Bike El Camino Real

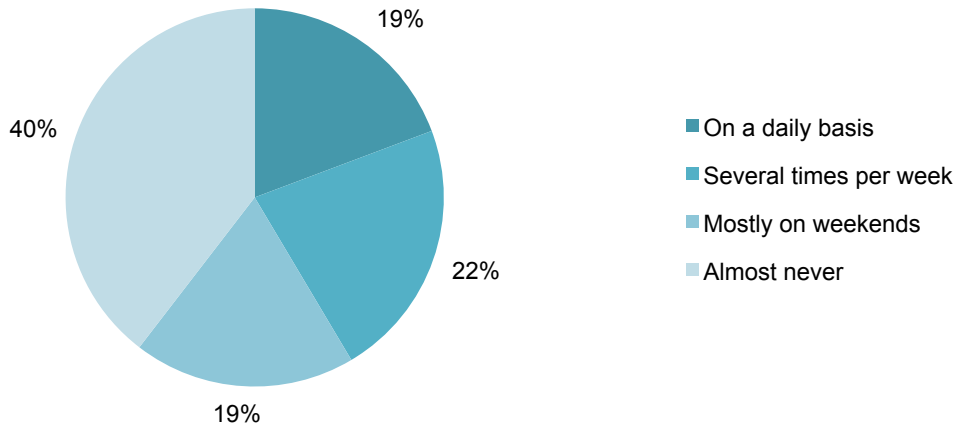

Table 7: Frequency that Respondents Bike El Camino Real

Frequency	*Number of Respondents*	*Percent of Total*
On a daily basis	61	19%
Several times per week	70	22%
Mostly on weekends	60	19%
Almost never	125	40%
Total	316	100%

Transit

Local bus transit was the least common form of transportation used among respondents, with only 6 percent of respondents using the bus at least sometimes. Most transit users responding to the survey ride at a frequency of several times a week (4 percent of respondents) with smaller numbers riding mostly on weekends (1 percent of respondents) and on a daily basis (1 percent of respondents). Chart 8 and Table 8 describe the frequency with which respondents use transit along El Camino Real. The sample size for this transportation mode was very small and may not be indicative of the habits of all users of transit along El Camino Real in Menlo Park.

Those respondents using transit along El Camino Real live and work in all four location categories. Reasons for traveling El Camino Real differ by frequency of transit usage. Both daily riders travel the Corridor for work, school, and local businesses. Those riding several times per week followed nearly the same distribution as survey respondents overall, with the highest share (92 percent of transit users) traveling for shopping, followed by patronizing local businesses (75 percent of transit users) and traveling to and from work (58 percent of transit users). For the four respondents using transit mostly on weekends, all travel the Corridor for work, three for shopping and local businesses, and one for school. For those who do use transit on El Camino Real, most also bike, walk, and drive.

Of the 94 percent of respondents who almost never use local bus transit along El Camino Real, most drive along the Corridor, though a majority also bicycles and walks. Respondents in this transportation category differ from the others in that driving is not the most common form of transportation used in addition to transit. The most common is biking, as 89 percent of transit users also bike the Corridor, while 83 percent of transit users also walk there. Sixty-one percent of transit users also drive, the lowest percentage of drivers among the bicycling, walking, and transit using categories.

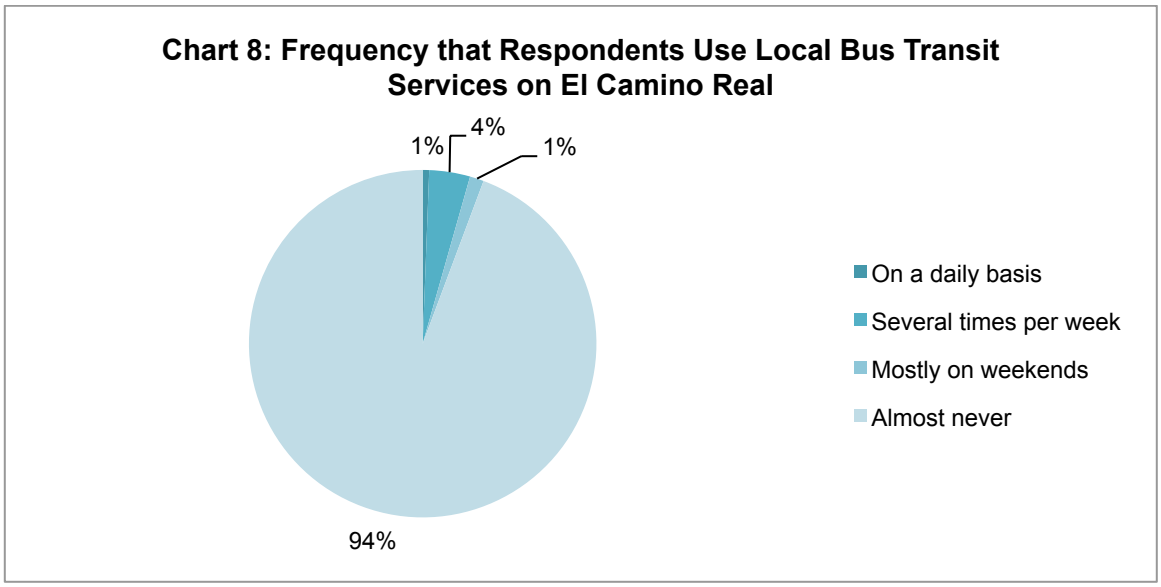

Table 8: Frequency that Respondents Use Local Bus Transit Services on El Camino Real

Frequency	*Number of Respondents*	*Percent of Total*
On a daily basis	2	1%
Several times per week	12	4%
Mostly on weekends	4	1%
Almost never	298	94%
Total	316	100%

Caltrain

Question 8 asked participants how they commonly travel to the Menlo Park Caltrain station, which can be accessed from El Camino Real via Oak Grove Avenue and Santa Cruz Avenue. Most respondents (57 percent) use the station in some capacity. Of those who use the Caltrain station, the most common transportation method used to access Caltrain is bicycle, which accounts for 37 percent. The second-most common mode of transportation to the station is walking, at 34 percent of station users. Twenty-two percent of station users (12 percent of respondents) drive to Caltrain and park there. Only 7 percent of station users (4 percent of respondents) said that they commonly are dropped off at the station by another vehicle or transit. Chart 9 and Table 9 describe how respondents commonly access the Menlo Park Caltrain station.

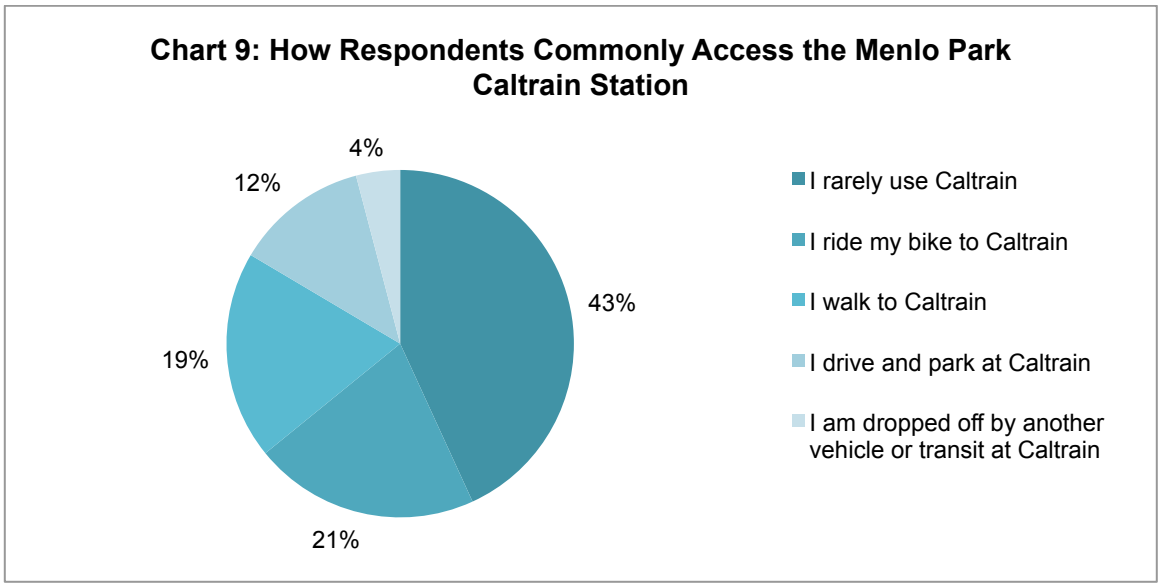

Table 9: How Respondents Commonly Access the Menlo Park Caltrain Station

Transportation Method	*Number of Respondents*	*Percent of Total*
I rarely use Caltrain	136	43%
I ride my bike to Caltrain	66	21%
I walk to Caltrain	61	19%
I drive and park at Caltrain	39	12%
I am dropped off by another vehicle or transit at Caltrain	13	4%
Total	315	100%

OPINIONS AND CONCERNS

Questions 11 through 14 asked participants to indicate their opinions on a series of statements on safety, the environment, and the walking, transit, vehicle traffic, bicycle, and parking environments on El Camino Real. The statements included in the survey were originally made by community members at the community workshop on April 30, 2014.

Safety and Environmental

These statements gauged respondents' opinions on general safety, children's safety, air quality, and signage. Chart 10 and Table 10 describe respondents' agreement with these statements. Responses showed agreement that safety on El Camino Real could be improved. A large majority of respondents agreed that children's safety when crossing the Corridor for school should be a high priority for the community, and only a very small portion of respondents disagreed. Though a very high percentage of respondents with children who cross El Camino Real strongly agreed (70 percent) or agreed (17 percent) with this statement, the majority of respondents without children who cross the Corridor also strongly agreed (47 percent) or agreed (29 percent).

A majority of respondents also agreed that the Corridor is only safe for vehicles regardless of which transportation modes they tend to use. Air quality was also a concern, with a majority of respondents agreeing that it should be a high priority to mitigate poor air quality resulting from traffic congestion. Regarding the clarity of signage for cross streets and turns, respondents tended to be neutral or split evenly between agreement and disagreement.

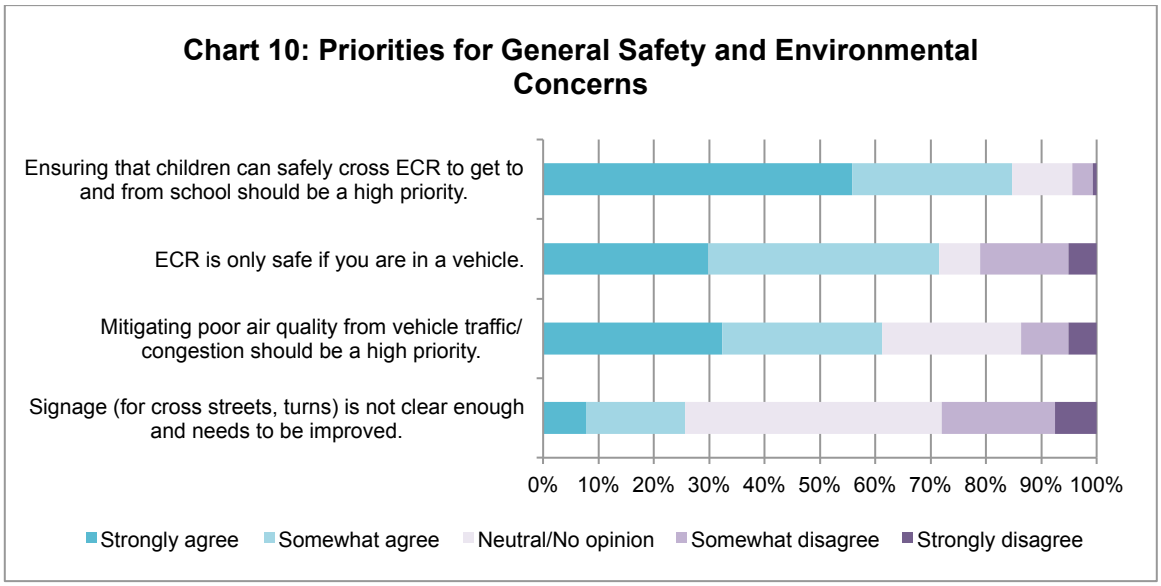

Table 10: Priorities for General Safety and Environmental Concerns

	Strongly agree	*Somewhat agree*	*Neutral/ No opinion*	*Somewhat disagree*	*Strongly disagree*	*Response Count*
Ensuring that children can safely cross ECR to get to and from school should be a high priority.	56%	29%	11%	4%	1%	294
ECR is only safe if you are in a vehicle.	30%	42%	7%	16%	5%	295
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.	32%	29%	25%	8%	5%	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.	8%	18%	46%	20%	7%	293

Walking Environment

The statements in Question 12 focused on pedestrian facilities and safety, and addressed concerns about paths, bicycles on the sidewalk, vehicle speeds, and crossing signals. Chart 11 and Table 11 describe respondents' levels of agreement with these statements. Despite the responses to Question 11, in which the majority of respondents believed that the Corridor was only safe if you were in a vehicle and that ensuring safe crossing for school children should be a high priority, most respondents agreed that signal lengths are currently appropriate for pedestrian safety. Similarly, nearly equal numbers of respondents agreed, disagreed, or were neutral to the idea that vehicle speeds should be slowed to improve pedestrian safety. There was not a strong difference in responses between participants who walk and respondents who drive. There was, however, also a sense that bicycles on the sidewalk pose a danger to pedestrians, as more than 60 percent agreed and just over 20 percent disagreed. A majority (nearly 70 percent) of respondents also agreed that there should be a parallel separated pedestrian path; less than 10 percent disagreed. Both cyclists and pedestrians tended to agree with this statement. Most respondents claimed that they would walk rather than drive for short trips if pedestrian conditions improved on El Camino Real. Agreement was strongest among those living in Menlo Park near the Corridor, those working within half a mile of the Corridor, those frequently bicycling, and those already walking.

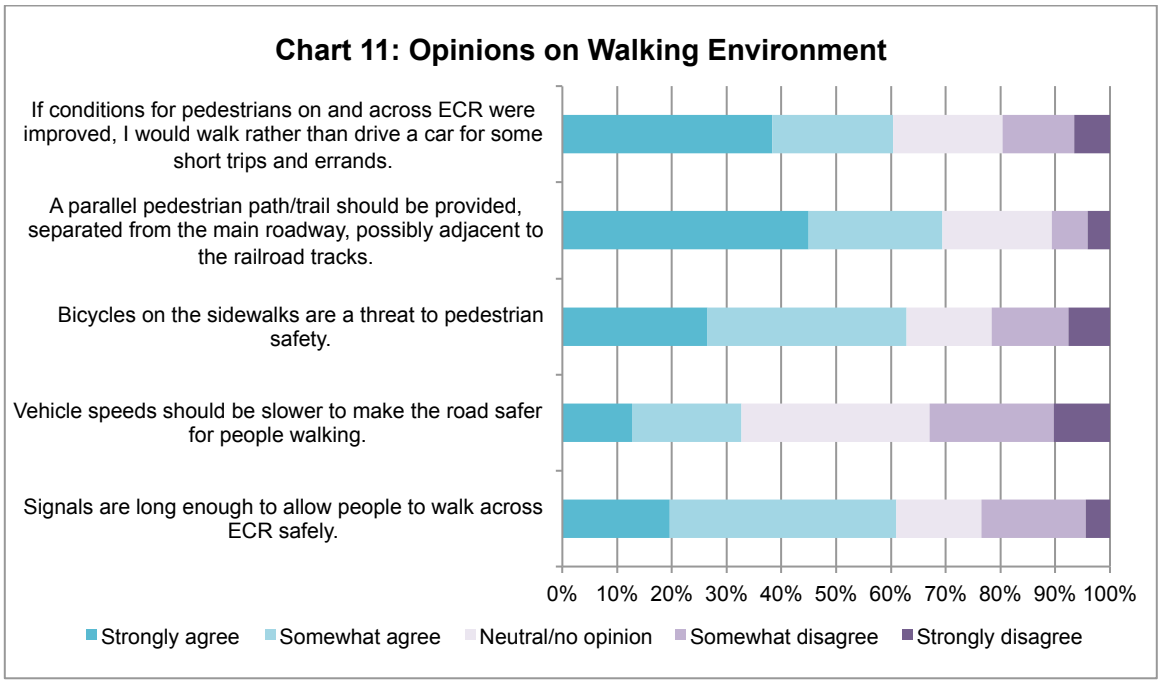

Table 11: Opinions on Walking Environment

	Strongly agree	*Somewhat agree*	*Neutral/ No opinion*	*Somewhat disagree*	*Strongly disagree*	*Response Count*
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.	38%	22%	20%	13%	7%	290
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.	45%	24%	20%	7%	4%	291
Bicycles on the sidewalks are a threat to pedestrian safety.	27%	37%	16%	14%	8%	291
Vehicle speeds should be slower to make the road safer for people walking.	13%	20%	34%	23%	10%	291
Signals are long enough to allow people to walk across ECR safely.	20%	41%	16%	19%	4%	290

Transit

This statement evaluated participants' interest in a dedicated bus or bus rapid transit (BRT) lane. Chart 12 and Table 12 describe respondents' levels of agreement with this statement. Most respondents disagreed that there should be BRT along El Camino Real through Menlo Park (40 percent) and nearly the same amount were neutral or had no opinion. Those more likely to agree with the statement tended to live outside of Menlo Park, almost never drive, or frequently walk or bike.

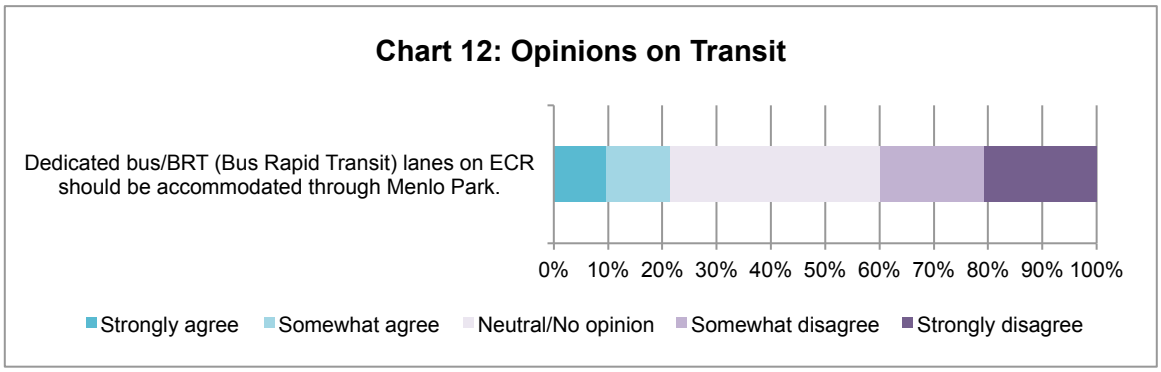

Table 12: Opinions on Transit

	Strongly agree	*Somewhat agree*	*Neutral/ No opinion*	*Somewhat disagree*	*Strongly disagree*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.	10%	12%	39%	19%	21%	289

Vehicle Traffic Environment

These statements represented opinions on priorities and actions to be taken regarding vehicle traffic conditions on El Camino Real. Chart 13 and Table 13 describe respondents' levels of agreement with these statements. Most (more than 60 percent) of respondents agreed that there is already adequate capacity for automobiles, and that improvements should prioritize alternative transportation modes. Respondents who said that they drive on El Camino Real were more likely to agree with this statement, even among the most frequent drivers. Respondents who frequently bicycle were particularly likely to support this statement, with 80 percent of daily riders in strong support. Pedestrians also tended to be in strong support.

Along the same lines, respondents were more likely to disagree than agree with the statement that improving automobile traffic flow should be the highest priority for the Corridor. Those who drive on El Camino Real were more likely than the other demographics to agree with this statement, with over 50 percent of those driving multiple times a day, and 60 percent of those driving once per day agreeing that improving traffic flow should be the highest priority.

Responses generally revealed preferences for statements that prioritized convenience for locals. Respondents were far more likely to:

- Agree than disagree that controlling spillover traffic in neighborhoods adjacent to the Corridor should be a priority;
- Very strongly disagree with the prioritization of regional through-traffic; and
- Strongly disagree that lanes should be widened to accommodate large trucks and delivery vehicles.

There was a relatively balanced response to the statement that regional through-traffic and local traffic should be separated—though respondents were most likely to agree, nearly the same number of respondents were neutral, and only slightly fewer disagreed.

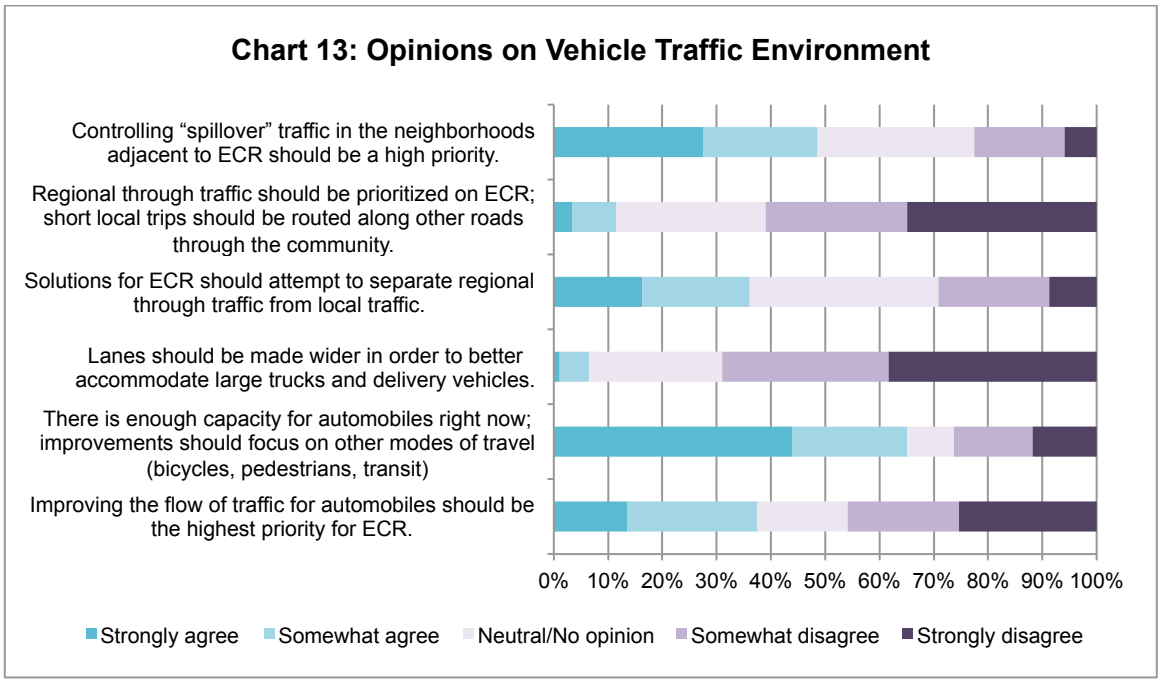

Table 13: Opinions on Vehicle Traffic Environment

	Strongly agree	*Somewhat agree*	*Neutral/ No opinion*	*Somewhat disagree*	*Strongly disagree*	*Response Count*
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.	27%	21%	29%	17%	6%	288
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.	3%	8%	28%	26%	35%	289
Solutions for ECR should attempt to separate regional through traffic from local traffic.	16%	20%	35%	20%	9%	288
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.	1%	6%	25%	31%	39%	290
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)	44%	21%	9%	15%	12%	289
Improving the flow of traffic for automobiles should be the highest priority for ECR.	14%	24%	17%	20%	25%	288

Bicycle Environment

Question 15 included statements about bicycle safety and potential bicycle improvements, and parallel routes. Two statements gauged opinions on the best place to accommodate bicycle traffic—one stated that there should be continuous bike lanes along El Camino Real, and another stated that bicycles are best accommodated on parallel routes. Chart 14 and Table 14 describe respondents' levels of agreement with these statements.

A majority of respondents agreed with both statements, though 11 percent more agreed that there should be bike lanes, and more respondents tended to disagree that bicycles were best accommodated on parallel routes. Preferences tended to differ based on whether the respondent was a daily or frequent cyclist, versus primarily a driver: frequent cyclists were generally more likely to favor bike lanes, with daily cyclists 61 percent more likely to strongly agree with bike

lanes than with parallel routes. On the other hand, frequent drivers were more likely to prefer parallel routes than bike lanes. Respondents indicated that existing parallel routes are not currently effective for bicycle travel, with over 80 percent agreeing that they are too discontinuous or conflicted. Regarding potential bike lanes, most respondents agreed that they should be physically separated from vehicle traffic. A large majority of cyclists agreed with this statement, as did a majority of drivers.

Respondents also largely agreed that the Corridor is not currently safe or convenient for crossing by bicycle. Over 70 percent of respondents agreed that they would consider bicycling rather than driving for short trips if bicycle conditions on El Camino Real were improved. This includes the majority of frequent drivers, frequent and weekend cyclists, and all but two transit-riding respondents.

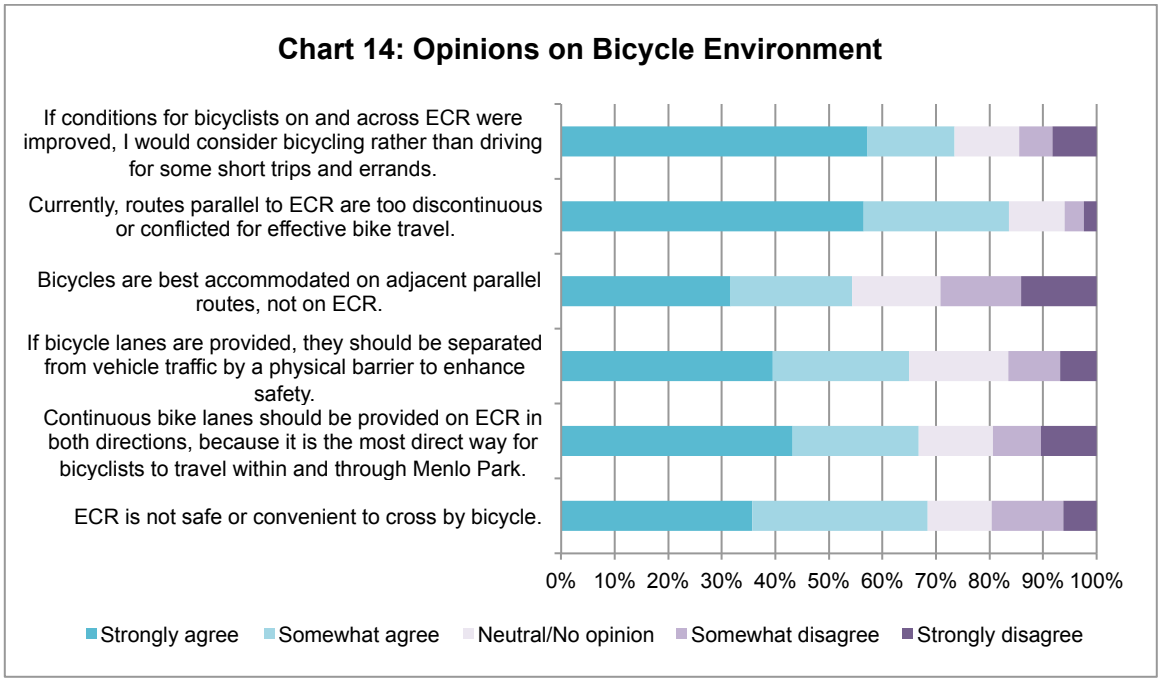

Table 14: Opinions on Bicycle Environment

	Strongly agree	*Somewhat agree*	*Neutral/ No opinion*	*Somewhat disagree*	*Strongly disagree*	*Response Count*
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.	57%	16%	12%	6%	8%	290
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.	56%	27%	10%	3%	2%	287
Bicycles are best accommodated on adjacent parallel routes, not on ECR.	32%	23%	16%	15%	14%	291
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.	40%	25%	19%	10%	7%	291
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.	43%	23%	14%	9%	10%	289
ECR is not safe or convenient to cross by bicycle.	36%	33%	12%	13%	6%	291

Parking Environment

These statements gauged participants' opinions on parking along El Camino Real. Chart 15 and Table 15 describe respondents' agreement with these statements. Respondents were more likely to agree with statements that the space currently occupied by on-street parking could be used more effectively for purposes other than parking. Respondents were more likely to strongly disagree than agree with the statement that on-street parking on El Camino Real is essential for customers of small businesses there. If parking were to be replaced by another use, bicycle lanes were the alternative use with the highest and strongest levels of agreement, with nearly 70 percent in agreement. There was less agreement with converting parking to space for vehicle travel (at 45 percent, less than a majority); however, respondents were still more likely to agree with converting parking to space for vehicles than they were to agree that street parking is essential on El Camino Real. Regardless of the reason for parking removal, a majority of respondents agreed that any parking removed from El Camino Real should be replaced as off-street parking located nearby.

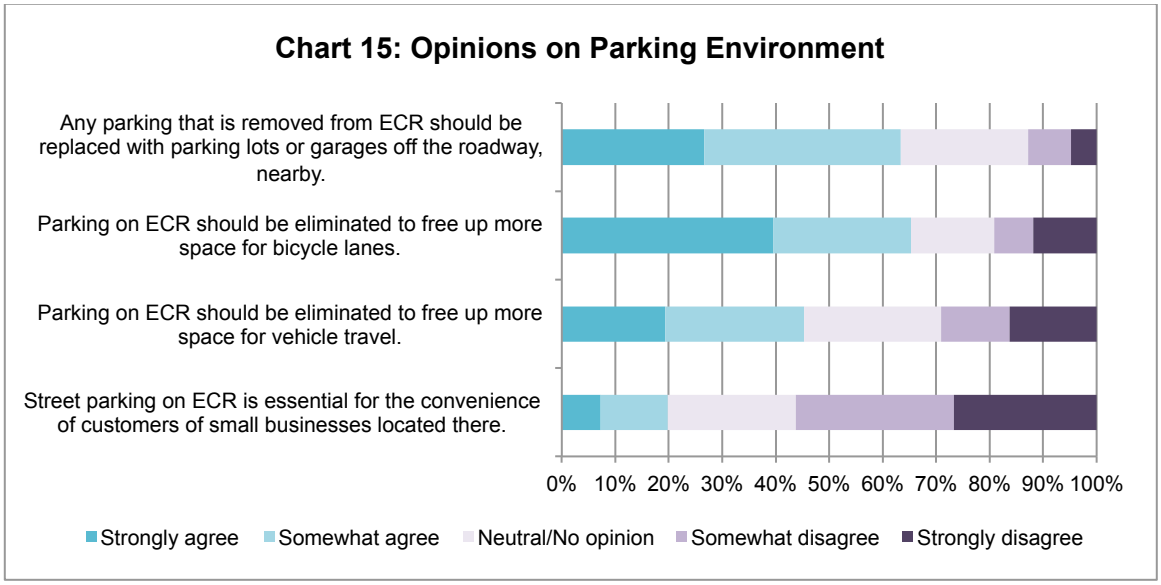

Table 15: Opinions on Parking Environment

	Strongly agree	*Somewhat agree*	*Neutral/ No opinion*	*Somewhat disagree*	*Strongly disagree*	*Response Count*
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.	27%	37%	24%	8%	5%	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.	40%	26%	16%	7%	12%	288
Parking on ECR should be eliminated to free up more space for vehicle travel.	19%	26%	26%	13%	16%	289
Street parking on ECR is essential for the convenience of customers of small businesses located there.	7%	13%	24%	30%	27%	288

POTENTIAL CHANGES ON EL CAMINO REAL

Question 10 offered 17 ideas for potential improvements along El Camino Real, and asked participants to rate each on a scale from least desirable (with a score of 1) to most desirable (with a score of 5). Chart 16 and Table 16 describe the responses for each item; the table also includes an average rating score for each item.

The idea rated as most desirable based on its average score is "Enhanced pedestrian safety and crossings on El Camino Real." Over 80 percent of respondents considered this option desirable, with 57 percent considering it most desirable (more than a majority, and more than was received by any other item). It also received the least amount of undesirable or least desirable responses.

Other items that received a majority of desirable responses were:

- Inclusion of bike lanes on El Camino Real, which also received more than a majority of most desirable responses and also the fewest neutral responses
- More bike parking close to downtown
- More landscaping along El Camino Real (providing buffers between pedestrians or bicyclists and vehicles)
- Timing traffic signals to favor continuous north-south flow on El Camino Real
- Reduction in delay at signalized intersections on El Camino Real
- Wider sidewalks on El Camino Real
- Increased vehicle safety on El Camino Real

These included all of these bicycle- and pedestrian-related improvements, two improvements to signalization, and an improvement related to vehicle safety.

The least-desirable improvement, based on average score, was "More convenient on-street parking on El Camino Real." Over 60 percent of respondents considered this an undesirable improvement, with over 40 percent considering it least desirable. Only eight percent responded that it would be a desirable improvement.

Other items where there were more undesirable responses than desirable responses were:

- Additional through lanes on El Camino Real
- Lower travel speeds on El Camino Real
- Higher travel speeds on El Camino Real
- More convenient on-street parking on El Camino Real

These were mainly vehicle-related improvements that altered travel speeds or that would increase the number of through-lanes or on-street parking spaces on El Camino Real.

There were also three improvements that received more neutral responses than either desirable or undesirable responses, though each of these items was still considered more desirable than undesirable:

- More landscaped medians on ECR
- Additional transit service along ECR
- Timing traffic signals to favor east-west access

Responses to this question generally corresponded to the opinions expressed in responses to questions 11 through 16. For example, the desirability of pedestrian and bicycle improvements reflects respondents' tendency to agree with statements promoting pedestrian and cyclist safety. Likewise, the relative unpopularity of additional through-lanes and on-street parking reflects respondents' opinions that there is adequate vehicle capacity on El Camino Real, and that on-street parking along the Corridor is nonessential and could be eliminated.

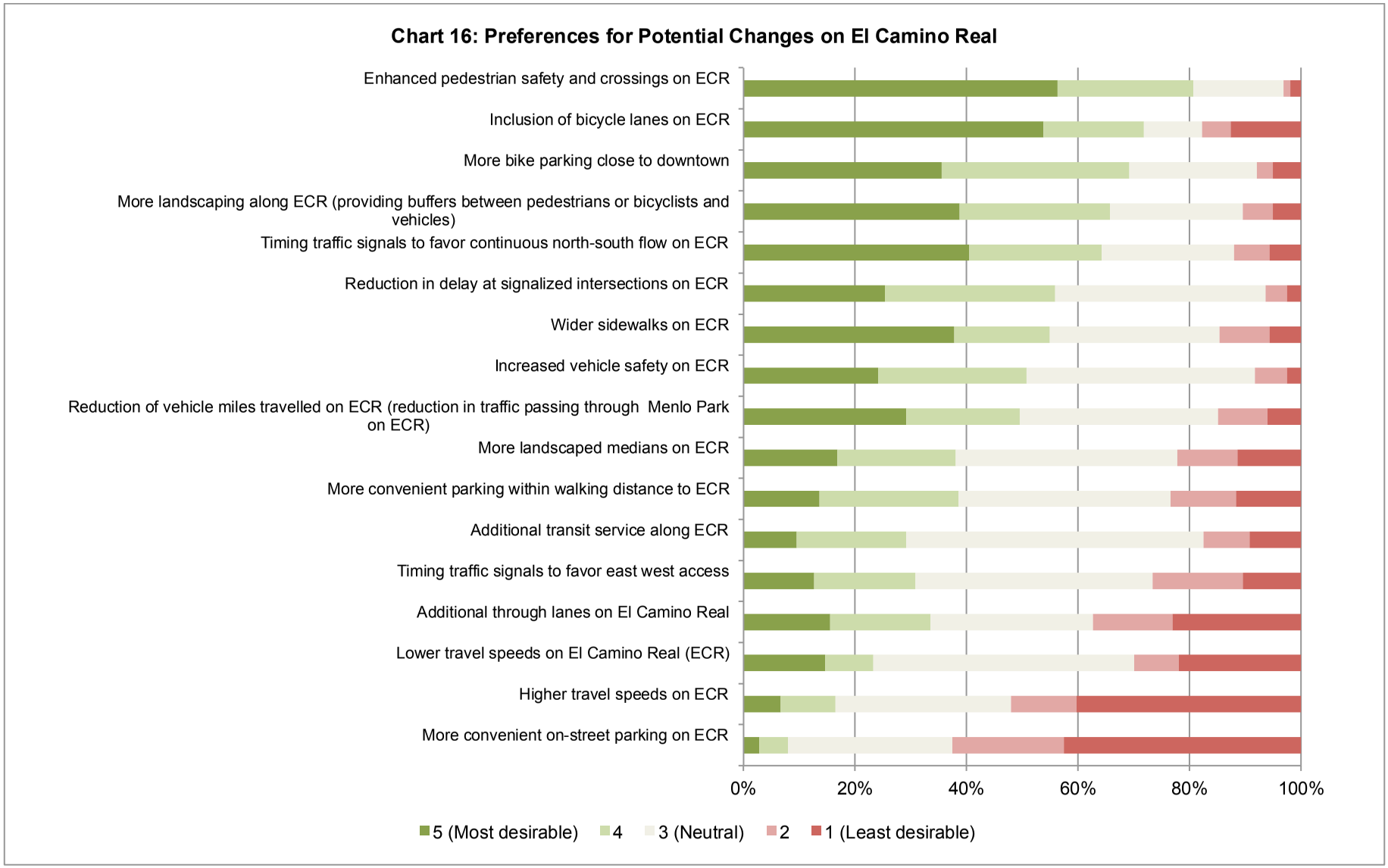
Chart 16: Preferences for Potential Changes on El Camino Real
Enhanced pedestrian safety and crossings on ECR
Inclusion of bicycle lanes on ECR
More bike parking close to downtown
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)
Timing traffic signals to favor continuous north-south flow on ECR
Reduction in delay at signalized intersections on ECR
Wider sidewalks on ECR
Increased vehicle safety on ECR
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)
More landscaped medians on ECR
More convenient parking within walking distance to ECR
Additional transit service along ECR
Timing traffic signals to favor east west access
Additional through lanes on El Camino Real
Lower travel speeds on El Camino Real (ECR)
Higher travel speeds on ECR
More convenient on-street parking on ECR
0%
20%
40%
60%
80%
100%
5 (Most desirable)
4
3 (Neutral)
2
1 (Least desirable)

Table 16: Preferences for Potential Changes on El Camino Real

		Percent of Total					
Potential Improvement	*Rating Average*	*1 Least Desirable*	*2*	*3 Neutral*	*4*	*5 Most Desirable*	*Number of Respondents*
Enhanced pedestrian safety and crossings on ECR	4.32	2%	1%	16%	24%	57%	316
Inclusion of bicycle lanes on ECR	3.95	13%	5%	10%	18%	54%	316
More bike parking close to downtown	3.92	5%	3%	23%	34%	36%	315
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)	3.89	5%	5%	24%	27%	39%	315
Timing traffic signals to favor continuous north-south flow on ECR	3.87	6%	6%	24%	24%	41%	316
Reduction in delay at signalized intersections on ECR	3.72	3%	4%	38%	30%	25%	315
Wider sidewalks on ECR	3.72	6%	9%	30%	17%	38%	315
Increased vehicle safety on ECR	3.64	3%	6%	41%	27%	24%	315
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)	3.58	6%	9%	36%	20%	29%	315
More landscaped medians on ECR	3.21	11%	11%	40%	21%	17%	315
More convenient parking within walking distance to ECR	3.17	12%	12%	38%	25%	14%	316
Additional transit service along ECR	3.12	9%	8%	53%	20%	10%	315
Timing traffic signals to favor east west access	3.06	10%	16%	43%	18%	13%	315
Additional through lanes on El Camino Real	2.89	23%	14%	29%	18%	16%	316
Lower travel speeds on El Camino Real (ECR)	2.86	22%	8%	47%	9%	15%	314
Higher travel speeds on ECR	2.31	40%	12%	31%	10%	7%	315
More convenient on-street parking on ECR	2.06	43%	20%	30%	5%	3%	315

OPEN-ENDED QUESTIONS

Questions 17 through 19 asked open-ended questions and allowed respondents to identify specific concerns and problematic locations along El Camino Real. Full text of the open-ended responses can be found in Appendix C.

Q17. In your opinion, how well does El Camino Real currently serve your transportation needs?

There were a total of 235 responses to this question. Responses generally corresponded to the following categories:

- **Well:** El Camino Real adequately serves the respondent's current needs
- **Not well:** El Camino Real does not adequately serve the respondent's needs or desires
- **Mixed:** The respondent that some needs may be met, but others are not
- **Other:** The respondent's opinion could not be determined from the response

In many cases, respondents also offered details about their transportation needs, and how they related to the El Camino Real Corridor. Common themes among the responses included concerns about the visual environment, future development, alternative transportation, safety, signalization, east/west crossings, and congestion, and a tendency for respondents to seek alternative routes in order to avoid the Corridor.

Most responses, 59 percent, could be categorized as "not well." These stated outright that the Corridor failed to serve their needs or were composed entirely of complaints. Congestion and safety were the main issues cited overall by respondents who felt that their needs were not being met. Specifically, respondents were concerned that traffic and congestion made vehicular travel along El Camino Real too time-consuming or dangerous, particularly during commute times. Thus, the Corridor is not serving the needs of these respondents who would use it in order to commute.

Meanwhile, nearly half of the "not well" responses cited their needs as bicyclists, pedestrians, and transit riders as being neglected along the Corridor. Those who must travel by these modes (as well as those who would prefer to but are afraid or are unable to do so), highlighted a lack of facilities and unsafe conditions as a barrier to their use of the Corridor. Many respondents described difficulty crossing El Camino Real. This was mentioned in relation to driving, bicycling, and walking, and was attributed to the congested and dangerous intersections along the Corridor. One safety concern related specifically to children—many respondents pointed out that the Corridor was too dangerous to serve the needs of children, particularly students, who live in the area and find it challenging to travel the Corridor to reach the destinations such as schools, the Library, and the Recreation Center. Many of the responses in this category (over 25 percent) indicated that as a result of the concerns discussed above, the respondent regularly seeks alternative routes to avoid El Camino Real.

Additionally, 25 percent of responses were "mixed," where respondents identified both needs that were and were not met, or where respondents indicated that the Corridor was "OK" but then identified an area where their needs were not being met. Concerns described in these responses

were similar to those in the "not well" category. Most responses followed a similar pattern, first stating something positive about the Corridor—it is "OK" or "adequate," is a direct route for the respondent's travel needs, is effective during non-commute hours, is effective for car travel, is adequate for pedestrians at crosswalks—and then stating that the respondent finds it difficult during commute hours or during active times of the day, dangerous for walking or bicycling, too congested or dangerous, or that the respondent actually tends to avoid the route when possible.

About 12 percent of responses could be categorized as "well." These stated that El Camino Real adequately served their needs and did not note any complaints about needs that were not being met. However, the responses revealed that in many cases, needs were only just being met. Characteristic responses included statements like "OK," "just tolerable," "barely adequately," and similar phrases suggesting that respondents still find aspects of traveling the Corridor to be unpleasant.

Four percent of the responses were categorized as "other." These included suggested improvements, descriptions of conditions on El Camino Real that did not indicate whether or not the respondent felt their needs were being met, and other comments. These responses can be found in Appendix C.

Q18. Specifically, what is the most important traffic/transportation/circulation issue to you on the El Camino Real Corridor in the City of Menlo Park?

There were a total of 239 responses to this question. In many cases, respondents noted more than one issue; these are also included in the following discussion. The issues identified by respondents can be divided into the following categories, and many of these sentiments mirror the priorities expressed in the earlier questions:

- **Alternatives to driving:** Sixty-two percent of responses identified a need for more alternatives to automobile travel along the Corridor, including improved public transportation options, bicycling, and walking, to accommodate both the needs and desires of different travelers, and the reduction of the number of cars traveling the Corridor.
- **Bicycle facilities and safety:** Fifty-six percent of responses included bicycle facilities and safety as important issues. Responses called for safety improvements both at crossings and along El Camino Real, with the primary improvement being the addition of bike lanes. Some responses indicated a need for separated bike lanes to ensure the safety of riders. Many responses focused specifically on the safety of students who may bicycle along or across the Corridor.
- **Safety:** Forty-one percent of respondents were concerned about safety along the Corridor, including bicycle, pedestrian, and student safety.
- **Traffic:** Thirty-two percent of responses mentioned traffic as a concern. The issue of traffic was often related to other issues, such as potential causes (such as on-street parking, poorly-timed lights, no alternatives to driving), and impacts (such as frustrated drivers behaving dangerously, safety concerns for cyclists and pedestrians, cars cutting through neighborhoods to avoid El Camino Real). Some respondents were also concerned about traffic impacts of future development in the city and along the Corridor.

- **Pedestrian facilities and safety:** Twenty-six percent of responses mentioned pedestrian facilities and safety. Respondents were particularly concerned with safety at pedestrian crossings, and requested improvements in pedestrian-friendliness at intersections. Requests for pedestrian improvements tended to be grouped with requests for bicycle improvements.
- **Crossing El Camino Real:** Nineteen percent of responses were concerned with the safety and convenience of crossing El Camino Real. Pedestrian crossings were a main concern, as were bicycle crossings. Drivers also reported frustration with long lights, blockages, and risky behavior at crossings.
- **Traffic lights:** Fifteen percent of respondents brought up traffic lights in their responses. Most often, the context involved the timing of the lights—many respondents felt that the lights are currently poorly timed, and that changing the timing could improve traffic flow along the Corridor. Many considered their experiences with waiting at individual traffic lights through multiple signal cycles as an indicator of poor traffic performance on the street. Some discussed unsafe driving behaviors at lights, as well as the need to improve signals and safety for cyclists and pedestrians at intersections.
- **Vehicle lanes:** Eleven percent of responses to this question mentioned vehicle travel lanes as an important issue. Regarding the number of lanes desired on El Camino Real, there were both responses suggesting that traffic is too great for existing lanes or that additional lanes are needed, and that there should not be any additional lanes or that existing lanes could be eliminated (Question 10 specifically asked participants whether or not they considered additional lanes desirable; responses were more likely to indicate undesirability though the most common response category was "neutral"). Respondents also identified the points where three lanes merge into two as problem areas responsible for bottlenecks. There were also some mentions of unsafe or problematic behavior at specific turn lanes along the Corridor that contribute to traffic and safety concerns.
- **Parking:** Five percent of respondents mentioned parking as an issue. These respondents indicated that parking along El Camino Real may contribute to traffic and safety problems, either by causing bottlenecks or by endangering cyclists or pedestrians. Some had suggestions for improving or removing parking along the Corridor.
- **East-west connections:** Five percent of responses specifically mentioned El Camino Real as a barrier when traveling between the eastern and western portions of the city.
- **Less common themes:**
  - *Transit:* Three percent of responses specifically mentioned a need for more public transit options.
  - *Student Safety:* Three percent of responses focused on improving safety and accessibility for students and children to walk and bike along and across El Camino Real.
  - *Overpass/Underpass:* Three percent of responses requested the construction of an overpass or underpass to facilitate crossings on El Camino Real.
  - *Streetscaping:* Two percent of responses emphasized the need to improve the appearance of El Camino Real, requesting plantings, landscaping, and multi-modal design.

- *Desirable uses:* One percent responses suggested that the Corridor could be improved by adding more retail businesses or restaurants, markets, and housing.
- *Other:* There were six other issues highlighted in responses, which include minimizing delays caused by the train and the need for more roads connecting to Middlefield.

Q19. Specifically, what intersection or portion of El Camino Real do you have concerns with traffic/transportation/circulation, if any?

There were a total of 210 responses to this question. Respondents indicated specific intersections and/or segments of El Camino Real that they felt were problematic, and many discussed their concerns with those intersections or segments.

Table 17 describes the frequency with which specific intersections were mentioned. The most frequently mentioned intersection by far was the intersection between El Camino Real and Menlo Avenue/Ravenswood Avenue, followed by Middle Avenue and Sand Hill Road.

Table 17: Intersections of Concern

Intersection	*Number of Mentions*
Menlo/Ravenswood	73
Middle	34
Sand Hill	26
Oak Grove[a]	21
Santa Cruz	17
Cambridge	14
Valparaiso/Glenwood	10
Encinal	7
Roble	5
Creek	5
Live Oak	3
Partridge	3

Notes:

a. One of these mentions is ambiguous; it was written as "[O…]," and assumed to refer to Oak Grove.

Many respondents also described concerns that they had with specific intersections.

- **Encinal:** Respondents were mainly concerned with crossing El Camino Real.
- **Valparaiso/Glenwood:** Some respondents were concerned with the crossing, some were concerned with turns off El Camino Real.
- **Oak Grove:** Concerns included vehicles running red lights, and safety of pedestrians and cyclists trying to cross El Camino Real.

- **Santa Cruz:** Concerns included unsafe pedestrian crossings, signal timing, and vehicles running red lights.
- **Menlo/Ravenswood:** Respondents cited a range of concerns including poor bicycle and pedestrian safety; large amounts of traffic, congestion, and conflict between different modes due to the popularity of destinations in the vicinity; turning; and signal timing.
- **Roble:** The only specific concern for Roble was cars blocking cross-traffic at the intersection.
- **Middle:** Concerns included congestion, particularly congestion related to the Safeway and gas station, and the unsafe and inconvenient crossing for pedestrians and cyclists.
- **Cambridge:** Concerns included U-turns and pedestrian crossings.
- **Creek:** The only specific concern noted for Creek Drive is that the bridge is too narrow for pedestrians.
- **Sand Hill:** Concerns included signal timing and vehicles running red lights.

Live Oak Avenue and Partridge Avenue are counted here based on responses that indicated "all intersections" in the Study Area, and have no specific concerns associated with them. The general concerns discussed in these responses are related to safety or, specifically, bicycle safety.

Table 18 describes the frequency that intersections were mentioned as part of problematic segments of the Corridor. Segments of concern included intersections throughout the Study Area. The frequency of inclusion peaks at Menlo Avenue/Ravenswood Avenue, and generally decreases towards the northern and southern boundaries of the Study Area. Many respondents described segments using landmarks such as the Caltrain station, the Stanford Shopping Center, and Palo Alto; these were associated with the nearest intersection and included in the analysis.

Table 18: Intersections in Segments of Concern

Intersection[a]	*Number of Mentions*
Encinal	10
Valparaiso/Glenwood	29
Oak Grove	34
Santa Cruz	44
Menlo/Ravenswood[b]	50
Live Oak[b]	43
Roble[b]	41
Middle[b]	44
Partridge[b]	34
Cambridge[b]	33
Creek[b]	32
Sand Hill[b]	30

Notes:

a. Intersections are listed from north to south.

b. One response described a segment from the Stanford Shopping Center to "Ringwood," which was assumed for this analysis to include intersections from Ravenwood to Sand Hill Road.

Descriptions of respondents' concerns about these segments were focused mainly on congestion or bicycle safety. The areas mentioned most frequently, such as Menlo/Ravenswood, may be considered the most congested and most challenging for cyclists.

4. Summary of Key Issues

TRANSPORTATION NEEDS

Most respondents use multiple forms of transportation along El Camino Real—mainly a combination of driving, bicycling, and walking. They mostly travel the Corridor to access shopping and local businesses, and half of respondents use it to commute to work. Most of the survey respondents reported using the Menlo Park Caltrain Station. These Caltrain users tend to favor bicycling or walking to the station.

Respondents desire multi-modal improvements along the Corridor regardless of which modes they currently use most. The majority agreed that if pedestrian and bicycling improvements were made, they would prefer to take advantage of those transportation options rather than drive.

There may need to be a closer examination of public transit needs along the corridor. The sample of transit riders responding to the survey was too small to draw supportable generalizations. However, survey responses suggest that frequent transit riders—unlike frequent users of other transportation modes—are less willing or less able to drive as an alternative to transit, meaning that this group may have a greater need for non-automotive transportation options. Additionally,

there were some open-ended responses from non-transit users that showed interest in improving public transportation along the corridor.

TRAFFIC

Traffic was a prevalent concern throughout responses to the open-ended questions. Respondents connected traffic conditions with a number of the Corridor's safety issues as frustrated drivers participate in risky behavior, such as running red lights, cutting through adjacent neighborhoods, and speeding. In discussing potential improvements to vehicle traffic, most respondents did not feel that vehicle capacity was a problem in the Corridor, and additional vehicle lanes on El Camino Real were not considered a desirable improvement. Respondents' explanations for traffic causes focused on bottlenecks at specific intersections or along specific segments of the Corridor due to signal timing and lane design. Problematic intersections tended to be those adjacent to major destinations (such as Menlo/Ravenswood) or which serve as connections for regional traffic (such as Sand Hill). Signalization changes were a desired improvement. According to the responses to the open-ended questions, important considerations for signal timing include crossing signals for pedestrians and cyclists and ensuring that signals facilitate east-west movement as well as north-south flow.

SAFETY

Safety in the Corridor was a major concern, particularly for those traveling by bicycle or on foot. Pedestrian safety and crossing improvements, bike lanes, bike parking, and landscaped buffers for pedestrians and cyclists were among the most desired improvements. Additionally, though travel by vehicle was considered the safest way to travel El Camino Real, vehicle safety improvements were still considered desirable. Open-ended responses indicated that vehicle safety may need to address driving behavior such as speeding, opportunistic use of turn lanes for passing purposes, running red lights, U-turns, and stopping in the intersection during red lights.

Student safety and the safety of children using El Camino Real was a priority for respondents, regardless of whether or not respondents have children who need to cross El Camino Real for school. Nineteen percent of respondents have children who need to make this crossing, though responses to open-ended questions suggested that there were additional respondents who are uncomfortable with letting their children travel El Camino Real alone and use alternate means of getting them to school. Student safety concerns include traveling by foot and by bicycle, particularly at crossings.

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Appendix A

El Camino Real
SurveyMonkey Transportation Survey

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El Camino Real Transportation Survey

The survey includes 19 questions and is estimated to take no more than 10 minutes to fill out. Thank you for your time!

*1. Indicate the condition which applies to the location of your residence. (Select one)

- ◯ I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.
- ◯ I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor
- ◯ I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.
- ◯ None of the above.

*2. Indicate the condition which applies to the location of your work. (Select one)

- ◯ I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.
- ◯ I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor
- ◯ I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.
- ◯ None of the above

*3. Do you drive a vehicle on El Camino Real? (Select one)

- ◯ Multiple times per day
- ◯ Approximately once per day
- ◯ A few times a week
- ◯ Almost never

*4. Do you ride a bike on or across El Camino Real? (Select one)

- ◯ On a daily basis
- ◯ Several times per week
- ◯ Mostly on weekends
- ◯ Almost never

*5. Do you use local bus transit services that travel on El Camino Real? (Select one)

- ◯ On a daily basis
- ◯ Several times per week
- ◯ Mostly on weekends
- ◯ Almost never

***6. Do you walk along or across El Camino Real? (Select one)**

- ◯ On a daily basis
- ◯ Several times per week
- ◯ Mostly on weekends
- ◯ Almost never

***7. Do you have a child that has to cross El Camino Real to get to school? (Select one)**

- ◯ Yes
- ◯ No

***8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)**

- ◯ I walk to Caltrain
- ◯ I ride my bike to Caltrain
- ◯ I am dropped off by another vehicle or transit at Caltrain
- ◯ I drive and park at Caltrain
- ◯ I rarely use Caltrain

***9. Why do you typically travel on El Camino Real? (Select all that apply)**

- ☐ Travel to and/or from work
- ☐ Travel to and/or from school
- ☐ Travel for shopping
- ☐ Patronizing local businesses
- ☐ For physical activity

Other (please specify)

El Camino Real Transportation Survey

***10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).**

	1 Least desirable	2	3 Neutral	4	5 Most desirable
Lower travel speeds on El Camino Real (ECR)	○	○	○	○	○
Higher travel speeds on ECR	○	○	○	○	○
More convenient on-street parking on ECR	○	○	○	○	○
More convenient parking within walking distance to ECR	○	○	○	○	○
More bike parking close to downtown	○	○	○	○	○
Inclusion of bicycle lanes on ECR	○	○	○	○	○
Enhanced pedestrian safety and crossings on ECR	○	○	○	○	○
Wider sidewalks on ECR	○	○	○	○	○
Additional through lanes on El Camino Real	○	○	○	○	○
Increased vehicle safety on ECR	○	○	○	○	○
Additional transit service along ECR	○	○	○	○	○
Timing traffic signals to favor continuous north-south flow on ECR	○	○	○	○	○
Timing traffic signals to favor east west access	○	○	○	○	○
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)	○	○	○	○	○
Reduction in delay at signalized intersections on ECR	○	○	○	○	○
More landscaped medians on ECR	○	○	○	○	○
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)	○	○	○	○	○

Instructions for Questions 11-16: The following generalized statements were made at the project's first community workshop on April 30, 2014, each representing an opinion of an individual attending the meeting. Please indicate your opinion on each of these statements using 1 (strongly disagree), 2 (somewhat disagree), 3 (neutral/no opinion), 4 (somewhat agree) or 5 (strongly agree) for each item. The City will evaluate which statements represent options most supported by the community before identifying feasible improvements to the El Camino corridor in the coming stages of the study.

11. General Safety and Environmental Concerns

	Strongly disagree	Somewhat disagree	Neutral/No opinion	Somewhat agree	Strongly agree
ECR is only safe if you are in a vehicle.	◯	◯	◯	◯	◯
Ensuring that children can safely cross ECR to get to and from school should be a high priority.	◯	◯	◯	◯	◯
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.	◯	◯	◯	◯	◯
Signage (for cross streets, turns) is not clear enough and needs to be improved.	◯	◯	◯	◯	◯

12. Walking Environment

	Strongly disagree	Somewhat disagree	Neutral/no opinion	Somewhat agree	Strongly agree
Signals are long enough to allow people to walk across ECR safely.	◯	◯	◯	◯	◯
Vehicle speeds should be slower to make the road safer for people walking.	◯	◯	◯	◯	◯
Bicycles on the sidewalks are a threat to pedestrian safety.	◯	◯	◯	◯	◯
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.	◯	◯	◯	◯	◯
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.	◯	◯	◯	◯	◯

13. Transit

	Strongly disagree	Somewhat disagree	Neutral/No opinion	Somewhat agree	Strongly agree
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.	◯	◯	◯	◯	◯

14. Vehicle Traffic Environment

	Strongly disagree	Somewhat disagree	Neutral/No opinion	Somewhat agree	Strongly agree
Improving the flow of traffic for automobiles should be the highest priority for ECR.	◯	◯	◯	◯	◯
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)	◯	◯	◯	◯	◯
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.	◯	◯	◯	◯	◯
Solutions for ECR should attempt to separate regional through traffic from local traffic.	◯	◯	◯	◯	◯
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.	◯	◯	◯	◯	◯
Controlling “spillover” traffic in the neighborhoods adjacent to ECR should be a high priority.	◯	◯	◯	◯	◯

15. Bicycling Environment

	Strongly disagree	Somewhat disagree	Neutral/No opinion	Somewhat agree	Strongly agree
ECR is not safe or convenient to cross by bicycle.	◯	◯	◯	◯	◯
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.	◯	◯	◯	◯	◯
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.	◯	◯	◯	◯	◯
Bicycles are best accommodated on adjacent parallel routes, not on ECR.	◯	◯	◯	◯	◯
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.	◯	◯	◯	◯	◯
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.	◯	◯	◯	◯	◯

16. Parking Environment

	Strongly disagree	Somewhat disagree	Neutral/No opinion	Somewhat agree	Strongly agree
Street parking on ECR is essential for the convenience of customers of small businesses located there.	◯	◯	◯	◯	◯
Parking on ECR should be eliminated to free up more space for vehicle travel.	◯	◯	◯	◯	◯
Parking on ECR should be eliminated to free up more space for bicycle lanes.	◯	◯	◯	◯	◯
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.	◯	◯	◯	◯	◯

17. In your opinion, how well does El Camino Real currently serve your transportation needs?

18. Specifically, what is the most important traffic/transportation/circulation issue to you on the El Camino Real corridor in the City of Menlo Park?

19. Specifically, what intersection or portion of El Camino Real do you have concerns with traffic/transportation/circulation, if any?

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Appendix B

El Camino Real
Transportation Survey Responses

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SUMMARY TABLES (QUESTIONS 1-16)

1. Indicate the condition which applies to the location of your residence. (Select one)		
Answer Options	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	46.5%	147
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	32.3%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	13.0%	41
None of the above.	8.2%	26
	answered question	**316**
	skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)		
Answer Options	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	17.7%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	24.1%	76
None of the above	43.4%	137
	answered question	**316**
	skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)		
Answer Options	*Response Percent*	*Response Count*
Multiple times per day	33.5%	106
Approximately once per day	14.2%	45
A few times a week	36.1%	114
Almost never	16.1%	51
	answered question	**316**
	skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)		
Answer Options	*Response Percent*	*Response Count*
On a daily basis	19.3%	61
Several times per week	22.2%	70
Mostly on weekends	19.0%	60
Almost never	39.6%	125
	answered question	**316**
	skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)		
Answer Options	*Response Percent*	*Response Count*
On a daily basis	0.6%	2
Several times per week	3.8%	12
Mostly on weekends	1.3%	4
Almost never	94.3%	298
	answered question	**316**
	skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)		
Answer Options	*Response Percent*	*Response Count*
On a daily basis	9.8%	31
Several times per week	25.4%	80
Mostly on weekends	26.3%	83
Almost never	38.4%	121
	answered question	**315**
	skipped question	**1**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)		
Answer Options	*Response Percent*	*Response Count*
Yes	19.0%	60
No	81.0%	255
	answered question	**315**
	skipped question	**1**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)		
Answer Options	*Response Percent*	*Response Count*
I walk to Caltrain	19.4%	61
I ride my bike to Caltrain	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	4.1%	13
I drive and park at Caltrain	12.4%	39
I rarely use Caltrain	43.2%	136
	answered question	**315**
	skipped question	**1**

9. Why do you typically travel on El Camino Real? (Select all that apply)		
Answer Options	*Response Percent*	*Response Count*
Travel to and/or from work	50.5%	159
Travel to and/or from school	19.0%	60
Travel for shopping	76.2%	240
Patronizing local businesses	68.6%	216
For physical activity	17.5%	55
Other (please specify)		36
	answered question	**315**
	skipped question	**1**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
Answer Options	*1 Least desirable*	*2*	*3 Neutral*	*4*	*5 Most desirable*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)	69	25	147	27	46	2.86	314
Higher travel speeds on ECR	127	37	99	31	21	2.31	315
More convenient on-street parking on ECR	134	63	93	16	9	2.06	315
More convenient parking within walking distance to ECR	37	37	120	79	43	3.17	316
More bike parking close to downtown	16	9	72	106	112	3.92	315
Inclusion of bicycle lanes on ECR	40	16	33	57	170	3.95	316
Enhanced pedestrian safety and crossings on ECR	6	4	51	77	178	4.32	316
Wider sidewalks on ECR	18	28	96	54	119	3.72	315
Additional through lanes on El Camino Real	73	45	92	57	49	2.89	316
Increased vehicle safety on ECR	8	18	129	84	76	3.64	315
Additional transit service along ECR	29	26	168	62	30	3.12	315
Timing traffic signals to favor continuous north-south flow on ECR	18	20	75	75	128	3.87	316
Timing traffic signals to favor east west access	33	51	134	57	40	3.06	315
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)	19	28	112	64	92	3.58	315
Reduction in delay at signalized intersections on ECR	8	12	119	96	80	3.72	315
More landscaped medians on ECR	36	34	125	67	53	3.21	315
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)	16	17	75	85	122	3.89	315
						answered question	**316**
						skipped question	**0**

11. General Safety and Environmental Concerns							
Answer Options	*Strongly disagree*	*Some what disagree*	*Neutral/ No opinion*	*Somew hat agree*	*Strongly agree*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.	15	47	22	123	88	3.75	295
Ensuring that children can safely cross ECR to get to and from school should be a high priority.	2	11	32	85	164	4.35	294
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.	15	25	74	85	95	3.75	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.	22	60	136	52	23	2.98	293
						answered question	**295**
						skipped question	**21**

12. Walking Environment							
Answer Options	*Strongly disagree*	*Some what disagree*	*Neutral/n o opinion*	*Somew hat agree*	*Strongly agree*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.	13	55	45	120	57	3.53	290
Vehicle speeds should be slower to make the road safer for people walking.	30	66	100	58	37	3.02	291
Bicycles on the sidewalks are a threat to pedestrian safety.	22	41	45	106	77	3.60	291
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.	12	19	58	71	131	4.00	291
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.	19	38	58	64	111	3.72	290
						answered question	**292**
						skipped question	**24**

13. Transit							
Answer Options	*Strongly disagree*	*Some what disagree*	*Neutral/ No opinion*	*Somew hat agree*	*Strongly agree*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.	60	55	112	34	28	2.71	289
						answered question	**289**
						skipped question	**27**

14. Vehicle Traffic Environment							
Answer Options	*Strongly disagree*	*Some what disagree*	*Neutral/ No opinion*	*Somew hat agree*	*Strongly agree*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.	73	59	48	69	39	2.80	288
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)	34	42	25	61	127	3.71	289
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.	111	89	71	16	3	2.00	290
Solutions for ECR should attempt to separate regional through traffic from local traffic.	25	59	100	57	47	3.15	288
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.	101	75	80	23	10	2.19	289
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.	17	48	83	61	79	3.48	288
						answered question	**290**
						skipped question	**26**

15. Bicycling Environment							
Answer Options	*Strongly disagree*	*Some what disagree*	*Neutral/ No opinion*	*Somew hat agree*	*Strongly agree*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.	18	39	35	95	104	3.78	291
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.	30	26	40	68	125	3.80	289
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.	20	28	54	74	115	3.81	291
Bicycles are best accommodated on adjacent parallel routes, not on ECR.	41	44	48	66	92	3.43	291
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.	7	10	30	78	162	4.32	287
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.	24	18	35	47	166	4.08	290
						answered question	**292**
						skipped question	**24**

16. Parking Environment							
Answer Options	*Strongly disagree*	*Some what disagree*	*Neutral/ No opinion*	*Somew hat agree*	*Strongly agree*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.	77	85	69	36	21	2.44	288
Parking on ECR should be eliminated to free up more space for vehicle travel.	47	37	74	75	56	3.19	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.	34	21	45	74	114	3.74	288
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.	14	23	69	106	77	3.72	289
						answered question	**290**
						skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 1

1. Indicate the condition which applies to the location of your residence. (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	147	0	0	0	46.5%	147
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	0	102	0	0	32.3%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	0	0	41	0	13.0%	41
None of the above.	0	0	0	26	8.2%	26
					answered question	**316**
					skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	38	8	5	5	17.7%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	16	25	4	2	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	28	14	23	11	24.1%	76
None of the above	65	55	9	8	43.4%	137
					answered question	**316**
					skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
Multiple times per day	63	35	7	1	33.5%	106
Approximately once per day	25	16	4	0	14.2%	45
A few times a week	51	38	15	10	36.1%	114
Almost never	8	13	15	15	16.1%	51
					answered question	**316**
					skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
On a daily basis	23	13	15	10	19.3%	61
Several times per week	29	23	9	9	22.2%	70
Mostly on weekends	33	16	8	3	19.0%	60
Almost never	62	50	9	4	39.6%	125
					answered question	**316**
					skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
On a daily basis	0	2	0	0	0.6%	2
Several times per week	4	0	7	1	3.8%	12
Mostly on weekends	2	0	2	0	1.3%	4
Almost never	141	100	32	25	94.3%	298
					answered question	**316**
					skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
On a daily basis	26	1	4	0	9.8%	31
Several times per week	51	14	8	7	25.4%	80
Mostly on weekends	37	25	15	6	26.3%	83
Almost never	32	62	14	13	38.4%	121
					answered question	**315**
					skipped question	**1**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
Yes	32	23	4	1	19.0%	60
No	114	79	37	25	81.0%	255
					answered question	**315**
					skipped question	**1**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
I walk to Caltrain	51	7	2	1	19.4%	61
I ride my bike to Caltrain	17	15	20	14	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	5	6	1	1	4.1%	13
I drive and park at Caltrain	17	17	3	2	12.4%	39
I rarely use Caltrain	56	57	15	8	43.2%	136
					answered question	**315**
					skipped question	**1**

9. Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Response Percent*	*Response Count*
Travel to and/or from work	75	39	25	20	50.5%	159
Travel to and/or from school	27	24	8	1	19.0%	60
Travel for shopping	119	82	27	12	76.2%	240
Patronizing local businesses	102	76	24	14	68.6%	216
For physical activity	39	11	2	3	17.5%	55
Other (please specify)						36
					answered question	**315**
					skipped question	**1**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)							
1 Least desirable	38	16	54	46	11		
2	12	6	17	17	5		
3 Neutral	72	23	112	102	29		
4	13	7	23	16	4		
5 Most desirable	24	7	32	33	5		
	2.83	2.71	2.84	2.87	2.76	2.83	313
Higher travel speeds on ECR							
1 Least desirable	63	24	95	84	21		
2	15	6	29	24	4		
3 Neutral	49	19	74	76	20		
4	19	6	24	20	5		
5 Most desirable	13	5	17	11	5		
	2.40	2.37	2.33	2.30	2.44	2.35	314
More convenient on-street parking on ECR							
1 Least desirable	68	27	102	84	17		
2	28	12	45	45	12		
3 Neutral	51	16	71	68	21		
4	9	4	14	13	3		
5 Most desirable	3	1	7	5	2		
	2.06	2.00	2.08	2.12	2.29	2.09	314
More convenient parking within walking distance to ECR							
1 Least desirable	23	7	20	20	5		
2	21	8	27	24	5		
3 Neutral	59	25	93	86	23		
4	36	9	64	61	15		
5 Most desirable	20	11	36	25	7		
	3.06	3.15	3.29	3.22	3.25	3.20	315
More bike parking close to downtown							
1 Least desirable	9	6	10	9	2		
2	2	0	7	3	2		
3 Neutral	30	14	59	48	8		
4	62	17	79	74	23		
5 Most desirable	56	23	84	81	20		
	3.97	3.85	3.92	4.00	4.04	3.96	314
Inclusion of bicycle lanes on ECR							
1 Least desirable	18	6	32	21	5		
2	4	4	14	13	2		
3 Neutral	13	7	28	21	3		
4	28	9	43	40	8		
5 Most desirable	96	34	123	121	37		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
	4.13	4.02	3.88	4.05	4.27	4.03	315
Enhanced pedestrian safety and crossings on ECR							
1 Least desirable	2	1	6	3	2		
2	2	2	2	1	1		
3 Neutral	25	6	38	31	5		
4	46	10	60	54	11		
5 Most desirable	84	41	134	127	36		
	4.31	4.47	4.31	4.39	4.42	4.35	315
Wider sidewalks on ECR							
1 Least desirable	7	4	14	10	3		
2	14	5	23	18	4		
3 Neutral	46	21	73	63	15		
4	28	7	38	37	6		
5 Most desirable	64	23	91	87	27		
	3.81	3.67	3.71	3.80	3.91	3.77	314
Additional through lanes on El Camino Real							
1 Least desirable	37	12	49	48	11		
2	22	4	34	26	6		
3 Neutral	49	16	65	63	20		
4	29	15	47	45	10		
5 Most desirable	22	13	45	34	8		
	2.86	3.22	3.02	2.96	2.96	2.98	315
Increased vehicle safety on ECR							
1 Least desirable	4	0	7	4	3		
2	13	2	12	9	1		
3 Neutral	64	23	98	87	19		
4	43	19	62	59	12		
5 Most desirable	35	16	60	56	20		
	3.58	3.82	3.65	3.72	3.82	3.68	314
Additional transit service along ECR							
1 Least desirable	14	5	21	19	3		
2	18	6	21	18	3		
3 Neutral	85	34	130	111	33		
4	30	13	45	46	11		
5 Most desirable	12	2	22	21	5		
	3.05	3.02	3.11	3.15	3.22	3.11	314
Timing traffic signals to favor continuous north-south flow on ECR							
1 Least desirable	10	6	11	13	4		
2	8	2	11	15	0		
3 Neutral	37	15	55	52	15		
4	36	13	61	46	10		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
5 Most desirable	68	24	102	90	26		
	3.91	3.78	3.97	3.86	3.98	3.91	315
Timing traffic signals to favor east west access							
1 Least desirable	17	6	28	22	6		
2	36	7	33	33	9		
3 Neutral	68	23	102	91	22		
4	24	13	46	40	11		
5 Most desirable	14	11	30	29	7		
	2.89	3.27	3.07	3.10	3.07	3.05	314
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)							
1 Least desirable	11	2	14	12	2		
2	13	6	26	21	5		
3 Neutral	51	26	81	75	25		
4	38	12	46	40	11		
5 Most desirable	46	14	72	67	12		
	3.60	3.50	3.57	3.60	3.47	3.57	314
Reduction in delay at signalized intersections on ECR							
1 Least desirable	3	0	4	6	2		
2	10	1	10	8	0		
3 Neutral	59	22	88	77	23		
4	50	19	72	62	15		
5 Most desirable	37	18	65	62	15		
	3.68	3.90	3.77	3.77	3.75	3.76	314
More landscaped medians on ECR							
1 Least desirable	23	8	25	24	7		
2	16	6	30	25	7		
3 Neutral	60	19	94	82	23		
4	32	19	47	44	6		
5 Most desirable	28	8	43	40	12		
	3.16	3.22	3.22	3.24	3.16	3.21	314
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)							
1 Least desirable	7	2	14	8	3		
2	6	2	14	13	2		
3 Neutral	36	16	56	48	14		
4	42	14	66	60	13		
5 Most desirable	68	26	89	86	23		
	3.99	4.00	3.85	3.94	3.93	3.93	314
						answered question	**315**
						skipped question	**0**

11. General Safety and Environmental Concerns						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.						
Strongly disagree	2	9	3	1		
Somewhat disagree	18	22	3	4		
Neutral/No opinion	10	7	4	1		
Somewhat agree	66	35	15	7		
Strongly agree	41	26	10	11		
	3.92	3.47	3.74	3.96	3.75	295
Ensuring that children can safely cross ECR to get to and from school should be a high priority.						
Strongly disagree	0	2	0	0		
Somewhat disagree	5	3	2	1		
Neutral/No opinion	16	9	3	4		
Somewhat agree	36	31	12	6		
Strongly agree	79	54	18	13		
	4.39	4.33	4.31	4.29	4.35	294
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.						
Strongly disagree	3	12	0	0		
Somewhat disagree	10	11	3	1		
Neutral/No opinion	32	22	13	7		
Somewhat agree	35	35	9	6		
Strongly agree	56	19	10	10		
	3.96	3.38	3.74	4.04	3.75	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.						
Strongly disagree	8	12	2	0		
Somewhat disagree	30	17	8	5		
Neutral/No opinion	64	43	18	11		
Somewhat agree	23	17	5	7		
Strongly agree	10	10	2	1		
	2.98	2.96	2.91	3.17	2.98	293
					answered question	**295**
					skipped question	**21**

12. Walking Environment						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.						
Strongly disagree	9	4	0	0		
Somewhat disagree	23	17	9	6		
Neutral/no opinion	17	17	6	5		
Somewhat agree	62	36	13	9		
Strongly agree	24	24	5	4		
	3.51	3.60	3.42	3.46	3.53	290
Vehicle speeds should be slower to make the road safer for people walking.						
Strongly disagree	9	16	5	0		
Somewhat disagree	33	25	4	4		
Neutral/no opinion	47	29	12	12		
Somewhat agree	28	18	7	5		
Strongly agree	18	11	5	3		
	3.10	2.83	3.09	3.29	3.02	291
Bicycles on the sidewalks are a threat to pedestrian safety.						
Strongly disagree	8	7	6	1		
Somewhat disagree	21	10	6	4		
Neutral/no opinion	22	18	2	3		
Somewhat agree	48	38	15	5		
Strongly agree	36	26	4	11		
	3.61	3.67	3.15	3.88	3.60	291
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.						
Strongly disagree	6	6	0	0		
Somewhat disagree	6	6	4	3		
Neutral/no opinion	25	22	5	6		
Somewhat agree	35	24	5	7		
Strongly agree	64	40	19	8		
	4.07	3.88	4.18	3.83	4.00	291
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.						
Strongly disagree	8	11	0	0		
Somewhat disagree	13	20	3	2		
Neutral/no opinion	14	25	12	7		
Somewhat agree	32	21	5	6		
Strongly agree	69	21	12	9		
	4.04	3.21	3.81	3.92	3.72	290
					answered question	**292**
					skipped question	**24**

13. Transit						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.						
Strongly disagree	31	25	3	1		
Somewhat disagree	27	22	5	1		
Neutral/No opinion	56	29	13	14		
Somewhat agree	15	13	3	3		
Strongly agree	6	8	9	5		
	2.54	2.56	3.30	3.42	2.71	289
					answered question	**289**
					skipped question	**27**

14. Vehicle Traffic Environment						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.						
Strongly disagree	31	16	13	13		
Somewhat disagree	31	19	5	4		
Neutral/No opinion	19	20	7	2		
Somewhat agree	35	25	5	4		
Strongly agree	17	19	2	1		
	2.82	3.12	2.31	2.00	2.80	288
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)						
Strongly disagree	11	20	2	1		
Somewhat disagree	24	14	4	0		
Neutral/No opinion	10	13	1	1		
Somewhat agree	36	17	2	6		
Strongly agree	53	35	23	16		
	3.72	3.33	4.25	4.50	3.71	289
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.						
Strongly disagree	57	31	15	8		
Somewhat disagree	38	35	9	7		
Neutral/No opinion	32	26	6	7		
Somewhat agree	6	6	2	2		
Strongly agree	2	1	0	0		
	1.95	2.10	1.84	2.13	2.00	290

14. Vehicle Traffic Environment						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
Solutions for ECR should attempt to separate regional through traffic from local traffic.						
Strongly disagree	13	8	2	2		
Somewhat disagree	22	26	7	4		
Neutral/No opinion	45	28	13	14		
Somewhat agree	29	20	6	2		
Strongly agree	26	15	4	2		
	3.24	3.08	3.09	2.92	3.15	288
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.						
Strongly disagree	55	35	7	4		
Somewhat disagree	32	27	8	8		
Neutral/No opinion	34	21	14	11		
Somewhat agree	9	12	2	0		
Strongly agree	5	3	1	1		
	2.09	2.19	2.44	2.42	2.19	289
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.						
Strongly disagree	7	6	3	1		
Somewhat disagree	16	18	8	6		
Neutral/No opinion	30	30	11	12		
Somewhat agree	32	20	5	4		
Strongly agree	49	24	5	1		
	3.75	3.39	3.03	2.92	3.48	288
					answered question	**290**
					skipped question	**26**

15. Bicycling Environment						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.						
Strongly disagree	5	12	1	0		
Somewhat disagree	14	20	3	2		
Neutral/No opinion	16	12	3	4		
Somewhat agree	47	27	14	7		
Strongly agree	53	28	12	11		
	3.96	3.39	4.00	4.13	3.78	291

15. Bicycling Environment						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.						
Strongly disagree	11	14	4	1		
Somewhat disagree	13	13	0	0		
Neutral/No opinion	22	14	3	1		
Somewhat agree	24	32	5	7		
Strongly agree	65	23	21	16		
	3.88	3.39	4.18	4.48	3.80	289
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.						
Strongly disagree	9	7	3	1		
Somewhat disagree	10	14	1	3		
Neutral/No opinion	21	25	2	6		
Somewhat agree	35	22	9	8		
Strongly agree	60	30	18	7		
	3.94	3.55	4.15	3.68	3.81	291
Bicycles are best accommodated on adjacent parallel routes, not on ECR.						
Strongly disagree	18	7	8	8		
Somewhat disagree	19	15	5	5		
Neutral/No opinion	21	17	6	4		
Somewhat agree	35	24	5	2		
Strongly agree	42	35	9	6		
	3.47	3.66	3.06	2.72	3.43	291
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.						
Strongly disagree	2	5	0	0		
Somewhat disagree	9	1	0	0		
Neutral/No opinion	11	18	1	0		
Somewhat agree	39	29	8	2		
Strongly agree	72	45	23	22		
	4.28	4.10	4.69	4.92	4.32	287
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.						
Strongly disagree	10	13	1	0		
Somewhat disagree	5	12	0	1		
Neutral/No opinion	16	12	3	4		
Somewhat agree	21	22	3	1		
Strongly agree	83	39	25	19		
	4.20	3.63	4.59	4.52	4.08	290
					answered question	**292**
					skipped question	**24**

16. Parking Environment						
	Indicate the condition which applies to the location of your residence. (Select one)					
Answer Options	*I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above.*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.						
Strongly disagree	34	23	11	9		
Somewhat disagree	47	24	6	8		
Neutral/No opinion	26	25	12	6		
Somewhat agree	19	13	3	1		
Strongly agree	7	14	0	0		
	2.38	2.71	2.22	1.96	2.44	288
Parking on ECR should be eliminated to free up more space for vehicle travel.						
Strongly disagree	19	20	5	3		
Somewhat disagree	12	12	9	4		
Neutral/No opinion	35	20	8	11		
Somewhat agree	42	25	6	2		
Strongly agree	27	21	4	4		
	3.34	3.15	2.84	3.00	3.19	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.						
Strongly disagree	14	18	1	1		
Somewhat disagree	7	11	1	2		
Neutral/No opinion	23	16	5	1		
Somewhat agree	34	27	8	5		
Strongly agree	55	27	17	15		
	3.82	3.34	4.22	4.29	3.74	288
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.						
Strongly disagree	7	1	4	2		
Somewhat disagree	10	3	6	4		
Neutral/No opinion	33	22	7	7		
Somewhat agree	46	43	10	7		
Strongly agree	38	30	5	4		
	3.73	3.99	3.19	3.29	3.72	289
					answered question	**290**
					skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 2

1. Indicate the condition which applies to the location of your residence. (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	38	16	28	65	46.5%	147
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	8	25	14	55	32.3%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	5	4	23	9	13.0%	41
None of the above.	5	2	11	8	8.2%	26
					answered question	**316**
					skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Respons e Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	56	0	0	0	17.7%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	0	47	0	0	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	0	0	76	0	24.1%	76
None of the above	0	0	0	137	43.4%	137
					answered question	**316**
					skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
Multiple times per day	18	18	27	43	33.5%	106
Approximately once per day	11	7	3	24	14.2%	45
A few times a week	17	18	28	51	36.1%	114
Almost never	10	4	18	19	16.1%	51
					answered question	**316**
					skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
On a daily basis	19	7	22	13	19.3%	61
Several times per week	11	13	12	34	22.2%	70
Mostly on weekends	10	10	16	24	19.0%	60
Almost never	16	17	26	66	39.6%	125
					answered question	**316**
					skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
On a daily basis	0	0	1	1	0.6%	2
Several times per week	3	2	6	1	3.8%	12
Mostly on weekends	0	0	2	2	1.3%	4
Almost never	53	45	67	133	94.3%	298
					answered question	**316**
					skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
On a daily basis	11	2	8	10	9.8%	31
Several times per week	21	11	19	29	25.4%	80
Mostly on weekends	11	17	27	28	26.3%	83
Almost never	13	17	22	69	38.4%	121
					answered question	**315**
					skipped question	**1**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
Yes	15	11	10	24	19.0%	60
No	41	36	66	112	81.0%	255
					answered question	**315**
					skipped question	**1**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
I walk to Caltrain	14	7	18	22	19.4%	61
I ride my bike to Caltrain	9	8	26	23	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	3	3	3	4	4.1%	13
I drive and park at Caltrain	7	9	9	14	12.4%	39
I rarely use Caltrain	23	20	20	73	43.2%	136
					answered question	**315**
					skipped question	**1**

9. Why do you typically travel on El Camino Real? (Select all that apply)						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Response Percent*	*Response Count*
Travel to and/or from work	35	25	60	39	50.5%	159
Travel to and/or from school	12	11	13	24	19.0%	60
Travel for shopping	44	38	50	108	76.2%	240
Patronizing local businesses	38	33	46	99	68.6%	216
For physical activity	10	11	8	26	17.5%	55
Other (please specify)						36
					answered question	**315**
					skipped question	**1**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)						
1 Least desirable	9	11	16	33		
2	3	3	11	8		
3 Neutral	19	24	39	65		
4	8	2	4	13		
5 Most desirable	17	7	6	16		
	3.38	2.81	2.64	2.79	2.86	314
Higher travel speeds on ECR						
1 Least desirable	29	23	24	51		
2	9	3	10	15		
3 Neutral	14	11	25	49		
4	2	6	13	10		
5 Most desirable	2	4	4	11		
	1.91	2.26	2.51	2.38	2.31	315
More convenient on-street parking on ECR						
1 Least desirable	22	19	30	63		
2	12	10	12	29		
3 Neutral	19	16	27	31		
4	1	2	5	8		
5 Most desirable	2	0	2	5		
	2.09	2.02	2.17	1.99	2.06	315

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
More convenient parking within walking distance to ECR						
1 Least desirable	6	4	12	15		
2	7	3	9	18		
3 Neutral	24	23	24	49		
4	10	12	21	36		
5 Most desirable	9	5	10	19		
	3.16	3.23	3.11	3.19	3.17	316
More bike parking close to downtown						
1 Least desirable	1	1	3	11		
2	0	4	0	5		
3 Neutral	12	15	15	30		
4	20	11	32	43		
5 Most desirable	23	16	26	47		
	4.14	3.79	4.03	3.81	3.92	315
Inclusion of bicycle lanes on ECR						
1 Least desirable	3	9	6	22		
2	1	4	2	9		
3 Neutral	9	4	7	13		
4	10	8	11	28		
5 Most desirable	33	22	50	65		
	4.23	3.64	4.28	3.77	3.95	316
Enhanced pedestrian safety and crossings on ECR						
1 Least desirable	0	1	1	4		
2	0	0	1	3		
3 Neutral	8	9	17	17		
4	11	11	23	32		
5 Most desirable	37	26	34	81		
	4.52	4.30	4.16	4.34	4.32	316
Wider sidewalks on ECR						
1 Least desirable	0	5	4	9		
2	3	5	8	12		
3 Neutral	19	14	23	40		
4	12	8	12	22		
5 Most desirable	22	15	29	53		
	3.95	3.49	3.71	3.72	3.72	315
Additional through lanes on El Camino Real						
1 Least desirable	16	11	18	28		
2	11	5	8	21		
3 Neutral	12	16	28	36		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
4	10	8	15	24		
5 Most desirable	7	7	7	28		
	2.66	2.89	2.80	3.02	2.89	316
Increased vehicle safety on ECR						
1 Least desirable	2	2	1	3		
2	4	2	5	7		
3 Neutral	19	18	37	55		
4	15	15	19	35		
5 Most desirable	16	10	14	36		
	3.70	3.62	3.53	3.69	3.64	315
Additional transit service along ECR						
1 Least desirable	6	1	6	16		
2	4	3	8	11		
3 Neutral	25	33	38	72		
4	17	8	14	23		
5 Most desirable	4	2	10	14		
	3.16	3.15	3.18	3.06	3.12	315
Timing traffic signals to favor continuous north-south flow on ECR						
1 Least desirable	5	3	4	6		
2	4	6	2	8		
3 Neutral	7	12	18	38		
4	16	14	12	33		
5 Most desirable	24	12	40	52		
	3.89	3.55	4.08	3.85	3.87	316
Timing traffic signals to favor east west access						
1 Least desirable	6	1	14	12		
2	7	9	16	19		
3 Neutral	23	16	32	63		
4	12	15	9	21		
5 Most desirable	8	6	5	21		
	3.16	3.34	2.67	3.15	3.06	315
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)						
1 Least desirable	3	2	5	9		
2	2	3	10	13		
3 Neutral	16	18	30	48		
4	13	6	13	32		
5 Most desirable	22	18	18	34		
	3.88	3.74	3.38	3.51	3.58	315
Reduction in delay at signalized intersections on ECR						

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
1 Least desirable	3	1	2	2		
2	3	1	4	4		
3 Neutral	17	16	28	58		
4	17	19	23	37		
5 Most desirable	16	10	19	35		
	3.71	3.77	3.70	3.73	3.72	315
More landscaped medians on ECR						
1 Least desirable	3	5	9	19		
2	5	5	9	15		
3 Neutral	24	18	27	56		
4	13	7	15	32		
5 Most desirable	11	12	16	14		
	3.43	3.34	3.26	3.05	3.21	315
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)						
1 Least desirable	0	4	2	10		
2	1	2	7	7		
3 Neutral	14	14	9	38		
4	16	9	20	40		
5 Most desirable	25	18	38	41		
	4.16	3.74	4.12	3.70	3.89	315
					answered question	**316**
					skipped question	**0**

11. General Safety and Environmental Concerns						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.						
Strongly disagree	1	1	4	9		
Somewhat disagree	13	5	10	19		
Neutral/No opinion	4	4	5	9		
Somewhat agree	23	21	26	53		
Strongly agree	14	13	24	37		
	3.65	3.91	3.81	3.71	3.75	295
Ensuring that children can safely cross ECR to get to and from school should be a high priority.						
Strongly disagree	0	1	0	1		
Somewhat disagree	1	1	6	3		
Neutral/No opinion	4	6	8	14		
Somewhat agree	13	13	24	35		
Strongly agree	37	23	30	74		
	4.56	4.27	4.15	4.40	4.35	294
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.						
Strongly disagree	1	3	3	8		
Somewhat disagree	3	2	5	15		
Neutral/No opinion	13	12	16	33		
Somewhat agree	12	11	23	39		
Strongly agree	26	16	22	31		
	4.07	3.80	3.81	3.56	3.75	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.						
Strongly disagree	3	2	3	14		
Somewhat disagree	9	9	19	23		
Neutral/No opinion	27	21	30	58		
Somewhat agree	13	8	10	21		
Strongly agree	3	4	7	9		
	3.07	3.07	2.99	2.90	2.98	293
					answered question	**295**
					skipped question	**21**

12. Walking Environment						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.						
Strongly disagree	4	3	1	5		
Somewhat disagree	11	10	10	24		
Neutral/no opinion	5	5	12	23		
Somewhat agree	23	22	34	41		
Strongly agree	12	4	9	32		
	3.51	3.32	3.61	3.57	3.53	290
Vehicle speeds should be slower to make the road safer for people walking.						
Strongly disagree	4	3	6	17		
Somewhat disagree	11	11	18	26		
Neutral/no opinion	12	13	30	45		
Somewhat agree	15	10	7	26		
Strongly agree	13	7	5	12		
	3.40	3.16	2.80	2.92	3.02	291
Bicycles on the sidewalks are a threat to pedestrian safety.						
Strongly disagree	5	3	6	8		
Somewhat disagree	8	6	13	14		
Neutral/no opinion	6	10	9	20		
Somewhat agree	19	14	22	51		
Strongly agree	16	11	17	33		
	3.61	3.55	3.46	3.69	3.60	291
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.						
Strongly disagree	2	2	1	7		
Somewhat disagree	1	2	5	11		
Neutral/no opinion	13	12	8	25		
Somewhat agree	16	9	18	28		
Strongly agree	23	19	35	54		
	4.04	3.93	4.21	3.89	4.00	291
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.						
Strongly disagree	3	1	5	10		
Somewhat disagree	7	12	6	13		
Neutral/no opinion	6	9	14	29		
Somewhat agree	14	7	11	32		
Strongly agree	25	15	30	41		
	3.93	3.52	3.83	3.65	3.72	290
					answered question	**292**
					skipped question	**24**

13. Transit						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.						
Strongly disagree	13	10	9	28		
Somewhat disagree	9	13	8	25		
Neutral/No opinion	20	16	31	45		
Somewhat agree	9	2	9	14		
Strongly agree	4	3	9	12		
	2.67	2.43	3.02	2.65	2.71	289
					answered question	**289**
					skipped question	**27**

14. Vehicle Traffic Environment						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.						
Strongly disagree	15	13	20	25		
Somewhat disagree	12	6	13	28		
Neutral/No opinion	10	8	14	16		
Somewhat agree	11	10	12	36		
Strongly agree	6	6	7	20		
	2.65	2.77	2.59	2.98	2.80	288
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)						
Strongly disagree	3	4	4	23		
Somewhat disagree	9	5	8	20		
Neutral/No opinion	5	10	2	8		
Somewhat agree	11	6	17	27		
Strongly agree	26	18	35	48		
	3.89	3.67	4.08	3.45	3.71	289
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.						
Strongly disagree	25	13	28	45		
Somewhat disagree	15	14	20	40		
Neutral/No opinion	15	14	13	29		
Somewhat agree	0	2	4	10		
Strongly agree	0	0	1	2		
	1.82	2.12	1.94	2.08	2.00	290

14. Vehicle Traffic Environment						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
Solutions for ECR should attempt to separate regional through traffic from local traffic.						
Strongly disagree	3	4	2	16		
Somewhat disagree	12	8	15	24		
Neutral/No opinion	19	12	25	44		
Somewhat agree	9	12	12	24		
Strongly agree	12	7	12	16		
	3.27	3.23	3.26	3.00	3.15	288
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.						
Strongly disagree	24	15	18	44		
Somewhat disagree	16	12	15	32		
Neutral/No opinion	10	10	24	36		
Somewhat agree	4	6	6	7		
Strongly agree	1	0	3	6		
	1.95	2.16	2.41	2.19	2.19	289
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.						
Strongly disagree	1	0	8	8		
Somewhat disagree	5	6	17	20		
Neutral/No opinion	12	11	19	41		
Somewhat agree	13	13	6	29		
Strongly agree	23	13	16	27		
	3.96	3.77	3.08	3.38	3.48	288
					answered question	**290**
					skipped question	**26**

15. Bicycling Environment						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.						
Strongly disagree	2	4	1	11		
Somewhat disagree	6	5	7	21		
Neutral/No opinion	8	4	5	18		
Somewhat agree	19	16	22	38		
Strongly agree	20	15	32	37		

15. Bicycling Environment						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
	3.89	3.75	4.15	3.55	3.78	291
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.						
Strongly disagree	3	6	5	16		
Somewhat disagree	8	4	1	13		
Neutral/No opinion	7	8	6	19		
Somewhat agree	13	11	14	30		
Strongly agree	25	13	41	46		
	3.88	3.50	4.27	3.62	3.80	289
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.						
Strongly disagree	4	3	4	9		
Somewhat disagree	4	3	6	15		
Neutral/No opinion	9	13	9	23		
Somewhat agree	15	10	13	36		
Strongly agree	24	15	35	41		
	3.91	3.70	4.03	3.69	3.81	291
Bicycles are best accommodated on adjacent parallel routes, not on ECR.						
Strongly disagree	12	5	10	14		
Somewhat disagree	9	7	5	23		
Neutral/No opinion	9	9	14	16		
Somewhat agree	13	11	16	26		
Strongly agree	13	12	22	45		
	3.11	3.41	3.52	3.52	3.43	291
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.						
Strongly disagree	2	0	1	4		
Somewhat disagree	4	2	2	2		
Neutral/No opinion	4	4	3	19		
Somewhat agree	17	9	15	37		
Strongly agree	28	28	45	61		
	4.18	4.47	4.53	4.21	4.32	287
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.						
Strongly disagree	3	2	4	15		
Somewhat disagree	1	5	0	12		
Neutral/No opinion	8	8	8	11		
Somewhat agree	10	7	10	20		
Strongly agree	34	20	45	67		
	4.27	3.90	4.37	3.90	4.08	290
					answered question	**292**
					skipped question	**24**

16. Parking Environment						
	Indicate the condition which applies to the location of your work. (Select one)					
Answer Options	*I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor*	*I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.*	*None of the above*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.						
Strongly disagree	12	13	19	33		
Somewhat disagree	18	9	14	44		
Neutral/No opinion	13	13	22	21		
Somewhat agree	9	5	7	15		
Strongly agree	3	3	4	11		
	2.51	2.44	2.44	2.41	2.44	288
Parking on ECR should be eliminated to free up more space for vehicle travel.						
Strongly disagree	10	7	11	19		
Somewhat disagree	8	3	9	17		
Neutral/No opinion	14	17	16	27		
Somewhat agree	18	7	20	30		
Strongly agree	5	9	11	31		
	3.00	3.19	3.16	3.30	3.19	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.						
Strongly disagree	5	5	6	18		
Somewhat disagree	3	4	5	9		
Neutral/No opinion	10	10	6	19		
Somewhat agree	15	10	20	29		
Strongly agree	22	14	29	49		
	3.84	3.56	3.92	3.66	3.74	288
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.						
Strongly disagree	2	1	3	8		
Somewhat disagree	6	1	7	9		
Neutral/No opinion	17	17	14	21		
Somewhat agree	17	17	24	48		
Strongly agree	13	7	18	39		
	3.60	3.65	3.71	3.81	3.72	289
					answered question	**290**
					skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 3

1. Indicate the condition which applies to the location of your residence. (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	63	25	51	8	46.5%	147
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	35	16	38	13	32.3%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	7	4	15	15	13.0%	41
None of the above.	1	0	10	15	8.2%	26
					answered question	**316**
					skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	18	11	17	10	17.7%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	18	7	18	4	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	27	3	28	18	24.1%	76
None of the above	43	24	51	19	43.4%	137
					answered question	**316**
					skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
Multiple times per day	106	0	0	0	33.5%	106
Approximately once per day	0	45	0	0	14.2%	45
A few times a week	0	0	114	0	36.1%	114
Almost never	0	0	0	51	16.1%	51
					answered question	**316**
					skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	5	1	32	23	19.3%	61
Several times per week	17	6	28	19	22.2%	70
Mostly on weekends	30	10	16	4	19.0%	60
Almost never	54	28	38	5	39.6%	125
					answered question	**316**
					skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	2	0	0	0	0.6%	2
Several times per week	3	0	3	6	3.8%	12
Mostly on weekends	0	0	3	1	1.3%	4
Almost never	101	45	108	44	94.3%	298
					answered question	**316**
					skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	13	3	10	5	9.8%	31
Several times per week	26	11	33	10	25.4%	80
Mostly on weekends	29	12	26	16	26.3%	83
Almost never	38	19	44	20	38.4%	121
					answered question	**315**
					skipped question	**1**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
Yes	34	8	16	2	19.0%	60
No	72	37	97	49	81.0%	255
					answered question	**315**
					skipped question	**1**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
I walk to Caltrain	23	8	25	5	19.4%	61
I ride my bike to Caltrain	6	2	24	34	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	7	1	5	0	4.1%	13
I drive and park at Caltrain	24	2	11	2	12.4%	39
I rarely use Caltrain	46	32	48	10	43.2%	136
					answered question	**315**
					skipped question	**1**

9. Why do you typically travel on El Camino Real? (Select all that apply)						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Response Percent*	*Response Count*
Travel to and/or from work	75	12	44	28	50.5%	159
Travel to and/or from school	29	9	16	6	19.0%	60
Travel for shopping	86	38	85	31	76.2%	240
Patronizing local businesses	78	30	78	30	68.6%	216
For physical activity	22	7	17	9	17.5%	55
Other (please specify)						36
					answered question	**315**
					skipped question	**1**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)						
1 Least desirable	28	13	25	3		
2	11	5	7	2		
3 Neutral	45	18	57	27		
4	7	3	8	9		
5 Most desirable	13	6	17	10		
	2.67	2.64	2.87	3.41	2.86	314
Higher travel speeds on ECR						
1 Least desirable	39	21	42	25		
2	7	4	18	8		
3 Neutral	37	13	35	14		
4	13	3	13	2		
5 Most desirable	9	4	6	2		
	2.49	2.22	2.32	1.98	2.31	315
More convenient on-street parking on ECR						
1 Least desirable	48	21	46	19		
2	17	9	27	10		
3 Neutral	31	13	30	19		
4	5	1	9	1		
5 Most desirable	4	1	2	2		
	2.05	1.93	2.07	2.16	2.06	315
More convenient parking within walking distance to ECR						
1 Least desirable	13	3	13	8		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
2	11	4	16	6		
3 Neutral	38	17	42	23		
4	27	10	32	10		
5 Most desirable	17	11	11	4		
	3.23	3.49	3.11	2.92	3.17	316
More bike parking close to downtown						
1 Least desirable	9	4	2	1		
2	2	1	6	0		
3 Neutral	33	17	19	3		
4	37	10	33	26		
5 Most desirable	24	13	54	21		
	3.62	3.60	4.15	4.29	3.92	315
Inclusion of bicycle lanes on ECR						
1 Least desirable	20	10	9	1		
2	7	3	5	1		
3 Neutral	15	6	10	2		
4	24	8	19	6		
5 Most desirable	40	18	71	41		
	3.54	3.47	4.21	4.67	3.95	316
Enhanced pedestrian safety and crossings on ECR						
1 Least desirable	1	2	2	1		
2	1	1	2	0		
3 Neutral	15	7	19	10		
4	29	10	26	12		
5 Most desirable	60	25	65	28		
	4.38	4.22	4.32	4.29	4.32	316
Wider sidewalks on ECR						
1 Least desirable	4	6	7	1		
2	8	5	11	4		
3 Neutral	36	11	34	15		
4	17	4	24	9		
5 Most desirable	40	19	38	22		
	3.77	3.56	3.66	3.92	3.72	315
Additional through lanes on El Camino Real						
1 Least desirable	17	8	28	20		
2	9	9	18	9		
3 Neutral	28	11	35	18		
4	28	7	20	2		
5 Most desirable	24	10	13	2		
	3.31	3.04	2.75	2.16	2.89	316

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Increased vehicle safety on ECR						
1 Least desirable	1	3	3	1		
2	4	2	7	5		
3 Neutral	40	13	50	26		
4	31	14	26	13		
5 Most desirable	29	13	28	6		
	3.79	3.71	3.61	3.35	3.64	315
Additional transit service along ECR						
1 Least desirable	9	3	13	4		
2	12	3	10	1		
3 Neutral	58	28	59	23		
4	17	8	19	18		
5 Most desirable	9	3	13	5		
	3.05	3.11	3.08	3.37	3.12	315
Timing traffic signals to favor continuous north-south flow on ECR						
1 Least desirable	5	1	6	6		
2	1	3	8	8		
3 Neutral	17	5	27	26		
4	25	12	33	5		
5 Most desirable	58	24	40	6		
	4.23	4.22	3.82	2.94	3.87	316
Timing traffic signals to favor east west access						
1 Least desirable	18	3	9	3		
2	21	7	20	3		
3 Neutral	45	17	46	26		
4	11	12	23	11		
5 Most desirable	10	6	16	8		
	2.75	3.24	3.15	3.35	3.06	315
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)						
1 Least desirable	9	3	5	2		
2	14	3	10	1		
3 Neutral	31	16	45	20		
4	17	6	22	19		
5 Most desirable	34	17	32	9		
	3.50	3.69	3.58	3.63	3.58	315
Reduction in delay at signalized intersections on ECR						
1 Least desirable	2	0	4	2		
2	4	1	4	3		
3 Neutral	29	16	43	31		
4	39	16	33	8		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
5 Most desirable	31	12	30	7		
	3.89	3.87	3.71	3.29	3.72	315
More landscaped medians on ECR						
1 Least desirable	11	6	15	4		
2	9	3	15	7		
3 Neutral	37	18	45	25		
4	21	10	25	11		
5 Most desirable	27	8	14	4		
	3.42	3.24	3.07	3.08	3.21	315
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)						
1 Least desirable	4	5	7	0		
2	6	3	6	2		
3 Neutral	28	13	19	15		
4	26	8	40	11		
5 Most desirable	41	16	42	23		
	3.90	3.60	3.91	4.08	3.89	315
					answered question	**316**
					skipped question	**0**

11. General Safety and Environmental Concerns						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.						
Strongly disagree	6	3	1	5		
Somewhat disagree	15	6	18	8		
Neutral/No opinion	8	2	8	4		
Somewhat agree	34	19	49	21		
Strongly agree	32	12	36	8		
	3.75	3.74	3.90	3.41	3.75	295
Ensuring that children can safely cross ECR to get to and from school should be a high priority.						
Strongly disagree	1	1	0	0		
Somewhat disagree	6	1	2	2		
Neutral/No opinion	4	6	17	5		
Somewhat agree	27	11	33	14		
Strongly agree	56	23	60	25		
	4.39	4.29	4.35	4.35	4.35	294
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.						
Strongly disagree	6	3	6	0		
Somewhat disagree	11	5	7	2		
Neutral/No opinion	26	9	24	15		
Somewhat agree	25	14	34	12		
Strongly agree	26	11	41	17		
	3.57	3.60	3.87	3.96	3.75	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.						
Strongly disagree	12	3	6	1		
Somewhat disagree	15	9	28	8		
Neutral/No opinion	42	16	51	27		
Somewhat agree	16	11	18	7		
Strongly agree	8	3	9	3		
	2.92	3.05	2.96	3.07	2.98	293
					answered question	**295**
					skipped question	**21**

12. Walking Environment						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.						
Strongly disagree	6	2	5	0		
Somewhat disagree	17	4	22	12		
Neutral/no opinion	14	4	17	10		
Somewhat agree	37	19	50	14		
Strongly agree	20	13	15	9		
	3.51	3.88	3.44	3.44	3.53	290
Vehicle speeds should be slower to make the road safer for people walking.						
Strongly disagree	12	5	11	2		
Somewhat disagree	23	15	26	2		
Neutral/no opinion	32	11	38	19		
Somewhat agree	18	4	21	15		
Strongly agree	9	7	14	7		
	2.88	2.83	3.01	3.51	3.02	291
Bicycles on the sidewalks are a threat to pedestrian safety.						
Strongly disagree	4	2	9	7		
Somewhat disagree	12	4	19	6		
Neutral/no opinion	20	10	11	4		
Somewhat agree	32	18	42	14		
Strongly agree	27	7	29	14		
	3.69	3.59	3.57	3.49	3.60	291
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.						
Strongly disagree	6	3	3	0		
Somewhat disagree	5	3	9	2		
Neutral/no opinion	14	9	23	12		
Somewhat agree	26	9	25	11		
Strongly agree	44	18	50	19		
	4.02	3.86	4.00	4.07	4.00	291
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.						
Strongly disagree	9	3	7	0		
Somewhat disagree	15	7	14	2		
Neutral/no opinion	13	7	25	13		
Somewhat agree	21	9	22	12		
Strongly agree	37	15	42	17		
	3.65	3.63	3.71	4.00	3.72	290
					answered question	**292**
					skipped question	**24**

13. Transit						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.						
Strongly disagree	28	9	22	1		
Somewhat disagree	26	12	13	4		
Neutral/No opinion	30	14	48	20		
Somewhat agree	7	4	16	7		
Strongly agree	2	2	11	13		
	2.24	2.46	2.83	3.60	2.71	289
					answered question	**289**
					skipped question	**27**

14. Vehicle Traffic Environment						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.						
Strongly disagree	18	2	27	26		
Somewhat disagree	13	6	32	8		
Neutral/No opinion	11	9	19	9		
Somewhat agree	28	18	21	2		
Strongly agree	21	7	11	0		
	3.23	3.52	2.61	1.71	2.80	288
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)						
Strongly disagree	20	7	7	0		
Somewhat disagree	17	11	14	0		
Neutral/No opinion	6	4	11	4		
Somewhat agree	22	13	22	4		
Strongly agree	28	7	55	37		
	3.23	3.05	3.95	4.73	3.71	289
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.						
Strongly disagree	37	15	44	15		
Somewhat disagree	25	15	34	15		
Neutral/No opinion	25	8	24	14		
Somewhat agree	4	3	8	1		
Strongly agree	2	1	0	0		
	2.02	2.05	1.96	2.02	2.00	290
Solutions for ECR should attempt to separate regional through traffic from local traffic.						
Strongly disagree	8	4	11	2		
Somewhat disagree	16	12	26	5		
Neutral/No opinion	32	12	33	23		

14. Vehicle Traffic Environment						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Somewhat agree	16	10	22	9		
Strongly agree	21	4	17	5		
	3.28	2.95	3.07	3.23	3.15	288
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.						
Strongly disagree	38	16	37	10		
Somewhat disagree	22	9	32	12		
Neutral/No opinion	20	10	29	21		
Somewhat agree	10	5	7	1		
Strongly agree	3	1	5	1		
	2.12	2.17	2.19	2.36	2.19	289
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.						
Strongly disagree	8	2	6	1		
Somewhat disagree	15	8	17	8		
Neutral/No opinion	20	5	36	22		
Somewhat agree	16	14	23	8		
Strongly agree	33	12	28	6		
	3.55	3.63	3.45	3.22	3.48	288
					answered question	**290**
					skipped question	**26**

15. Bicycling Environment						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.						
Strongly disagree	6	3	6	3		
Somewhat disagree	14	9	13	3		
Neutral/No opinion	12	6	9	8		
Somewhat agree	28	11	39	17		
Strongly agree	34	13	43	14		
	3.74	3.52	3.91	3.80	3.78	291
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.						
Strongly disagree	17	6	7	0		
Somewhat disagree	6	9	11	0		
Neutral/No opinion	20	7	8	5		
Somewhat agree	20	14	23	11		
Strongly agree	30	5	60	30		
	3.43	3.07	4.08	4.54	3.80	289
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.						

15. Bicycling Environment						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Strongly disagree	14	2	4	0		
Somewhat disagree	7	6	9	6		
Neutral/No opinion	22	9	15	8		
Somewhat agree	15	14	31	14		
Strongly agree	36	10	51	18		
	3.55	3.59	4.05	3.96	3.81	291
Bicycles are best accommodated on adjacent parallel routes, not on ECR.						
Strongly disagree	9	2	19	11		
Somewhat disagree	12	7	15	10		
Neutral/No opinion	12	7	20	9		
Somewhat agree	23	13	23	7		
Strongly agree	37	13	33	9		
	3.72	3.67	3.33	2.85	3.43	291
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.						
Strongly disagree	3	1	3	0		
Somewhat disagree	5	1	3	1		
Neutral/No opinion	12	6	10	2		
Somewhat agree	30	17	23	8		
Strongly agree	43	16	70	33		
	4.13	4.12	4.41	4.66	4.32	287
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.						
Strongly disagree	10	6	8	0		
Somewhat disagree	10	2	5	1		
Neutral/No opinion	8	7	13	7		
Somewhat agree	20	11	11	5		
Strongly agree	45	15	73	33		
	3.86	3.66	4.24	4.52	4.08	290
					answered question	**292**
					skipped question	**24**

16. Parking Environment						
	Do you drive a vehicle on El Camino Real? (Select one)					
Answer Options	*Multiple times per day*	*Approximately once per day*	*A few times a week*	*Almost never*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.						
Strongly disagree	31	6	29	11		
Somewhat disagree	30	16	27	12		
Neutral/No opinion	18	9	25	17		
Somewhat agree	7	6	21	2		
Strongly agree	6	4	8	3		
	2.21	2.66	2.56	2.42	2.44	288
Parking on ECR should be eliminated to free up more space for vehicle travel.						
Strongly disagree	12	7	22	6		
Somewhat disagree	12	6	11	8		
Neutral/No opinion	17	5	32	20		
Somewhat agree	28	16	24	7		
Strongly agree	24	8	21	3		
	3.43	3.29	3.10	2.84	3.19	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.						
Strongly disagree	17	8	8	1		
Somewhat disagree	8	3	8	2		
Neutral/No opinion	10	9	18	8		
Somewhat agree	26	10	26	12		
Strongly agree	31	12	49	22		
	3.50	3.36	3.92	4.16	3.74	288
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.						
Strongly disagree	2	0	7	5		
Somewhat disagree	5	3	7	8		
Neutral/No opinion	17	6	34	12		
Somewhat agree	40	19	29	18		
Strongly agree	29	14	32	2		
	3.96	4.05	3.66	3.09	3.72	289
					answered question	**290**
					skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 4

1. Indicate the condition which applies to the location of your residence. (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	23	29	33	62	46.5%	147
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	13	23	16	50	32.3%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	15	9	8	9	13.0%	41
None of the above.	10	9	3	4	8.2%	26
					answered question	**316**
					skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	19	11	10	16	17.7%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	7	13	10	17	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	22	12	16	26	24.1%	76
None of the above	13	34	24	66	43.4%	137
					answered question	**316**
					skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Multiple times per day	5	17	30	54	33.5%	106
Approximately once per day	1	6	10	28	14.2%	45
A few times a week	32	28	16	38	36.1%	114
Almost never	23	19	4	5	16.1%	51
					answered question	**316**
					skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	61	0	0	0	19.3%	61
Several times per week	0	70	0	0	22.2%	70
Mostly on weekends	0	0	60	0	19.0%	60
Almost never	0	0	0	125	39.6%	125
					answered question	**316**
					skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	1	1	0	0	0.6%	2
Several times per week	4	5	2	1	3.8%	12
Mostly on weekends	2	0	1	1	1.3%	4
Almost never	54	64	57	123	94.3%	298
					answered question	**316**
					skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	10	7	6	8	9.8%	31
Several times per week	24	20	16	20	25.4%	80
Mostly on weekends	10	19	30	24	26.3%	83
Almost never	17	23	8	73	38.4%	121
					answered question	**315**
					skipped question	**1**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Yes	11	11	15	23	19.0%	60
No	50	58	45	102	81.0%	255
					answered question	**315**
					skipped question	**1**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I walk to Caltrain	13	14	12	22	19.4%	61
I ride my bike to Caltrain	34	25	5	2	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	3	3	3	4	4.1%	13
I drive and park at Caltrain	3	7	8	21	12.4%	39
I rarely use Caltrain	8	20	32	76	43.2%	136
					answered question	**315**
					skipped question	**1**

9. Why do you typically travel on El Camino Real? (Select all that apply)						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Travel to and/or from work	45	35	33	46	50.5%	159
Travel to and/or from school	18	11	10	21	19.0%	60
Travel for shopping	44	47	46	103	76.2%	240
Patronizing local businesses	41	46	42	87	68.6%	216
For physical activity	13	17	11	14	17.5%	55
Other (please specify)						36
					answered question	**315**
					skipped question	**1**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)						
1 Least desirable	12	9	20	28		
2	2	3	11	9		
3 Neutral	27	39	21	60		
4	9	7	4	7		
5 Most desirable	11	12	4	19		
	3.08	3.14	2.35	2.84	2.86	314
Higher travel speeds on ECR						
1 Least desirable	28	30	18	51		
2	7	9	7	14		
3 Neutral	17	21	21	40		
4	6	7	10	8		
5 Most desirable	3	3	4	11		
	2.16	2.20	2.58	2.31	2.31	315
More convenient on-street parking on ECR						
1 Least desirable	32	29	22	51		
2	10	14	14	25		
3 Neutral	17	23	20	33		
4	0	4	4	8		
5 Most desirable	2	0	0	7		
	1.85	2.03	2.10	2.15	2.06	315
More convenient parking within walking distance to ECR						
1 Least desirable	11	9	6	11		
2	12	8	6	11		
3 Neutral	21	33	26	40		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
4	10	15	16	38		
5 Most desirable	7	5	6	25		
	2.84	2.99	3.17	3.44	3.17	316
More bike parking close to downtown						
1 Least desirable	2	2	3	9		
2	1	2	1	5		
3 Neutral	1	5	18	48		
4	22	31	24	29		
5 Most desirable	35	30	14	33		
	4.43	4.21	3.75	3.58	3.92	315
Inclusion of bicycle lanes on ECR						
1 Least desirable	1	4	5	30		
2	0	3	2	11		
3 Neutral	0	5	7	21		
4	5	13	19	20		
5 Most desirable	55	45	27	43		
	4.85	4.31	4.02	3.28	3.95	316
Enhanced pedestrian safety and crossings on ECR						
1 Least desirable	1	1	0	4		
2	0	1	1	2		
3 Neutral	11	5	17	18		
4	13	13	20	31		
5 Most desirable	36	50	22	70		
	4.36	4.57	4.05	4.29	4.32	316
Wider sidewalks on ECR						
1 Least desirable	1	5	0	12		
2	6	6	6	10		
3 Neutral	17	15	25	39		
4	9	12	15	18		
5 Most desirable	28	32	14	45		
	3.93	3.86	3.62	3.60	3.72	315
Additional through lanes on El Camino Real						
1 Least desirable	23	19	8	23		
2	9	11	7	18		
3 Neutral	19	24	20	29		
4	6	11	13	27		
5 Most desirable	4	5	12	28		
	2.33	2.60	3.23	3.15	2.89	316
Increased vehicle safety on ECR						
1 Least desirable	2	3	2	1		
2	5	7	2	4		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
3 Neutral	22	36	31	40		
4	20	11	18	35		
5 Most desirable	12	13	7	44		
	3.57	3.34	3.43	3.94	3.64	315
Additional transit service along ECR						
1 Least desirable	8	3	7	11		
2	4	6	6	10		
3 Neutral	29	38	36	65		
4	15	15	8	24		
5 Most desirable	5	8	3	14		
	3.08	3.27	2.90	3.16	3.12	315
Timing traffic signals to favor continuous north-south flow on ECR						
1 Least desirable	7	5	3	3		
2	5	6	2	7		
3 Neutral	23	21	10	21		
4	9	18	14	34		
5 Most desirable	17	20	31	60		
	3.39	3.60	4.13	4.13	3.87	316
Timing traffic signals to favor east west access						
1 Least desirable	4	6	7	16		
2	9	12	12	18		
3 Neutral	31	30	24	49		
4	9	12	12	24		
5 Most desirable	8	10	5	17		
	3.13	3.11	2.93	3.06	3.06	315
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)						
1 Least desirable	3	2	4	10		
2	2	8	8	10		
3 Neutral	21	30	27	34		
4	18	19	5	22		
5 Most desirable	17	11	16	48		
	3.72	3.41	3.35	3.71	3.58	315
Reduction in delay at signalized intersections on ECR						
1 Least desirable	3	1	1	3		
2	3	5	2	2		
3 Neutral	32	34	24	29		
4	14	15	20	47		
5 Most desirable	9	15	13	43		
	3.38	3.54	3.70	4.01	3.72	315
More landscaped medians on ECR						
1 Least desirable	8	7	7	14		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
2	8	8	7	11		
3 Neutral	26	29	25	45		
4	13	18	10	26		
5 Most desirable	6	8	11	28		
	3.02	3.17	3.18	3.35	3.21	315
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)						
1 Least desirable	1	4	2	9		
2	2	2	3	10		
3 Neutral	15	17	17	26		
4	13	20	22	30		
5 Most desirable	30	27	16	49		
	4.13	3.91	3.78	3.81	3.89	315
					answered question	316
					skipped question	0

11. General Safety and Environmental Concerns						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.						
Strongly disagree	2	4	3	6		
Somewhat disagree	10	8	10	19		
Neutral/No opinion	4	2	5	11		
Somewhat agree	21	31	25	46		
Strongly agree	19	22	12	35		
	3.80	3.88	3.60	3.73	3.75	295
Ensuring that children can safely cross ECR to get to and from school should be a high priority.						
Strongly disagree	0	0	1	1		
Somewhat disagree	0	1	4	6		
Neutral/No opinion	9	5	7	11		
Somewhat agree	10	17	25	33		
Strongly agree	37	44	18	65		
	4.50	4.55	4.00	4.34	4.35	294
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.						
Strongly disagree	0	2	5	8		
Somewhat disagree	4	4	8	9		
Neutral/No opinion	14	18	16	26		
Somewhat agree	11	22	16	36		
Strongly agree	27	20	10	38		
	4.09	3.82	3.33	3.74	3.75	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.						
Strongly disagree	2	4	7	9		
Somewhat disagree	17	10	9	24		
Neutral/No opinion	21	37	31	47		
Somewhat agree	10	11	7	24		
Strongly agree	6	3	1	13		
	3.02	2.98	2.75	3.07	2.98	293
					answered question	**295**
					skipped question	**21**

12. Walking Environment						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.						
Strongly disagree	2	2	2	7		
Somewhat disagree	12	21	7	15		
Neutral/no opinion	7	12	7	19		
Somewhat agree	24	20	23	53		
Strongly agree	11	10	15	21		
	3.54	3.23	3.78	3.57	3.53	290
Vehicle speeds should be slower to make the road safer for people walking.						
Strongly disagree	7	3	8	12		
Somewhat disagree	9	9	18	30		
Neutral/no opinion	21	21	20	38		
Somewhat agree	10	22	4	22		
Strongly agree	9	10	5	13		
	3.09	3.42	2.64	2.95	3.02	291
Bicycles on the sidewalks are a threat to pedestrian safety.						
Strongly disagree	6	6	5	5		
Somewhat disagree	9	10	7	15		
Neutral/no opinion	4	14	13	14		
Somewhat agree	23	19	18	46		
Strongly agree	14	16	12	35		
	3.54	3.45	3.45	3.79	3.60	291
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.						
Strongly disagree	1	2	2	7		
Somewhat disagree	1	6	2	10		
Neutral/no opinion	10	11	15	22		
Somewhat agree	14	13	11	33		
Strongly agree	30	33	25	43		
	4.27	4.06	4.00	3.83	4.00	291
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.						
Strongly disagree	0	3	2	14		
Somewhat disagree	5	5	7	21		
Neutral/no opinion	15	8	14	21		
Somewhat agree	9	16	14	25		
Strongly agree	27	32	17	35		
	4.04	4.08	3.69	3.40	3.72	290
					answered question	**292**
					skipped question	**24**

13. Transit						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.						
Strongly disagree	*8*	*7*	*16*	*29*		
Somewhat disagree	*7*	*12*	*12*	*24*		
Neutral/No opinion	*24*	*27*	*23*	*38*		
Somewhat agree	*8*	*8*	*1*	*17*		
Strongly agree	*9*	*11*	*2*	*6*		
	3.05	*3.06*	*2.28*	*2.54*	*2.71*	*289*
					answered question	**289**
					skipped question	**27**

14. Vehicle Traffic Environment						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.						
Strongly disagree	*26*	*24*	*7*	*16*		
Somewhat disagree	*12*	*13*	*12*	*22*		
Neutral/No opinion	*11*	*14*	*8*	*15*		
Somewhat agree	*6*	*11*	*17*	*35*		
Strongly agree	*1*	*3*	*10*	*25*		
	2.00	*2.32*	*3.20*	*3.27*	*2.80*	*288*
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)						
Strongly disagree	*0*	*1*	*7*	*26*		
Somewhat disagree	*1*	*6*	*16*	*19*		
Neutral/No opinion	*4*	*7*	*5*	*9*		
Somewhat agree	*6*	*18*	*12*	*25*		
Strongly agree	*45*	*33*	*15*	*34*		
	4.70	*4.17*	*3.22*	*3.19*	*3.71*	*289*
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.						
Strongly disagree	*22*	*25*	*19*	*45*		
Somewhat disagree	*18*	*21*	*16*	*34*		
Neutral/No opinion	*15*	*16*	*16*	*24*		
Somewhat agree	*1*	*3*	*4*	*8*		
Strongly agree	*0*	*0*	*0*	*3*		
	1.91	*1.95*	*2.09*	*2.04*	*2.00*	*290*
Solutions for ECR should attempt to separate regional through traffic from local traffic.						
Strongly disagree	*3*	*4*	*7*	*11*		
Somewhat disagree	*12*	*11*	*11*	*25*		
Neutral/No opinion	*23*	*26*	*21*	*30*		

14. Vehicle Traffic Environment						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Somewhat agree	*8*	*15*	*11*	*23*		
Strongly agree	*10*	*9*	*4*	*24*		
	3.18	*3.22*	*2.89*	*3.21*	*3.15*	*288*
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.						
Strongly disagree	*17*	*15*	*16*	*53*		
Somewhat disagree	*13*	*17*	*18*	*27*		
Neutral/No opinion	*19*	*24*	*14*	*23*		
Somewhat agree	*3*	*6*	*7*	*7*		
Strongly agree	*4*	*3*	*0*	*3*		
	2.36	*2.46*	*2.22*	*1.94*	*2.19*	*289*
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.						
Strongly disagree	*3*	*3*	*2*	*9*		
Somewhat disagree	*11*	*11*	*11*	*15*		
Neutral/No opinion	*22*	*23*	*12*	*26*		
Somewhat agree	*11*	*12*	*16*	*22*		
Strongly agree	*9*	*15*	*14*	*41*		
	3.21	*3.39*	*3.53*	*3.63*	*3.48*	*288*
					answered question	**290**
					skipped question	**26**

15. Bicycling Environment						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.						
Strongly disagree	3	3	5	7		
Somewhat disagree	6	7	8	18		
Neutral/No opinion	1	5	8	21		
Somewhat agree	25	22	16	32		
Strongly agree	21	28	18	37		
	3.98	4.00	3.62	3.64	3.78	291
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.						
Strongly disagree	0	2	8	20		
Somewhat disagree	0	5	4	17		
Neutral/No opinion	3	6	10	21		
Somewhat agree	10	14	15	29		
Strongly agree	43	37	17	28		
	4.71	4.23	3.54	3.24	3.80	289

15. Bicycling Environment						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.						
Strongly disagree	0	2	8	10		
Somewhat disagree	4	7	2	15		
Neutral/No opinion	8	9	11	26		
Somewhat agree	16	18	21	19		
Strongly agree	28	30	12	45		
	4.21	4.02	3.50	3.64	3.81	291
Bicycles are best accommodated on adjacent parallel routes, not on ECR.						
Strongly disagree	19	9	7	6		
Somewhat disagree	10	12	5	17		
Neutral/No opinion	11	10	6	21		
Somewhat agree	7	16	19	24		
Strongly agree	9	19	18	46		
	2.59	3.36	3.65	3.76	3.43	291
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.						
Strongly disagree	0	1	1	5		
Somewhat disagree	2	2	3	3		
Neutral/No opinion	0	2	5	23		
Somewhat agree	9	16	20	33		
Strongly agree	44	43	26	49		
	4.73	4.53	4.22	4.04	4.32	287
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.						
Strongly disagree	0	1	4	19		
Somewhat disagree	1	0	3	14		
Neutral/No opinion	5	7	8	15		
Somewhat agree	4	6	16	21		
Strongly agree	46	51	24	45		
	4.70	4.63	3.96	3.52	4.08	290
					answered question	**292**
					skipped question	**24**

16. Parking Environment						
	Do you ride a bike on or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.						
Strongly disagree	18	14	16	29		
Somewhat disagree	14	25	14	32		
Neutral/No opinion	17	15	15	22		
Somewhat agree	5	6	8	17		
Strongly agree	2	5	2	12		
	2.27	2.43	2.38	2.56	2.44	288
Parking on ECR should be eliminated to free up more space for vehicle travel.						
Strongly disagree	11	10	7	19		
Somewhat disagree	11	6	5	15		
Neutral/No opinion	17	21	13	23		
Somewhat agree	12	16	17	30		
Strongly agree	6	12	12	26		
	2.84	3.22	3.41	3.26	3.19	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.						
Strongly disagree	1	4	4	25		
Somewhat disagree	2	2	6	11		
Neutral/No opinion	6	11	6	22		
Somewhat agree	15	14	18	27		
Strongly agree	33	34	21	26		
	4.35	4.11	3.84	3.16	3.74	288
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.						
Strongly disagree	4	6	1	3		
Somewhat disagree	9	6	2	6		
Neutral/No opinion	20	14	16	19		
Somewhat agree	16	21	23	46		
Strongly agree	8	18	13	38		
	3.26	3.60	3.82	3.98	3.72	289
					answered question	**290**
					skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 5

1. Indicate the condition which applies to the location of your residence. (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	0	4	2	141	46.5%	147
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	2	0	0	100	32.3%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	0	7	2	32	13.0%	41
None of the above.	0	1	0	25	8.2%	26
					answered question	**316**
					skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	0	3	0	53	17.7%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	0	2	0	45	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	1	6	2	67	24.1%	76
None of the above	1	1	2	133	43.4%	137
					answered question	**316**
					skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Multiple times per day	2	3	0	101	33.5%	106
Approximately once per day	0	0	0	45	14.2%	45
A few times a week	0	3	3	108	36.1%	114
Almost never	0	6	1	44	16.1%	51
					answered question	**316**
					skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	1	4	2	54	19.3%	61
Several times per week	1	5	0	64	22.2%	70
Mostly on weekends	0	2	1	57	19.0%	60
Almost never	0	1	1	123	39.6%	125
					answered question	**316**
					skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	2	0	0	0	0.6%	2
Several times per week	0	12	0	0	3.8%	12
Mostly on weekends	0	0	4	0	1.3%	4
Almost never	0	0	0	298	94.3%	298
					answered question	**316**
					skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	0	4	2	25	9.8%	31
Several times per week	0	6	1	73	25.4%	80
Mostly on weekends	0	1	1	81	26.3%	83
Almost never	2	1	0	118	38.4%	121
					answered question	**315**
					skipped question	**1**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Yes	2	2	0	56	19.0%	60
No	0	10	4	241	81.0%	255
					answered question	**315**
					skipped question	**1**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I walk to Caltrain	0	3	2	56	19.4%	61
I ride my bike to Caltrain	0	7	1	58	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	0	0	1	12	4.1%	13
I drive and park at Caltrain	1	0	0	38	12.4%	39
I rarely use Caltrain	1	2	0	133	43.2%	136
					answered question	**315**
					skipped question	**1**

9. Why do you typically travel on El Camino Real? (Select all that apply)						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Travel to and/or from work	2	7	4	146	50.5%	159
Travel to and/or from school	2	1	1	56	19.0%	60
Travel for shopping	1	11	3	225	76.2%	240
Patronizing local businesses	2	9	3	202	68.6%	216
For physical activity	0	2	1	52	17.5%	55
Other (please specify)						36
					answered question	**315**
					skipped question	**1**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)						
1 Least desirable	1	0	3	65		
2	0	0	0	25		
3 Neutral	1	5	0	141		
4	0	2	1	24		
5 Most desirable	0	5	0	41		
	2.00	4.00	1.75	2.83	2.86	314
Higher travel speeds on ECR						
1 Least desirable	0	8	0	119		
2	0	1	1	35		
3 Neutral	2	3	1	93		
4	0	0	0	31		
5 Most desirable	0	0	2	19		
	3.00	1.58	3.75	2.31	2.31	315
More convenient on-street parking on ECR						
1 Least desirable	2	4	2	126		
2	0	2	1	60		
3 Neutral	0	5	1	87		
4	0	0	0	16		
5 Most desirable	0	1	0	8		
	1.00	2.33	1.75	2.06	2.06	315
More convenient parking within walking distance to ECR						
1 Least desirable	1	2	1	33		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
2	0	2	0	35		
3 Neutral	1	3	1	115		
4	0	3	2	74		
5 Most desirable	0	2	0	41		
	2.00	3.08	3.00	3.18	3.17	316
More bike parking close to downtown						
1 Least desirable	1	1	0	14		
2	0	0	0	9		
3 Neutral	0	2	0	70		
4	1	3	0	102		
5 Most desirable	0	6	4	102		
	2.50	4.08	5.00	3.91	3.92	315
Inclusion of bicycle lanes on ECR						
1 Least desirable	0	1	0	39		
2	0	1	0	15		
3 Neutral	0	0	0	33		
4	0	2	1	54		
5 Most desirable	2	8	3	157		
	5.00	4.25	4.75	3.92	3.95	316
Enhanced pedestrian safety and crossings on ECR						
1 Least desirable	0	1	0	5		
2	0	0	0	4		
3 Neutral	0	1	1	49		
4	0	1	1	75		
5 Most desirable	2	9	2	165		
	5.00	4.42	4.25	4.31	4.32	316
Wider sidewalks on ECR						
1 Least desirable	1	0	0	17		
2	0	1	1	26		
3 Neutral	1	3	1	91		
4	0	0	1	53		
5 Most desirable	0	8	1	110		
	2.00	4.25	3.50	3.72	3.72	315
Additional through lanes on El Camino Real						
1 Least desirable	0	7	1	65		
2	0	0	1	44		
3 Neutral	0	2	0	90		
4	1	1	1	54		
5 Most desirable	1	2	1	45		
	4.50	2.25	3.00	2.90	2.89	316

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Increased vehicle safety on ECR						
1 Least desirable	0	1	0	7		
2	0	2	1	15		
3 Neutral	2	3	2	122		
4	0	3	0	81		
5 Most desirable	0	3	1	72		
	3.00	3.42	3.25	3.66	3.64	315
Additional transit service along ECR						
1 Least desirable	1	0	1	27		
2	0	1	0	25		
3 Neutral	1	4	1	162		
4	0	3	2	57		
5 Most desirable	0	4	0	26		
	2.00	3.83	3.00	3.10	3.12	315
Timing traffic signals to favor continuous north-south flow on ECR						
1 Least desirable	1	2	1	14		
2	0	1	0	19		
3 Neutral	1	5	1	68		
4	0	3	1	71		
5 Most desirable	0	1	1	126		
	2.00	3.00	3.25	3.93	3.87	316
Timing traffic signals to favor east west access						
1 Least desirable	1	0	0	32		
2	0	0	1	50		
3 Neutral	1	7	2	124		
4	0	3	0	54		
5 Most desirable	0	2	1	37		
	2.00	3.58	3.25	3.05	3.06	315
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)						
1 Least desirable	1	2	0	16		
2	0	2	1	25		
3 Neutral	0	5	1	106		
4	0	1	0	63		
5 Most desirable	1	2	2	87		
	3.00	2.92	3.75	3.61	3.58	315
Reduction in delay at signalized intersections on ECR						
1 Least desirable	0	0	0	8		
2	0	2	0	10		
3 Neutral	2	6	2	109		
4	0	2	1	93		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
5 Most desirable	0	2	1	77		
	3.00	3.33	3.75	3.74	3.72	315
More landscaped medians on ECR						
1 Least desirable	0	1	1	34		
2	0	4	0	30		
3 Neutral	1	4	3	117		
4	1	2	0	64		
5 Most desirable	0	1	0	52		
	3.50	2.83	2.50	3.24	3.21	315
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)						
1 Least desirable	0	0	0	16		
2	0	2	0	15		
3 Neutral	1	3	0	71		
4	0	4	2	79		
5 Most desirable	1	3	2	116		
	4.00	3.67	4.50	3.89	3.89	315
					answered question	**316**
					skipped question	**0**

11. General Safety and Environmental Concerns						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.						
Strongly disagree	0	1	0	14		
Somewhat disagree	0	4	0	43		
Neutral/No opinion	0	0	0	22		
Somewhat agree	1	5	2	115		
Strongly agree	1	1	2	84		
	4.50	3.09	4.50	3.76	3.75	295
Ensuring that children can safely cross ECR to get to and from school should be a high priority.						
Strongly disagree	0	0	0	2		
Somewhat disagree	0	0	0	11		
Neutral/No opinion	0	1	1	30		
Somewhat agree	0	1	1	83		
Strongly agree	2	9	2	151		
	5.00	4.73	4.25	4.34	4.35	294
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.						
Strongly disagree	1	0	0	14		
Somewhat disagree	0	1	0	24		
Neutral/No opinion	0	3	1	70		
Somewhat agree	1	2	0	82		
Strongly agree	0	5	3	87		
	2.50	4.00	4.50	3.74	3.75	294
Signage (for cross streets, turns) is not clear enough and needs to be improved.						
Strongly disagree	1	0	2	19		
Somewhat disagree	0	3	2	55		
Neutral/No opinion	0	4	0	132		
Somewhat agree	0	3	0	49		
Strongly agree	1	1	0	21		
	3.00	3.18	1.50	2.99	2.98	293
					answered question	**295**
					skipped question	**21**

12. Walking Environment						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.						
Strongly disagree	0	0	0	13		
Somewhat disagree	0	4	1	50		
Neutral/no opinion	0	1	0	44		
Somewhat agree	0	5	1	114		
Strongly agree	2	1	2	52		
	5.00	3.27	4.00	3.52	3.53	290
Vehicle speeds should be slower to make the road safer for people walking.						
Strongly disagree	0	0	2	28		
Somewhat disagree	1	1	0	64		
Neutral/no opinion	1	4	1	94		
Somewhat agree	0	2	1	55		
Strongly agree	0	4	0	33		
	2.50	3.82	2.25	3.00	3.02	291
Bicycles on the sidewalks are a threat to pedestrian safety.						
Strongly disagree	0	2	0	20		
Somewhat disagree	0	1	2	38		
Neutral/no opinion	0	0	0	45		
Somewhat agree	2	7	1	96		
Strongly agree	0	1	1	75		
	4.00	3.36	3.25	3.61	3.60	291
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.						
Strongly disagree	1	0	0	11		
Somewhat disagree	0	2	1	16		
Neutral/no opinion	0	2	1	55		
Somewhat agree	1	6	0	64		
Strongly agree	0	1	2	128		
	2.50	3.55	3.75	4.03	4.00	291
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.						
Strongly disagree	1	1	0	17		
Somewhat disagree	0	1	1	36		
Neutral/no opinion	0	2	0	56		
Somewhat agree	0	0	1	63		
Strongly agree	1	7	2	101		
	3.00	4.00	4.00	3.71	3.72	290
					answered question	**292**
					skipped question	**24**

13. Transit						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.						
Strongly disagree	0	2	1	57		
Somewhat disagree	2	1	1	51		
Neutral/No opinion	0	2	1	109		
Somewhat agree	0	1	0	33		
Strongly agree	0	5	1	22		
	2.00	3.55	2.75	2.68	2.71	289
					answered question	**289**
					skipped question	**27**

14. Vehicle Traffic Environment						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.						
Strongly disagree	0	7	2	64		
Somewhat disagree	0	1	0	58		
Neutral/No opinion	1	1	1	45		
Somewhat agree	1	0	1	67		
Strongly agree	0	1	0	38		
	3.50	1.70	2.25	2.84	2.80	288
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)						
Strongly disagree	0	0	0	34		
Somewhat disagree	0	1	0	41		
Neutral/No opinion	0	1	0	24		
Somewhat agree	1	2	1	57		
Strongly agree	1	6	3	117		
	4.50	4.30	4.75	3.67	3.71	289
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.						
Strongly disagree	0	5	3	103		
Somewhat disagree	2	4	1	82		
Neutral/No opinion	0	1	0	70		
Somewhat agree	0	0	0	16		
Strongly agree	0	0	0	3		

14. Vehicle Traffic Environment						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
	2.00	1.60	1.25	2.03	2.00	290
Solutions for ECR should attempt to separate regional through traffic from local traffic.						
Strongly disagree	0	0	1	24		
Somewhat disagree	1	4	0	54		
Neutral/No opinion	0	4	1	95		
Somewhat agree	1	0	2	54		
Strongly agree	0	2	0	45		
	3.00	3.00	3.00	3.15	3.15	288
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.						
Strongly disagree	1	4	1	95		
Somewhat disagree	0	3	1	71		
Neutral/No opinion	1	3	2	74		
Somewhat agree	0	0	0	23		
Strongly agree	0	0	0	10		
	2.00	1.90	2.25	2.20	2.19	289
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.						
Strongly disagree	1	1	1	14		
Somewhat disagree	0	4	2	42		
Neutral/No opinion	0	3	1	79		
Somewhat agree	1	1	0	59		
Strongly agree	0	1	0	78		
	2.50	2.70	2.00	3.53	3.48	288
					answered question	**290**
					skipped question	**26**

15. Bicycling Environment						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.						
Strongly disagree	0	1	0	17		
Somewhat disagree	0	0	0	39		
Neutral/No opinion	0	1	1	33		
Somewhat agree	1	6	1	87		
Strongly agree	1	3	2	98		
	4.50	3.91	4.25	3.77	3.78	291
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.						
Strongly disagree	0	1	0	29		
Somewhat disagree	0	0	0	26		
Neutral/No opinion	0	0	0	40		
Somewhat agree	0	2	0	66		
Strongly agree	2	8	4	111		
	5.00	4.45	5.00	3.75	3.80	289
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.						
Strongly disagree	0	3	0	17		
Somewhat disagree	0	2	0	26		
Neutral/No opinion	0	1	0	53		
Somewhat agree	0	0	2	72		
Strongly agree	2	5	2	106		
	5.00	3.18	4.50	3.82	3.81	291
Bicycles are best accommodated on adjacent parallel routes, not on ECR.						
Strongly disagree	0	6	2	33		
Somewhat disagree	0	1	1	42		
Neutral/No opinion	0	2	0	46		
Somewhat agree	0	1	0	65		
Strongly agree	2	1	1	88		
	5.00	2.09	2.25	3.49	3.43	291
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.						
Strongly disagree	0	0	0	7		
Somewhat disagree	0	1	0	9		
Neutral/No opinion	0	0	0	30		
Somewhat agree	0	1	0	77		
Strongly agree	2	8	4	148		
	5.00	4.60	5.00	4.29	4.32	287

15. Bicycling Environment						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.						
Strongly disagree	0	0	0	24		
Somewhat disagree	0	0	0	18		
Neutral/No opinion	0	2	0	33		
Somewhat agree	0	1	0	46		
Strongly agree	2	7	4	153		
	5.00	4.50	5.00	4.04	4.08	290
answered question						**292**
skipped question						**24**

16. Parking Environment						
	Do you use local bus transit services that travel on El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.						
Strongly disagree	0	3	3	71		
Somewhat disagree	1	4	0	80		
Neutral/No opinion	1	2	1	65		
Somewhat agree	0	1	0	35		
Strongly agree	0	0	0	21		
	2.50	2.10	1.50	2.47	2.44	288
Parking on ECR should be eliminated to free up more space for vehicle travel.						
Strongly disagree	0	1	1	45		
Somewhat disagree	0	2	0	35		
Neutral/No opinion	1	4	1	68		
Somewhat agree	1	2	0	72		
Strongly agree	0	1	2	53		
	3.50	3.00	3.50	3.19	3.19	289
Parking on ECR should be eliminated to free up more space for bicycle lanes.						
Strongly disagree	0	0	0	34		
Somewhat disagree	0	0	0	21		
Neutral/No opinion	1	1	0	43		
Somewhat agree	0	4	1	69		
Strongly agree	1	5	3	105		
	4.00	4.40	4.75	3.70	3.74	288
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.						
Strongly disagree	0	1	2	11		
Somewhat disagree	0	3	0	20		
Neutral/No opinion	0	2	0	67		
Somewhat agree	0	3	1	102		
Strongly agree	2	1	1	73		
	5.00	3.00	2.75	3.75	3.72	289
					answered question	**290**
					skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 6

1. Indicate the condition which applies to the location of your residence. (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	26	51	37	32	46.3%	146
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	1	14	25	62	32.4%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	4	8	15	14	13.0%	41
None of the above.	0	7	6	13	8.3%	26
					answered question	**315**
					skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	11	21	11	13	17.8%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	2	11	17	17	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	8	19	27	22	24.1%	76
None of the above	10	29	28	69	43.2%	136
					answered question	**315**
					skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Multiple times per day	13	26	29	38	33.7%	106
Approximately once per day	3	11	12	19	14.3%	45
A few times a week	10	33	26	44	35.9%	113
Almost never	5	10	16	20	16.2%	51
					answered question	**315**
					skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	10	24	10	17	19.4%	61
Several times per week	7	20	19	23	21.9%	69
Mostly on weekends	6	16	30	8	19.0%	60
Almost never	8	20	24	73	39.7%	125
					answered question	**315**
					skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	0	0	0	2	0.6%	2
Several times per week	4	6	1	1	3.8%	12
Mostly on weekends	2	1	1	0	1.3%	4
Almost never	25	73	81	118	94.3%	297
					answered question	**315**
					skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
On a daily basis	31	0	0	0	9.8%	31
Several times per week	0	80	0	0	25.4%	80
Mostly on weekends	0	0	83	0	26.3%	83
Almost never	0	0	0	121	38.4%	121
					answered question	**315**
					skipped question	**0**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Yes	3	19	16	22	19.0%	60
No	28	61	67	99	81.0%	255
					answered question	**315**
					skipped question	**0**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
I walk to Caltrain	18	20	16	7	19.4%	61
I ride my bike to Caltrain	6	25	15	20	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	1	7	2	3	4.1%	13
I drive and park at Caltrain	3	6	11	19	12.4%	39
I rarely use Caltrain	3	22	39	72	43.2%	136
					answered question	**315**
					skipped question	**0**

9. Why do you typically travel on El Camino Real? (Select all that apply)						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Response Percent*	*Response Count*
Travel to and/or from work	19	51	42	47	50.5%	159
Travel to and/or from school	4	18	13	25	19.0%	60
Travel for shopping	26	59	66	89	76.2%	240
Patronizing local businesses	22	53	61	80	68.6%	216
For physical activity	17	13	13	12	17.5%	55
Other (please specify)						36
					answered question	**315**
					skipped question	**0**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)						
1 Least desirable	7	13	18	31		
2	0	10	9	6		
3 Neutral	12	28	44	63		
4	5	9	5	8		
5 Most desirable	6	19	7	13		
	3.10	3.14	2.69	2.72	2.85	313
Higher travel speeds on ECR						
1 Least desirable	15	39	24	48		
2	4	5	19	9		
3 Neutral	10	20	30	39		
4	1	11	6	13		
5 Most desirable	1	4	4	12		
	2.00	2.19	2.36	2.44	2.31	314
More convenient on-street parking on ECR						
1 Least desirable	15	32	33	53		
2	5	21	14	23		
3 Neutral	8	19	29	37		
4	1	4	6	5		
5 Most desirable	2	3	1	3		
	2.03	2.05	2.13	2.02	2.06	314
More convenient parking within walking distance to ECR						
1 Least desirable	8	11	6	12		
2	4	17	4	12		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
3 Neutral	7	25	38	49		
4	8	16	23	32		
5 Most desirable	4	11	12	16		
	2.87	2.99	3.37	3.23	3.17	315
More bike parking close to downtown						
1 Least desirable	3	2	4	7		
2	0	2	2	5		
3 Neutral	4	11	20	37		
4	11	31	32	32		
5 Most desirable	13	33	25	40		
	4.00	4.15	3.87	3.77	3.91	314
Inclusion of bicycle lanes on ECR						
1 Least desirable	5	6	9	20		
2	1	4	5	6		
3 Neutral	1	6	12	14		
4	5	14	16	22		
5 Most desirable	19	50	41	59		
	4.03	4.23	3.90	3.78	3.95	315
Enhanced pedestrian safety and crossings on ECR						
1 Least desirable	0	1	1	4		
2	1	1	0	2		
3 Neutral	6	8	16	21		
4	3	18	26	30		
5 Most desirable	21	52	40	64		
	4.42	4.49	4.25	4.22	4.32	315
Wider sidewalks on ECR						
1 Least desirable	0	1	4	13		
2	3	5	7	13		
3 Neutral	5	22	30	38		
4	7	8	16	23		
5 Most desirable	16	43	26	34		
	4.16	4.10	3.64	3.43	3.73	314
Additional through lanes on El Camino Real						
1 Least desirable	10	19	16	27		
2	4	12	13	16		
3 Neutral	7	20	28	37		
4	5	19	14	19		
5 Most desirable	5	10	12	22		
	2.71	2.86	2.92	2.94	2.89	315
Increased vehicle safety on ECR						

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
1 Least desirable	1	2	1	4		
2	2	7	3	6		
3 Neutral	11	26	44	48		
4	5	26	20	33		
5 Most desirable	12	18	15	30		
	3.81	3.65	3.54	3.65	3.64	314
Additional transit service along ECR						
1 Least desirable	5	6	3	15		
2	3	8	8	7		
3 Neutral	13	41	52	62		
4	3	18	16	24		
5 Most desirable	7	6	4	13		
	3.13	3.13	3.12	3.11	3.12	314
Timing traffic signals to favor continuous north-south flow on ECR						
1 Least desirable	5	7	3	3		
2	0	6	5	9		
3 Neutral	9	17	19	30		
4	6	18	22	28		
5 Most desirable	11	32	34	51		
	3.58	3.78	3.95	3.95	3.87	315
Timing traffic signals to favor east west access						
1 Least desirable	5	7	8	13		
2	4	15	16	16		
3 Neutral	12	31	35	55		
4	4	17	17	19		
5 Most desirable	6	9	7	18		
	3.06	3.08	2.99	3.11	3.06	314
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)						
1 Least desirable	2	5	5	7		
2	4	12	3	9		
3 Neutral	10	24	34	43		
4	4	15	16	29		
5 Most desirable	11	23	25	33		
	3.58	3.49	3.64	3.60	3.58	314
Reduction in delay at signalized intersections on ECR						
1 Least desirable	3	3	0	2		
2	0	9	1	2		
3 Neutral	11	24	32	51		
4	5	22	32	37		
5 Most desirable	12	21	18	29		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
	3.74	3.62	3.81	3.74	3.73	314
More landscaped medians on ECR						
1 Least desirable	5	5	11	15		
2	5	10	7	12		
3 Neutral	10	28	34	52		
4	2	21	15	29		
5 Most desirable	9	15	16	13		
	3.16	3.39	3.22	3.11	3.21	314
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)						
1 Least desirable	0	1	6	9		
2	2	4	4	7		
3 Neutral	11	12	17	34		
4	3	29	23	30		
5 Most desirable	15	33	33	41		
	4.00	4.13	3.88	3.72	3.89	314
					answered question	**315**
					skipped question	**0**

11. General Safety and Environmental Concerns						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.						
Strongly disagree	1	1	2	11		
Somewhat disagree	3	17	10	17		
Neutral/No opinion	2	3	4	13		
Somewhat agree	14	38	34	36		
Strongly agree	9	19	22	38		
	3.93	3.73	3.89	3.63	3.75	294
Ensuring that children can safely cross ECR to get to and from school should be a high priority.						
Strongly disagree	0	0	1	1		
Somewhat disagree	1	4	3	3		
Neutral/No opinion	3	8	10	11		
Somewhat agree	6	17	26	36		
Strongly agree	19	49	32	63		
	4.48	4.42	4.18	4.38	4.35	293
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.						
Strongly disagree	2	1	4	8		
Somewhat disagree	4	5	3	13		
Neutral/No opinion	6	19	22	27		
Somewhat agree	6	17	24	38		
Strongly agree	11	35	19	29		
	3.69	4.04	3.71	3.58	3.74	293
Signage (for cross streets, turns) is not clear enough and needs to be improved.						
Strongly disagree	3	4	6	9		
Somewhat disagree	6	16	18	20		
Neutral/No opinion	14	31	34	56		
Somewhat agree	4	19	10	19		
Strongly agree	2	6	4	11		
	2.86	3.09	2.83	3.03	2.98	292
					answered question	**294**
					skipped question	**21**

12. Walking Environment						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.						
Strongly disagree	2	5	3	3		
Somewhat disagree	9	18	12	16		
Neutral/no opinion	2	12	7	24		
Somewhat agree	13	31	30	45		
Strongly agree	3	11	18	25		
	3.21	3.32	3.69	3.65	3.53	289
Vehicle speeds should be slower to make the road safer for people walking.						
Strongly disagree	4	5	6	15		
Somewhat disagree	1	20	16	29		
Neutral/no opinion	10	20	33	37		
Somewhat agree	9	16	8	24		
Strongly agree	5	16	7	9		
	3.34	3.23	2.91	2.85	3.02	290
Bicycles on the sidewalks are a threat to pedestrian safety.						
Strongly disagree	2	8	6	6		
Somewhat disagree	1	16	8	16		
Neutral/no opinion	2	14	13	16		
Somewhat agree	9	27	26	43		
Strongly agree	15	11	17	34		
	4.17	3.22	3.57	3.72	3.60	290
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.						
Strongly disagree	1	3	2	6		
Somewhat disagree	1	4	3	11		
Neutral/no opinion	5	14	16	22		
Somewhat agree	6	17	17	31		
Strongly agree	16	39	32	44		
	4.21	4.10	4.06	3.84	4.00	290
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.						
Strongly disagree	1	2	3	13		
Somewhat disagree	0	7	9	22		
Neutral/no opinion	5	8	12	33		
Somewhat agree	3	21	14	25		
Strongly agree	20	39	31	21		
	4.41	4.14	3.88	3.17	3.72	289
					answered question	291
					skipped question	24

13. Transit						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.						
Strongly disagree	10	13	13	24		
Somewhat disagree	5	14	13	23		
Neutral/No opinion	4	33	32	42		
Somewhat agree	5	8	6	15		
Strongly agree	5	9	6	8		
	2.66	2.82	2.70	2.64	2.70	288
					answered question	**288**
					skipped question	**27**

14. Vehicle Traffic Environment						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.						
Strongly disagree	14	24	12	23		
Somewhat disagree	1	14	19	24		
Neutral/No opinion	3	13	15	17		
Somewhat agree	6	21	15	27		
Strongly agree	5	5	8	21		
	2.55	2.60	2.83	2.99	2.80	287
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)						
Strongly disagree	3	3	7	21		
Somewhat disagree	6	9	12	15		
Neutral/No opinion	1	10	6	8		
Somewhat agree	7	16	13	24		
Strongly agree	12	39	32	44		
	3.66	4.03	3.73	3.49	3.71	288
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.						
Strongly disagree	14	36	23	38		
Somewhat disagree	7	22	22	37		
Neutral/No opinion	6	17	19	29		
Somewhat agree	1	2	5	8		
Strongly agree	1	0	1	1		
	1.90	1.81	2.13	2.09	2.00	289
Solutions for ECR should attempt to separate regional through traffic from local traffic.						
Strongly disagree	3	5	5	11		
Somewhat disagree	4	14	17	24		

14. Vehicle Traffic Environment						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Neutral/No opinion	7	27	27	39		
Somewhat agree	8	18	10	21		
Strongly agree	7	13	11	16		
	3.41	3.26	3.07	3.06	3.15	287
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.						
Strongly disagree	11	27	22	40		
Somewhat disagree	5	21	18	31		
Neutral/No opinion	6	18	27	29		
Somewhat agree	4	9	1	9		
Strongly agree	3	2	2	3		
	2.41	2.19	2.19	2.14	2.19	288
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.						
Strongly disagree	3	5	1	8		
Somewhat disagree	4	14	11	19		
Neutral/No opinion	5	25	19	34		
Somewhat agree	6	13	15	26		
Strongly agree	10	20	24	25		
	3.57	3.38	3.71	3.37	3.47	287
					answered question	**289**
					skipped question	**26**

15. Bicycling Environment						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.						
Strongly disagree	2	2	2	12		
Somewhat disagree	1	7	11	19		
Neutral/No opinion	6	4	11	14		
Somewhat agree	10	32	17	36		
Strongly agree	10	32	29	33		
	3.86	4.10	3.86	3.52	3.79	290
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.						
Strongly disagree	4	3	9	14		
Somewhat disagree	3	4	8	11		
Neutral/No opinion	3	10	9	18		
Somewhat agree	3	17	21	26		

15. Bicycling Environment						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Strongly agree	16	43	23	43		
	3.83	4.21	3.59	3.65	3.80	288
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.						
Strongly disagree	5	2	5	8		
Somewhat disagree	2	7	6	12		
Neutral/No opinion	6	10	12	26		
Somewhat agree	4	23	16	31		
Strongly agree	12	35	31	37		
	3.55	4.06	3.89	3.68	3.82	290
Bicycles are best accommodated on adjacent parallel routes, not on ECR.						
Strongly disagree	5	15	5	15		
Somewhat disagree	5	12	4	23		
Neutral/No opinion	7	14	7	20		
Somewhat agree	5	16	22	23		
Strongly agree	7	20	32	33		
	3.14	3.18	4.03	3.32	3.43	290
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.						
Strongly disagree	1	0	2	4		
Somewhat disagree	1	3	3	3		
Neutral/No opinion	3	3	7	17		
Somewhat agree	7	20	17	33		
Strongly agree	16	51	39	56		
	4.29	4.55	4.29	4.19	4.32	286
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.						
Strongly disagree	3	1	4	16		
Somewhat disagree	1	2	4	11		
Neutral/No opinion	6	10	5	14		
Somewhat agree	2	15	10	20		
Strongly agree	17	49	47	52		
	4.00	4.42	4.31	3.72	4.08	289
					answered question	**291**
					skipped question	**24**

16. Parking Environment						
	Do you walk along or across El Camino Real? (Select one)					
Answer Options	*On a daily basis*	*Several times per week*	*Mostly on weekends*	*Almost never*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.						
Strongly disagree	11	21	19	26		
Somewhat disagree	8	24	18	35		
Neutral/No opinion	5	16	21	27		
Somewhat agree	2	11	8	14		
Strongly agree	3	4	4	10		
	2.24	2.38	2.43	2.53	2.44	287
Parking on ECR should be eliminated to free up more space for vehicle travel.						
Strongly disagree	3	15	10	19		
Somewhat disagree	2	10	10	15		
Neutral/No opinion	7	18	17	31		
Somewhat agree	11	21	18	25		
Strongly agree	6	13	16	21		
	3.52	3.09	3.28	3.13	3.19	288
Parking on ECR should be eliminated to free up more space for bicycle lanes.						
Strongly disagree	5	5	9	15		
Somewhat disagree	1	6	5	9		
Neutral/No opinion	5	6	10	23		
Somewhat agree	5	22	17	30		
Strongly agree	12	37	30	35		
	3.64	4.05	3.76	3.54	3.74	287
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.						
Strongly disagree	5	5	0	4		
Somewhat disagree	2	11	4	6		
Neutral/No opinion	9	16	20	23		
Somewhat agree	6	27	27	46		
Strongly agree	7	18	20	32		
	3.28	3.55	3.89	3.86	3.73	288
					answered question	**289**
					skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 7

1. Indicate the condition which applies to the location of your residence. (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	32	114	46.3%	146
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	23	79	32.4%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	4	37	13.0%	41
None of the above.	1	25	8.3%	26
			answered question	**315**
			skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	15	41	17.8%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	11	36	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	10	66	24.1%	76
None of the above	24	112	43.2%	136
			answered question	**315**
			skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
Multiple times per day	34	72	33.7%	106
Approximately once per day	8	37	14.3%	45
A few times a week	16	97	35.9%	113
Almost never	2	49	16.2%	51
			answered question	**315**
			skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
On a daily basis	11	50	19.4%	61
Several times per week	11	58	21.9%	69
Mostly on weekends	15	45	19.0%	60
Almost never	23	102	39.7%	125
			answered question	**315**
			skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
On a daily basis	2	0	0.6%	2
Several times per week	2	10	3.8%	12
Mostly on weekends	0	4	1.3%	4
Almost never	56	241	94.3%	297
			answered question	**315**
			skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
On a daily basis	3	28	9.8%	31
Several times per week	19	61	25.4%	80
Mostly on weekends	16	67	26.3%	83
Almost never	22	99	38.4%	121
			answered question	**315**
			skipped question	**0**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
Yes	60	0	19.0%	60
No	0	255	81.0%	255
			answered question	**315**
			skipped question	**0**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
I walk to Caltrain	7	54	19.4%	61
I ride my bike to Caltrain	8	58	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	2	11	4.1%	13
I drive and park at Caltrain	16	23	12.4%	39
I rarely use Caltrain	27	109	43.2%	136
			answered question	**315**
			skipped question	**0**

9. Why do you typically travel on El Camino Real? (Select all that apply)				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Response Percent*	*Response Count*
Travel to and/or from work	33	126	50.5%	159
Travel to and/or from school	31	29	19.0%	60
Travel for shopping	50	190	76.2%	240
Patronizing local businesses	43	173	68.6%	216
For physical activity	8	47	17.5%	55
Other (please specify)				36
			answered question	**315**
			skipped question	**0**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)				
1 Least desirable	14	55		
2	3	22		
3 Neutral	19	128		
4	12	15		
5 Most desirable	12	33		
	3.08	2.80	2.85	313
Higher travel speeds on ECR				
1 Least desirable	30	96		
2	10	27		
3 Neutral	12	87		
4	4	27		
5 Most desirable	4	17		
	2.03	2.38	2.31	314
More convenient on-street parking on ECR				
1 Least desirable	28	105		
2	11	52		
3 Neutral	16	77		
4	5	11		
5 Most desirable	0	9		
	1.97	2.08	2.06	314
More convenient parking within walking distance to ECR				
1 Least desirable	4	33		
2	5	32		
3 Neutral	28	91		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
4	13	66		
5 Most desirable	10	33		
	3.33	3.13	3.17	315
More bike parking close to downtown				
1 Least desirable	3	13		
2	3	6		
3 Neutral	15	57		
4	16	90		
5 Most desirable	23	88		
	3.88	3.92	3.91	314
Inclusion of bicycle lanes on ECR				
1 Least desirable	5	35		
2	5	11		
3 Neutral	10	23		
4	12	45		
5 Most desirable	28	141		
	3.88	3.96	3.95	315
Enhanced pedestrian safety and crossings on ECR				
1 Least desirable	1	5		
2	0	4		
3 Neutral	5	46		
4	10	67		
5 Most desirable	44	133		
	4.60	4.25	4.32	315
Wider sidewalks on ECR				
1 Least desirable	5	13		
2	5	23		
3 Neutral	21	74		
4	9	45		
5 Most desirable	20	99		
	3.57	3.76	3.73	314
Additional through lanes on El Camino Real				
1 Least desirable	17	55		
2	9	36		
3 Neutral	10	82		
4	11	46		
5 Most desirable	13	36		
	2.90	2.89	2.89	315
Increased vehicle safety on ECR				
1 Least desirable	0	8		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
2	2	16		
3 Neutral	24	105		
4	15	69		
5 Most desirable	19	56		
	3.85	3.59	3.64	314
Additional transit service along ECR				
1 Least desirable	4	25		
2	8	18		
3 Neutral	37	131		
4	11	50		
5 Most desirable	0	30		
	2.92	3.17	3.12	314
Timing traffic signals to favor continuous north-south flow on ECR				
1 Least desirable	4	14		
2	1	19		
3 Neutral	17	58		
4	17	57		
5 Most desirable	21	107		
	3.83	3.88	3.87	315
Timing traffic signals to favor east west access				
1 Least desirable	5	28		
2	6	45		
3 Neutral	29	104		
4	12	45		
5 Most desirable	8	32		
	3.20	3.03	3.06	314
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)				
1 Least desirable	4	15		
2	8	20		
3 Neutral	20	91		
4	11	53		
5 Most desirable	17	75		
	3.48	3.60	3.58	314
Reduction in delay at signalized intersections on ECR				
1 Least desirable	1	7		
2	2	10		
3 Neutral	22	96		
4	19	77		
5 Most desirable	16	64		
	3.78	3.71	3.73	314

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
More landscaped medians on ECR				
1 Least desirable	4	32		
2	6	28		
3 Neutral	22	102		
4	17	50		
5 Most desirable	11	42		
	3.42	3.17	3.21	314
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)				
1 Least desirable	0	16		
2	1	16		
3 Neutral	14	60		
4	21	64		
5 Most desirable	24	98		
	4.13	3.83	3.89	314
			answered question	**315**
			skipped question	**0**

11. General Safety and Environmental Concerns				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.				
Strongly disagree	2	13		
Somewhat disagree	7	40		
Neutral/No opinion	1	21		
Somewhat agree	23	99		
Strongly agree	21	67		
	4.00	3.70	3.75	294
Ensuring that children can safely cross ECR to get to and from school should be a high priority.				
Strongly disagree	0	2		
Somewhat disagree	2	9		
Neutral/No opinion	0	32		
Somewhat agree	10	75		
Strongly agree	42	121		
	4.70	4.27	4.35	293
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.				
Strongly disagree	2	13		
Somewhat disagree	7	18		
Neutral/No opinion	11	63		
Somewhat agree	17	68		
Strongly agree	17	77		
	3.74	3.74	3.74	293
Signage (for cross streets, turns) is not clear enough and needs to be improved.				
Strongly disagree	7	15		
Somewhat disagree	9	51		
Neutral/No opinion	24	111		
Somewhat agree	9	43		
Strongly agree	5	18		
	2.93	2.99	2.98	292
			answered question	**294**
			skipped question	**21**

12. Walking Environment				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.				
Strongly disagree	3	10		
Somewhat disagree	10	45		
Neutral/no opinion	8	37		
Somewhat agree	22	97		
Strongly agree	10	47		
	3.49	3.53	3.53	289
Vehicle speeds should be slower to make the road safer for people walking.				
Strongly disagree	6	24		
Somewhat disagree	11	55		
Neutral/no opinion	12	88		
Somewhat agree	12	45		
Strongly agree	12	25		
	3.25	2.97	3.02	290
Bicycles on the sidewalks are a threat to pedestrian safety.				
Strongly disagree	6	16		
Somewhat disagree	9	32		
Neutral/no opinion	11	34		
Somewhat agree	19	86		
Strongly agree	9	68		
	3.30	3.67	3.60	290
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.				
Strongly disagree	2	10		
Somewhat disagree	5	14		
Neutral/no opinion	12	45		
Somewhat agree	12	59		
Strongly agree	23	108		
	3.91	4.02	4.00	290
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.				
Strongly disagree	5	14		
Somewhat disagree	6	32		
Neutral/no opinion	8	50		
Somewhat agree	9	54		
Strongly agree	26	85		
	3.83	3.70	3.72	289
			answered question	**291**
			skipped question	**24**

13. Transit				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.				
Strongly disagree	10	50		
Somewhat disagree	17	38		
Neutral/No opinion	20	91		
Somewhat agree	3	31		
Strongly agree	3	25		
	2.47	2.76	2.70	288
			answered question	**288**
			skipped question	**27**

14. Vehicle Traffic Environment				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.				
Strongly disagree	11	62		
Somewhat disagree	11	47		
Neutral/No opinion	10	38		
Somewhat agree	13	56		
Strongly agree	7	32		
	2.88	2.78	2.80	287
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)				
Strongly disagree	5	29		
Somewhat disagree	10	32		
Neutral/No opinion	5	20		
Somewhat agree	7	53		
Strongly agree	25	102		
	3.71	3.71	3.71	288
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.				
Strongly disagree	19	92		
Somewhat disagree	14	74		
Neutral/No opinion	17	54		
Somewhat agree	1	15		
Strongly agree	1	2		
	2.06	1.99	2.00	289
Solutions for ECR should attempt to separate regional through traffic from local traffic.				
Strongly disagree	7	17		
Somewhat disagree	15	44		

14. Vehicle Traffic Environment				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Neutral/No opinion	15	85		
Somewhat agree	8	49		
Strongly agree	7	40		
	2.87	3.22	3.15	287
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.				
Strongly disagree	20	80		
Somewhat disagree	17	58		
Neutral/No opinion	9	71		
Somewhat agree	6	17		
Strongly agree	0	10		
	2.02	2.23	2.19	288
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.				
Strongly disagree	4	13		
Somewhat disagree	9	39		
Neutral/No opinion	12	71		
Somewhat agree	9	51		
Strongly agree	18	61		
	3.54	3.46	3.47	287
			answered question	**289**
			skipped question	**26**

15. Bicycling Environment				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.				
Strongly disagree	2	16		
Somewhat disagree	4	34		
Neutral/No opinion	1	34		
Somewhat agree	21	74		
Strongly agree	26	78		
	4.20	3.69	3.79	290
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.				
Strongly disagree	6	24		
Somewhat disagree	5	21		
Neutral/No opinion	10	30		
Somewhat agree	13	54		

15. Bicycling Environment				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Strongly agree	20	105		
	3.67	3.83	3.80	288
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.				
Strongly disagree	5	15		
Somewhat disagree	6	21		
Neutral/No opinion	7	47		
Somewhat agree	17	57		
Strongly agree	19	96		
	3.72	3.84	3.82	290
Bicycles are best accommodated on adjacent parallel routes, not on ECR.				
Strongly disagree	9	31		
Somewhat disagree	10	34		
Neutral/No opinion	6	42		
Somewhat agree	13	53		
Strongly agree	16	76		
	3.31	3.46	3.43	290
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.				
Strongly disagree	1	6		
Somewhat disagree	3	7		
Neutral/No opinion	5	25		
Somewhat agree	14	63		
Strongly agree	29	133		
	4.29	4.32	4.32	286
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.				
Strongly disagree	2	22		
Somewhat disagree	3	15		
Neutral/No opinion	5	30		
Somewhat agree	8	39		
Strongly agree	35	130		
	4.34	4.02	4.08	289
			answered question	**291**
			skipped question	**24**

16. Parking Environment				
	Do you have a child that has to cross El Camino Real to get to school? (Select one)			
Answer Options	*Yes*	*No*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.				
Strongly disagree	14	63		
Somewhat disagree	17	68		
Neutral/No opinion	12	57		
Somewhat agree	6	29		
Strongly agree	3	18		
	2.37	2.45	2.44	287
Parking on ECR should be eliminated to free up more space for vehicle travel.				
Strongly disagree	14	33		
Somewhat disagree	8	29		
Neutral/No opinion	11	62		
Somewhat agree	12	63		
Strongly agree	8	48		
	2.85	3.27	3.19	288
Parking on ECR should be eliminated to free up more space for bicycle lanes.				
Strongly disagree	7	27		
Somewhat disagree	3	18		
Neutral/No opinion	11	33		
Somewhat agree	12	62		
Strongly agree	20	94		
	3.66	3.76	3.74	287
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.				
Strongly disagree	2	12		
Somewhat disagree	4	19		
Neutral/No opinion	20	48		
Somewhat agree	14	92		
Strongly agree	12	65		
	3.58	3.76	3.73	288
			answered question	**289**
			skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 8

1. Indicate the condition which applies to the location of your residence. (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	51	17	5	17	56	46.3%	146
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	7	15	6	17	57	32.4%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	2	20	1	3	15	13.0%	41
None of the above.	1	14	1	2	8	8.3%	26
						answered question	**315**
						skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	14	9	3	7	23	17.8%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	7	8	3	9	20	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	18	26	3	9	20	24.1%	76
None of the above	22	23	4	14	73	43.2%	136
						answered question	**315**
						skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
Multiple times per day	23	6	7	24	46	33.7%	106
Approximately once per day	8	2	1	2	32	14.3%	45
A few times a week	25	24	5	11	48	35.9%	113
Almost never	5	34	0	2	10	16.2%	51
						answered question	**315**
						skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
On a daily basis	13	34	3	3	8	19.4%	61
Several times per week	14	25	3	7	20	21.9%	69
Mostly on weekends	12	5	3	8	32	19.0%	60
Almost never	22	2	4	21	76	39.7%	125
						answered question	**315**
						skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
On a daily basis	0	0	0	1	1	0.6%	2
Several times per week	3	7	0	0	2	3.8%	12
Mostly on weekends	2	1	1	0	0	1.3%	4
Almost never	56	58	12	38	133	94.3%	297
						answered question	**315**
						skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
On a daily basis	18	6	1	3	3	9.8%	31
Several times per week	20	25	7	6	22	25.4%	80
Mostly on weekends	16	15	2	11	39	26.3%	83
Almost never	7	20	3	19	72	38.4%	121
						answered question	**315**
						skipped question	**0**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
Yes	7	8	2	16	27	19.0%	60
No	54	58	11	23	109	81.0%	255
						answered question	**315**
						skipped question	**0**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
I walk to Caltrain	61	0	0	0	0	19.4%	61
I ride my bike to Caltrain	0	66	0	0	0	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	0	0	13	0	0	4.1%	13
I drive and park at Caltrain	0	0	0	39	0	12.4%	39
I rarely use Caltrain	0	0	0	0	136	43.2%	136
						answered question	**315**
						skipped question	**0**

9. Why do you typically travel on El Camino Real? (Select all that apply)							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Response Percent*	*Response Count*
Travel to and/or from work	35	46	8	18	52	50.5%	159
Travel to and/or from school	6	14	5	14	21	19.0%	60
Travel for shopping	50	44	13	29	104	76.2%	240
Patronizing local businesses	43	49	10	26	88	68.6%	216
For physical activity	17	12	5	4	17	17.5%	55
Other (please specify)							36
						answered question	**315**
						skipped question	**0**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)							
1 Least desirable	11	8	5	10	35		
2	4	4	2	5	10		
3 Neutral	28	34	5	13	67		
4	5	7	0	4	11		
5 Most desirable	13	13	1	6	12		
	3.08	3.20	2.23	2.76	2.67	2.85	313
Higher travel speeds on ECR							
1 Least desirable	24	32	5	15	50		
2	9	10	1	5	12		
3 Neutral	19	17	4	7	52		
4	7	6	2	6	10		
5 Most desirable	2	1	1	6	11		
	2.25	2.00	2.46	2.56	2.41	2.31	314
More convenient on-street parking on ECR							
1 Least desirable	26	24	6	24	53		
2	13	17	5	5	23		
3 Neutral	16	19	1	7	50		
4	3	4	1	3	5		
5 Most desirable	3	2	0	0	4		
	2.08	2.14	1.77	1.72	2.14	2.06	314
More convenient parking within walking distance to ECR							

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
1 Least desirable	13	7	2	6	9		
2	10	13	3	1	10		
3 Neutral	14	24	4	11	66		
4	14	15	3	12	35		
5 Most desirable	10	7	1	9	16		
	2.97	3.03	2.85	3.44	3.29	3.17	315
More bike parking close to downtown							
1 Least desirable	2	1	0	3	10		
2	0	0	1	2	6		
3 Neutral	14	1	3	10	44		
4	21	27	5	12	41		
5 Most desirable	24	37	4	12	34		
	4.07	4.50	3.92	3.72	3.61	3.91	314
Inclusion of bicycle lanes on ECR							
1 Least desirable	7	1	0	9	23		
2	1	0	1	4	10		
3 Neutral	4	1	1	2	25		
4	13	8	3	10	23		
5 Most desirable	36	56	8	14	55		
	4.15	4.79	4.38	3.41	3.57	3.95	315
Enhanced pedestrian safety and crossings on ECR							
1 Least desirable	1	1	0	1	3		
2	0	0	0	2	2		
3 Neutral	7	9	2	5	28		
4	15	17	3	13	29		
5 Most desirable	38	39	8	18	74		
	4.46	4.41	4.46	4.15	4.24	4.32	315
Wider sidewalks on ECR							
1 Least desirable	1	1	1	4	11		
2	5	6	1	2	14		
3 Neutral	18	10	5	15	47		
4	7	16	1	8	22		
5 Most desirable	30	33	5	10	41		
	3.98	4.12	3.62	3.46	3.50	3.73	314
Additional through lanes on El Camino Real							
1 Least desirable	19	19	2	8	24		
2	8	12	3	3	19		
3 Neutral	18	24	3	5	42		
4	8	6	4	14	25		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
5 Most desirable	8	5	1	9	26		
	2.64	2.48	2.92	3.33	3.07	2.89	315
Increased vehicle safety on ECR							
1 Least desirable	3	1	0	0	4		
2	3	7	1	0	7		
3 Neutral	21	24	7	14	63		
4	15	22	3	16	28		
5 Most desirable	19	12	2	9	33		
	3.72	3.56	3.46	3.87	3.59	3.64	314
Additional transit service along ECR							
1 Least desirable	6	4	0	1	18		
2	10	3	0	4	9		
3 Neutral	27	30	9	19	83		
4	9	22	3	14	13		
5 Most desirable	9	7	1	1	12		
	3.08	3.38	3.38	3.26	2.94	3.12	314
Timing traffic signals to favor continuous north-south flow on ECR							
1 Least desirable	7	3	0	2	6		
2	2	8	0	1	9		
3 Neutral	13	27	4	4	27		
4	15	12	3	13	31		
5 Most desirable	24	16	6	19	63		
	3.77	3.45	4.15	4.18	4.00	3.87	315
Timing traffic signals to favor east west access							
1 Least desirable	9	3	3	3	15		
2	10	11	4	8	18		
3 Neutral	26	31	4	16	56		
4	6	14	1	8	28		
5 Most desirable	10	7	1	4	18		
	2.97	3.17	2.46	3.05	3.12	3.06	314
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)							
1 Least desirable	4	3	1	3	8		
2	8	4	1	6	9		
3 Neutral	16	25	6	13	51		
4	13	22	2	8	19		
5 Most desirable	20	12	3	9	48		
	3.61	3.55	3.38	3.36	3.67	3.58	314
Reduction in delay at signalized intersections on ECR							
1 Least desirable	3	0	0	2	3		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
2	3	6	0	0	3		
3 Neutral	21	35	4	11	47		
4	19	13	7	17	40		
5 Most desirable	15	12	2	9	42		
	3.66	3.47	3.85	3.79	3.85	3.73	314
More landscaped medians on ECR							
1 Least desirable	10	8	1	5	12		
2	10	9	2	3	10		
3 Neutral	19	27	5	11	62		
4	5	16	2	11	33		
5 Most desirable	17	6	3	9	18		
	3.15	3.05	3.31	3.41	3.26	3.21	314
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)							
1 Least desirable	5	1	1	1	8		
2	4	2	1	3	7		
3 Neutral	10	17	3	8	36		
4	15	18	3	10	39		
5 Most desirable	27	28	5	17	45		
	3.90	4.06	3.77	4.00	3.79	3.89	314
						answered question	**315**
						skipped question	**0**

11. General Safety and Environmental Concerns							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.							
Strongly disagree	2	5	0	3	5		
Somewhat disagree	5	12	2	6	22		
Neutral/No opinion	3	4	0	5	10		
Somewhat agree	27	24	8	14	49		
Strongly agree	20	16	3	10	39		
	4.02	3.56	3.92	3.58	3.76	3.75	294
Ensuring that children can safely cross ECR to get to and from school should be a high priority.							
Strongly disagree	1	0	0	0	1		
Somewhat disagree	4	1	0	2	4		
Neutral/No opinion	9	4	5	1	13		
Somewhat agree	11	14	1	12	47		
Strongly agree	32	42	6	23	60		
	4.21	4.59	4.08	4.47	4.29	4.35	293
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.							
Strongly disagree	2	0	0	2	11		
Somewhat disagree	2	5	1	6	11		
Neutral/No opinion	14	17	3	8	32		
Somewhat agree	15	15	2	15	38		
Strongly agree	24	24	7	6	33		
	4.00	3.95	4.15	3.46	3.57	3.74	293
Signage (for cross streets, turns) is not clear enough and needs to be improved.							
Strongly disagree	3	1	2	6	10		
Somewhat disagree	16	11	2	6	25		
Neutral/No opinion	22	33	5	21	54		
Somewhat agree	10	12	2	3	25		
Strongly agree	6	4	1	1	11		
	3.00	3.11	2.83	2.65	3.02	2.98	292
						answered question	**294**
						skipped question	**21**

12. Walking Environment							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.							
Strongly disagree	6	0	1	2	4		
Somewhat disagree	14	18	0	7	16		
Neutral/no opinion	4	9	0	7	25		
Somewhat agree	25	25	7	12	50		
Strongly agree	8	7	5	10	27		
	3.26	3.36	4.15	3.55	3.66	3.53	289
Vehicle speeds should be slower to make the road safer for people walking.							
Strongly disagree	6	2	3	3	16		
Somewhat disagree	11	5	2	10	38		
Neutral/no opinion	15	26	6	12	41		
Somewhat agree	14	15	1	8	19		
Strongly agree	11	11	1	5	9		
	3.23	3.47	2.62	3.05	2.73	3.02	290
Bicycles on the sidewalks are a threat to pedestrian safety.							
Strongly disagree	2	8	0	1	11		
Somewhat disagree	6	12	5	5	13		
Neutral/no opinion	11	3	2	6	23		
Somewhat agree	24	19	4	13	45		
Strongly agree	14	17	2	13	31		
	3.74	3.42	3.23	3.84	3.59	3.60	290
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.							
Strongly disagree	2	1	1	1	7		
Somewhat disagree	2	5	0	0	12		
Neutral/no opinion	9	13	2	10	23		
Somewhat agree	14	12	5	14	26		
Strongly agree	30	28	5	13	55		
	4.19	4.03	4.00	4.00	3.89	4.00	290
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.							
Strongly disagree	3	1	0	3	12		
Somewhat disagree	3	4	3	4	24		
Neutral/no opinion	5	15	1	7	30		
Somewhat agree	10	12	5	14	22		
Strongly agree	36	26	4	10	35		
	4.28	4.00	3.77	3.63	3.36	3.72	289
						answered question	**291**
						skipped question	**24**

13. Transit							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.							
Strongly disagree	12	4	4	6	34		
Somewhat disagree	6	8	1	13	27		
Neutral/No opinion	23	23	6	13	46		
Somewhat agree	9	9	2	4	10		
Strongly agree	7	15	0	1	5		
	2.88	3.39	2.46	2.49	2.39	2.70	288
						answered question	**288**
						skipped question	**27**

14. Vehicle Traffic Environment							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.							
Strongly disagree	20	31	2	7	13		
Somewhat disagree	9	12	5	4	28		
Neutral/No opinion	10	9	2	7	20		
Somewhat agree	13	6	3	10	37		
Strongly agree	5	1	1	9	23		
	2.54	1.88	2.69	3.27	3.24	2.80	287
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)							
Strongly disagree	3	0	1	10	20		
Somewhat disagree	7	4	3	4	24		
Neutral/No opinion	3	3	1	3	15		
Somewhat agree	16	7	0	9	28		
Strongly agree	28	45	8	12	34		
	4.04	4.58	3.85	3.24	3.26	3.71	288
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.							
Strongly disagree	30	23	5	14	39		
Somewhat disagree	13	21	5	9	40		
Neutral/No opinion	12	14	2	11	32		
Somewhat agree	1	1	1	4	9		
Strongly agree	1	0	0	0	2		
	1.77	1.88	1.92	2.13	2.14	2.00	289
Solutions for ECR should attempt to separate regional through traffic from local traffic.							
Strongly disagree	5	2	0	3	14		

14. Vehicle Traffic Environment							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Somewhat disagree	10	5	5	15	24		
Neutral/No opinion	19	29	4	12	36		
Somewhat agree	8	15	2	7	25		
Strongly agree	15	8	2	1	21		
	3.32	3.37	3.08	2.68	3.13	3.15	287
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.							
Strongly disagree	21	14	5	11	49		
Somewhat disagree	11	14	5	14	31		
Neutral/No opinion	17	23	2	9	29		
Somewhat agree	3	6	1	4	9		
Strongly agree	5	2	0	0	3		
	2.30	2.46	1.92	2.16	2.06	2.19	288
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.							
Strongly disagree	3	2	1	4	7		
Somewhat disagree	8	12	4	6	18		
Neutral/No opinion	15	23	3	10	32		
Somewhat agree	10	10	2	8	30		
Strongly agree	21	12	2	10	34		
	3.67	3.31	3.00	3.37	3.55	3.47	287
						answered question	**289**
						skipped question	**26**

15. Bicycling Environment							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.							
Strongly disagree	2	4	0	2	10		
Somewhat disagree	6	4	2	3	23		
Neutral/No opinion	3	3	1	8	20		
Somewhat agree	19	24	7	12	33		
Strongly agree	27	24	3	13	37		
	4.11	4.02	3.85	3.82	3.52	3.79	290
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.							
Strongly disagree	5	0	1	9	15		
Somewhat disagree	2	1	1	4	18		

15. Bicycling Environment							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Neutral/No opinion	8	1	1	9	21		
Somewhat agree	11	13	2	7	34		
Strongly agree	30	44	8	9	34		
	4.05	4.69	4.15	3.08	3.44	3.80	288
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.							
Strongly disagree	7	1	1	4	7		
Somewhat disagree	3	10	2	5	7		
Neutral/No opinion	7	6	2	9	30		
Somewhat agree	13	16	4	5	36		
Strongly agree	27	26	4	15	43		
	3.88	3.95	3.62	3.58	3.82	3.82	290
Bicycles are best accommodated on adjacent parallel routes, not on ECR.							
Strongly disagree	8	16	1	5	10		
Somewhat disagree	8	14	3	2	17		
Neutral/No opinion	9	10	2	5	22		
Somewhat agree	12	8	4	10	32		
Strongly agree	20	11	3	15	43		
	3.49	2.73	3.38	3.76	3.65	3.43	290
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.							
Strongly disagree	1	0	0	3	3		
Somewhat disagree	1	2	1	1	5		
Neutral/No opinion	2	2	1	7	18		
Somewhat agree	12	10	4	10	41		
Strongly agree	40	44	7	17	54		
	4.59	4.66	4.31	3.97	4.14	4.32	286
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.							
Strongly disagree	4	0	1	3	16		
Somewhat disagree	2	1	0	6	9		
Neutral/No opinion	4	7	0	5	19		
Somewhat agree	9	4	3	8	23		
Strongly agree	38	47	9	16	55		
	4.32	4.64	4.46	3.74	3.75	4.08	289
						answered question	**291**
						skipped question	**24**

16. Parking Environment							
	Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)						
Answer Options	*I walk to Caltrain*	*I ride my bike to Caltrain*	*I am dropped off by another vehicle or transit at Caltrain*	*I drive and park at Caltrain*	*I rarely use Caltrain*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.							
Strongly disagree	17	15	5	12	28		
Somewhat disagree	14	19	3	17	32		
Neutral/No opinion	17	18	3	2	29		
Somewhat agree	4	5	1	3	22		
Strongly agree	5	2	1	4	9		
	2.40	2.32	2.23	2.21	2.60	2.44	287
Parking on ECR should be eliminated to free up more space for vehicle travel.							
Strongly disagree	7	12	2	8	18		
Somewhat disagree	5	11	1	6	14		
Neutral/No opinion	16	19	4	3	31		
Somewhat agree	18	10	3	11	33		
Strongly agree	11	7	3	10	25		
	3.37	2.81	3.31	3.24	3.27	3.19	288
Parking on ECR should be eliminated to free up more space for bicycle lanes.							
Strongly disagree	6	2	0	8	18		
Somewhat disagree	2	2	1	5	11		
Neutral/No opinion	5	9	1	6	23		
Somewhat agree	15	16	4	10	29		
Strongly agree	27	31	7	9	40		
	4.00	4.20	4.31	3.18	3.51	3.74	287
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.							
Strongly disagree	6	5	0	1	2		
Somewhat disagree	5	11	1	0	6		
Neutral/No opinion	13	14	3	12	26		
Somewhat agree	18	23	4	17	44		
Strongly agree	15	7	5	8	42		
	3.54	3.27	4.00	3.82	3.98	3.73	288
						answered question	**289**
						skipped question	**26**

APPENDIX B: CROSS-TABULATIONS – QUESTION 9

1. Indicate the condition which applies to the location of your residence. (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
I live in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	75	27	119	102	39	46.3%	146
I live in Menlo Park, but farther than a half mile of the El Camino Real Corridor	39	24	82	76	11	32.4%	102
I don't live in Menlo Park, but I do live within a half mile (4-5 blocks) of the El Camino Real Corridor.	25	8	27	24	2	13.0%	41
None of the above.	20	1	12	14	3	8.3%	26
						answered question	**315**
						skipped question	**0**

2. Indicate the condition which applies to the location of your work. (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
I work in Menlo Park within a half mile (4-5 blocks) of the El Camino Real Corridor.	35	12	44	38	10	17.8%	56
I work in Menlo Park, but farther than a half mile of the El Camino Real Corridor	25	11	38	33	11	14.9%	47
I don't work in Menlo Park, but I do work within a half mile (4-5 blocks) of the El Camino Real Corridor.	60	13	50	46	8	24.1%	76
None of the above	39	24	108	99	26	43.2%	136
						answered question	**315**
						skipped question	**0**

3. Do you drive a vehicle on El Camino Real? (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
Multiple times per day	75	29	86	78	22	33.7%	106
Approximately once per day	12	9	38	30	7	14.3%	45
A few times a week	44	16	85	78	17	35.9%	113
Almost never	28	6	31	30	9	16.2%	51
						answered question	**315**
						skipped question	**0**

4. Do you ride a bike on or across El Camino Real? (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
On a daily basis	45	18	44	41	13	19.4%	61
Several times per week	35	11	47	46	17	21.9%	69
Mostly on weekends	33	10	46	42	11	19.0%	60
Almost never	46	21	103	87	14	39.7%	125
						answered question	**315**
						skipped question	**0**

5. Do you use local bus transit services that travel on El Camino Real? (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
On a daily basis	2	2	1	2	0	0.6%	2
Several times per week	7	1	11	9	2	3.8%	12
Mostly on weekends	4	1	3	3	1	1.3%	4
Almost never	146	56	225	202	52	94.3%	297
						answered question	**315**
						skipped question	**0**

6. Do you walk along or across El Camino Real? (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
On a daily basis	19	4	26	22	17	9.8%	31
Several times per week	51	18	59	53	13	25.4%	80
Mostly on weekends	42	13	66	61	13	26.3%	83
Almost never	47	25	89	80	12	38.4%	121
						answered question	**315**
						skipped question	**0**

7. Do you have a child that has to cross El Camino Real to get to school? (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
Yes	33	31	50	43	8	19.0%	60
No	126	29	190	173	47	81.0%	255
						answered question	**315**
						skipped question	**0**

8. Please indicate the most common condition which applies to your use of the Menlo Park Caltrain station. (Select one)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
I walk to Caltrain	35	6	50	43	17	19.4%	61
I ride my bike to Caltrain	46	14	44	49	12	21.0%	66
I am dropped off by another vehicle or transit at Caltrain	8	5	13	10	5	4.1%	13
I drive and park at Caltrain	18	14	29	26	4	12.4%	39
I rarely use Caltrain	52	21	104	88	17	43.2%	136
						answered question	**315**
						skipped question	**0**

9. Why do you typically travel on El Camino Real? (Select all that apply)							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Response Percent*	*Response Count*
Travel to and/or from work	159	33	108	105	32	50.5%	159
Travel to and/or from school	33	60	49	52	12	19.0%	60
Travel for shopping	108	49	240	188	48	76.2%	240
Patronizing local businesses	105	52	188	216	46	68.6%	216
For physical activity	32	12	48	46	55	17.5%	55
Other (please specify)							78
						answered question	**315**
						skipped question	**0**

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Lower travel speeds on El Camino Real (ECR)							
1 Least desirable	38	16	54	46	11		
2	12	6	17	17	5		
3 Neutral	72	23	112	102	29		
4	13	7	23	16	4		
5 Most desirable	24	7	32	33	5		
	2.83	2.71	2.84	2.87	2.76	2.83	313
Higher travel speeds on ECR							
1 Least desirable	63	24	95	84	21		
2	15	6	29	24	4		
3 Neutral	49	19	74	76	20		
4	19	6	24	20	5		
5 Most desirable	13	5	17	11	5		
	2.40	2.37	2.33	2.30	2.44	2.35	314
More convenient on-street parking on ECR							
1 Least desirable	68	27	102	84	17		
2	28	12	45	45	12		
3 Neutral	51	16	71	68	21		
4	9	4	14	13	3		
5 Most desirable	3	1	7	5	2		
	2.06	2.00	2.08	2.12	2.29	2.09	314
More convenient parking within walking distance to ECR							
1 Least desirable	23	7	20	20	5		
2	21	8	27	24	5		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
3 Neutral	59	25	93	86	23		
4	36	9	64	61	15		
5 Most desirable	20	11	36	25	7		
	3.06	3.15	3.29	3.22	3.25	3.20	315
More bike parking close to downtown							
1 Least desirable	9	6	10	9	2		
2	2	0	7	3	2		
3 Neutral	30	14	59	48	8		
4	62	17	79	74	23		
5 Most desirable	56	23	84	81	20		
	3.97	3.85	3.92	4.00	4.04	3.96	314
Inclusion of bicycle lanes on ECR							
1 Least desirable	18	6	32	21	5		
2	4	4	14	13	2		
3 Neutral	13	7	28	21	3		
4	28	9	43	40	8		
5 Most desirable	96	34	123	121	37		
	4.13	4.02	3.88	4.05	4.27	4.03	315
Enhanced pedestrian safety and crossings on ECR							
1 Least desirable	2	1	6	3	2		
2	2	2	2	1	1		
3 Neutral	25	6	38	31	5		
4	46	10	60	54	11		
5 Most desirable	84	41	134	127	36		
	4.31	4.47	4.31	4.39	4.42	4.35	315
Wider sidewalks on ECR							
1 Least desirable	7	4	14	10	3		
2	14	5	23	18	4		
3 Neutral	46	21	73	63	15		
4	28	7	38	37	6		
5 Most desirable	64	23	91	87	27		
	3.81	3.67	3.71	3.80	3.91	3.77	314
Additional through lanes on El Camino Real							
1 Least desirable	37	12	49	48	11		
2	22	4	34	26	6		
3 Neutral	49	16	65	63	20		
4	29	15	47	45	10		
5 Most desirable	22	13	45	34	8		
	2.86	3.22	3.02	2.96	2.96	2.98	315

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Increased vehicle safety on ECR							
1 Least desirable	4	0	7	4	3		
2	13	2	12	9	1		
3 Neutral	64	23	98	87	19		
4	43	19	62	59	12		
5 Most desirable	35	16	60	56	20		
	3.58	3.82	3.65	3.72	3.82	3.68	314
Additional transit service along ECR							
1 Least desirable	14	5	21	19	3		
2	18	6	21	18	3		
3 Neutral	85	34	130	111	33		
4	30	13	45	46	11		
5 Most desirable	12	2	22	21	5		
	3.05	3.02	3.11	3.15	3.22	3.11	314
Timing traffic signals to favor continuous north-south flow on ECR							
1 Least desirable	10	6	11	13	4		
2	8	2	11	15	0		
3 Neutral	37	15	55	52	15		
4	36	13	61	46	10		
5 Most desirable	68	24	102	90	26		
	3.91	3.78	3.97	3.86	3.98	3.91	315
Timing traffic signals to favor east west access							
1 Least desirable	17	6	28	22	6		
2	36	7	33	33	9		
3 Neutral	68	23	102	91	22		
4	24	13	46	40	11		
5 Most desirable	14	11	30	29	7		
	2.89	3.27	3.07	3.10	3.07	3.05	314
Reduction of vehicle miles travelled on ECR (reduction in traffic passing through Menlo Park on ECR)							
1 Least desirable	11	2	14	12	2		
2	13	6	26	21	5		
3 Neutral	51	26	81	75	25		
4	38	12	46	40	11		
5 Most desirable	46	14	72	67	12		
	3.60	3.50	3.57	3.60	3.47	3.57	314
Reduction in delay at signalized intersections on ECR							
1 Least desirable	3	0	4	6	2		
2	10	1	10	8	0		
3 Neutral	59	22	88	77	23		

10. Please score each of the following items that you would like to see on El Camino Real from 1 (least desirable) to 5 (most desirable).							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
4	50	19	72	62	15		
5 Most desirable	37	18	65	62	15		
	3.68	3.90	3.77	3.77	3.75	3.76	314
More landscaped medians on ECR							
1 Least desirable	23	8	25	24	7		
2	16	6	30	25	7		
3 Neutral	60	19	94	82	23		
4	32	19	47	44	6		
5 Most desirable	28	8	43	40	12		
	3.16	3.22	3.22	3.24	3.16	3.21	314
More landscaping along ECR (providing buffers between pedestrians or bicyclists and vehicles)							
1 Least desirable	7	2	14	8	3		
2	6	2	14	13	2		
3 Neutral	36	16	56	48	14		
4	42	14	66	60	13		
5 Most desirable	68	26	89	86	23		
	3.99	4.00	3.85	3.94	3.93	3.93	314
						answered question	**315**
						skipped question	**0**

11. General Safety and Environmental Concerns							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
ECR is only safe if you are in a vehicle.							
Strongly disagree	8	2	12	9	0		
Somewhat disagree	23	6	37	35	5		
Neutral/No opinion	12	4	16	15	7		
Somewhat agree	53	30	96	93	20		
Strongly agree	52	13	65	54	18		
	3.80	3.84	3.73	3.72	4.02	3.77	294
Ensuring that children can safely cross ECR to get to and from school should be a high priority.							
Strongly disagree	1	0	2	1	0		
Somewhat disagree	7	3	6	6	0		
Neutral/No opinion	14	1	27	24	9		
Somewhat agree	43	15	61	59	10		
Strongly agree	82	36	129	115	31		
	4.35	4.53	4.37	4.37	4.44	4.38	293
Mitigating poor air quality from vehicle traffic/congestion should be a high priority.							
Strongly disagree	6	3	13	11	1		
Somewhat disagree	12	5	20	19	6		
Neutral/No opinion	39	17	57	49	10		
Somewhat agree	40	14	61	62	14		
Strongly agree	51	16	74	65	19		
	3.80	3.64	3.72	3.73	3.88	3.75	293
Signage (for cross streets, turns) is not clear enough and needs to be improved.							
Strongly disagree	14	6	19	15	2		
Somewhat disagree	30	8	47	37	7		
Neutral/No opinion	65	21	98	95	25		
Somewhat agree	25	12	43	41	9		
Strongly agree	13	7	17	17	6		
	2.95	3.11	2.96	3.04	3.20	3.01	292
						answered question	**294**
						skipped question	**21**

12. Walking Environment							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Signals are long enough to allow people to walk across ECR safely.							
Strongly disagree	5	4	10	9	2		
Somewhat disagree	32	10	42	39	13		
Neutral/no opinion	22	3	32	29	4		
Somewhat agree	59	24	94	84	21		
Strongly agree	27	13	45	42	9		
	3.49	3.59	3.55	3.55	3.45	3.53	289
Vehicle speeds should be slower to make the road safer for people walking.							
Strongly disagree	16	7	23	23	6		
Somewhat disagree	30	16	54	42	8		
Neutral/no opinion	48	15	78	72	17		
Somewhat agree	31	10	43	39	12		
Strongly agree	20	6	26	27	6		
	3.06	2.85	2.98	3.02	3.08	3.01	290
Bicycles on the sidewalks are a threat to pedestrian safety.							
Strongly disagree	9	5	15	12	3		
Somewhat disagree	26	11	33	27	9		
Neutral/no opinion	22	9	35	31	6		
Somewhat agree	50	17	84	72	17		
Strongly agree	39	12	56	60	14		
	3.58	3.37	3.60	3.70	3.61	3.61	290
A parallel pedestrian path/trail should be provided, separated from the main roadway, possibly adjacent to the railroad tracks.							
Strongly disagree	7	3	10	7	2		
Somewhat disagree	8	3	14	11	1		
Neutral/no opinion	28	6	43	37	7		
Somewhat agree	35	13	56	57	10		
Strongly agree	68	29	100	90	29		
	4.02	4.15	4.00	4.05	4.29	4.05	290
If conditions for pedestrians on and across ECR were improved, I would walk rather than drive a car for some short trips and errands.							
Strongly disagree	6	5	17	12	0		
Somewhat disagree	20	7	34	29	6		
Neutral/no opinion	27	7	42	40	9		
Somewhat agree	27	15	46	44	7		
Strongly agree	65	20	84	78	27		
	3.86	3.70	3.65	3.72	4.12	3.76	289
						answered question	**291**
						skipped question	**24**

13. Transit							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Dedicated bus/BRT (Bus Rapid Transit) lanes on ECR should be accommodated through Menlo Park.							
Strongly disagree	22	11	50	40	8		
Somewhat disagree	34	16	47	41	11		
Neutral/No opinion	54	21	79	77	19		
Somewhat agree	17	4	27	22	8		
Strongly agree	18	2	19	22	3		
	2.83	2.44	2.63	2.73	2.73	2.69	288
						answered question	**288**
						skipped question	**27**

14. Vehicle Traffic Environment							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Improving the flow of traffic for automobiles should be the highest priority for ECR.							
Strongly disagree	51	11	49	52	14		
Somewhat disagree	19	12	48	35	7		
Neutral/No opinion	24	9	34	33	9		
Somewhat agree	32	15	55	54	11		
Strongly agree	18	6	35	26	8		
	2.63	2.87	2.90	2.84	2.84	2.82	287
There is enough capacity for automobiles right now; improvements should focus on other modes of travel (bicycles, pedestrians, transit)							
Strongly disagree	13	6	30	22	4		
Somewhat disagree	15	8	37	30	6		
Neutral/No opinion	9	5	21	16	6		
Somewhat agree	32	9	45	43	11		
Strongly agree	76	26	89	91	22		
	3.99	3.76	3.57	3.75	3.84	3.75	288
Lanes should be made wider in order to better accommodate large trucks and delivery vehicles.							
Strongly disagree	60	21	84	78	17		
Somewhat disagree	44	20	67	58	13		
Neutral/No opinion	35	12	55	51	14		
Somewhat agree	5	1	14	13	4		
Strongly agree	1	0	3	2	1		
	1.92	1.87	2.04	2.02	2.16	2.00	289
Solutions for ECR should attempt to separate regional through traffic from local traffic.							
Strongly disagree	8	5	17	17	4		
Somewhat disagree	27	12	52	44	9		

14. Vehicle Traffic Environment							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Neutral/No opinion	57	19	75	68	19		
Somewhat agree	27	10	40	38	7		
Strongly agree	26	8	38	34	10		
	3.25	3.07	3.14	3.14	3.20	3.16	287
Regional through traffic should be prioritized on ECR; short local trips should be routed along other roads through the community.							
Strongly disagree	49	20	79	70	17		
Somewhat disagree	36	14	59	53	11		
Neutral/No opinion	45	14	55	55	14		
Somewhat agree	12	4	20	16	4		
Strongly agree	3	2	9	8	3		
	2.20	2.15	2.19	2.20	2.29	2.20	288
Controlling "spillover" traffic in the neighborhoods adjacent to ECR should be a high priority.							
Strongly disagree	10	5	12	13	4		
Somewhat disagree	32	11	37	34	4		
Neutral/No opinion	39	16	61	57	18		
Somewhat agree	22	9	48	45	10		
Strongly agree	42	13	63	53	13		
	3.37	3.26	3.51	3.45	3.49	3.44	287
						answered question	**289**
						skipped question	**26**

15. Bicycling Environment							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
ECR is not safe or convenient to cross by bicycle.							
Strongly disagree	8	2	16	13	2		
Somewhat disagree	19	4	31	29	5		
Neutral/No opinion	16	2	27	23	7		
Somewhat agree	40	20	78	69	17		
Strongly agree	63	26	71	68	18		
	3.90	4.19	3.70	3.74	3.90	3.81	290
Continuous bike lanes should be provided on ECR in both directions, because it is the most direct way for bicyclists to travel within and through Menlo Park.							
Strongly disagree	15	7	24	18	3		
Somewhat disagree	4	3	26	17	4		
Neutral/No opinion	14	12	30	29	8		
Somewhat agree	30	10	53	48	10		

15. Bicycling Environment							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Strongly agree	82	22	87	88	24		
	4.10	3.69	3.70	3.86	3.98	3.85	288
If bicycle lanes are provided, they should be separated from vehicle traffic by a physical barrier to enhance safety.							
Strongly disagree	11	3	16	16	4		
Somewhat disagree	10	4	21	19	3		
Neutral/No opinion	26	11	47	35	9		
Somewhat agree	32	12	55	52	13		
Strongly agree	68	24	83	80	20		
	3.93	3.93	3.76	3.80	3.86	3.83	290
Bicycles are best accommodated on adjacent parallel routes, not on ECR.							
Strongly disagree	28	8	28	26	5		
Somewhat disagree	22	10	34	32	10		
Neutral/No opinion	27	8	36	32	6		
Somewhat agree	31	9	56	46	14		
Strongly agree	39	19	68	65	14		
	3.21	3.39	3.46	3.46	3.45	3.40	290
Currently, routes parallel to ECR are too discontinuous or conflicted for effective bike travel.							
Strongly disagree	3	0	6	4	0		
Somewhat disagree	6	2	9	5	2		
Neutral/No opinion	9	7	22	25	3		
Somewhat agree	33	12	61	53	11		
Strongly agree	93	32	121	111	32		
	4.44	4.40	4.29	4.32	4.52	4.36	286
If conditions for bicyclists on and across ECR were improved, I would consider bicycling rather than driving for some short trips and errands.							
Strongly disagree	7	3	22	15	3		
Somewhat disagree	9	2	15	12	1		
Neutral/No opinion	17	4	22	25	8		
Somewhat agree	20	11	39	33	9		
Strongly agree	93	34	123	115	28		
	4.25	4.31	4.02	4.11	4.18	4.13	289
						answered question	**291**
						skipped question	**24**

16. Parking Environment							
	Why do you typically travel on El Camino Real? (Select all that apply)						
Answer Options	*Travel to and/or from work*	*Travel to and/or from school*	*Travel for shopping*	*Patronizing local businesses*	*For physical activity*	*Rating Average*	*Response Count*
Street parking on ECR is essential for the convenience of customers of small businesses located there.							
Strongly disagree	44	15	61	52	13		
Somewhat disagree	40	17	68	59	17		
Neutral/No opinion	35	17	49	52	13		
Somewhat agree	18	3	29	27	3		
Strongly agree	8	2	14	11	3		
	2.35	2.26	2.40	2.43	2.31	2.38	287
Parking on ECR should be eliminated to free up more space for vehicle travel.							
Strongly disagree	26	11	33	31	3		
Somewhat disagree	20	7	29	28	4		
Neutral/No opinion	38	11	49	50	13		
Somewhat agree	38	15	64	52	19		
Strongly agree	24	11	47	40	10		
	3.10	3.15	3.28	3.21	3.59	3.23	288
Parking on ECR should be eliminated to free up more space for bicycle lanes.							
Strongly disagree	15	8	28	21	4		
Somewhat disagree	9	2	19	17	1		
Neutral/No opinion	16	12	32	29	10		
Somewhat agree	37	10	55	53	13		
Strongly agree	69	23	88	80	21		
	3.93	3.69	3.70	3.77	3.94	3.79	287
Any parking that is removed from ECR should be replaced with parking lots or garages off the roadway, nearby.							
Strongly disagree	11	2	9	9	2		
Somewhat disagree	13	2	17	15	1		
Neutral/No opinion	31	17	55	45	15		
Somewhat agree	53	19	83	77	13		
Strongly agree	37	15	59	56	19		
	3.63	3.78	3.74	3.77	3.92	3.75	288
						answered question	**289**
						skipped question	**26**

Appendix C

El Camino Real Transportation Survey Open-Ended Responses

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Question 9

Why do you typically travel on El Camino Real? (Other)

1. To go to other local cities and activities
2. Travel to chorus
3. By far the best North/South route
4. Travel to other cities
5. to get to other cities that have better shopping options
6. travel to restaurants
7. To/from Library, to/from sports practices
8. Travel FOR work
9. Go to or through other Peninsula towns
10. Going out and coming home at night' primarily to get to the Burgess center for the library, Arrillaga gym, and classrooms
11. children's activities
12. travel to restaurants in other towns; travel to medical care; travel to volunteer activities
13. dropping off kid at daycare
14. to get to other towns - i otherwise try to avoid el camino
15. Driving child to practices/games
16. travel to friends' houses
17. the questions for 10 are BOGUS. Horrible, really.
18. it's the only way out of Allied Arts...
19. It is the most convenient and direct route north/south through the city.
20. I typically CROSS ECR
21. to go to the library
22. Attending events
23. Travel to/from doctor/dentist
24. Taking grandchildren to Burgess

25. mostly visiting the bank, post office, hardware store and other local shops and restaurants
26. Cross El Camino to get to Downtown MP from Linfield Oaks
27. Travel to and/or from home
28. to visit parents, go to doctor, go out to eat
29. Most direct route
30. To get to the library or classes at the Arrillaga Rec Center
31. To simply get from west side to east (i.e. to 101)
32. Crossing to reach my physical therapist
33. Children's activities
34. If there were a bike friendly way to cross near downtown, I would shop by bike. But it's hard to cross El.C. on a bike.
35. usually going or coming from the north to go from or get home
36. Travel to and/or/for recreation

Question 17

In your opinion, how well does El Camino Real currently serve your transportation needs?

Well

1. O.K.
2. OK, but I know it will fail me in the future with the Stanford, Greenheart, and other local and regional projects pending.
3. just tolerable
4. Ok by car or by foot.
5. Mostly pretty well.
6. with patience at certain times of day, works fine. with railroad tracks and few crossings, it's basically ECR or Middlfield for trips into town from where I live in North Fair Oaks / the Avenues.
7. Fairly well. I like the right turn lane at Valparaiso for entrance to west Menlo. Would hate to see it go away.

8. Adequate but not great

9. I have to drive down it every day to get to work (Mountain view to MP), and it works, but it's not fast or fun.

10. Adequate for my needs, as I have adjusted to ECR reality

11. It's ok the timeing of the lights could be improved

12. Barely adequately.

13. El Camino Real currently serves by transportation needs just fine, though I rarely travel during commute hours.

14. OK .. enforce the laws better. Sometimes 3 - 4 cars make turned after a light is clearly red. This is terribly annoying as someone who actually stops at a stale yellow. GIVE PEOPLE tickets and they will obey the law. Also give people tickets who are talking on cell phones. They drive more slowly and without paying attention - impeding the flow of traffic.

15. El Camino Real is fine. Bicycle traffic, particularly when bikes pass on the right and don't follow traffic signals, are more of an issue than making space for them can accommodate. If people want to go faster, take another route. I enjoy El Camino's pace for looking at businesses, and understand that it is not an expressway. If the lights are not already timed, that would be a nice feature to add to encourage cars to keep within the speed limit.

16. It's been an adequate compromise.

17. Reasonably well. I bike to work every day (M-F) and ride along ECR for at least some portion of that trip.

18. moderately well, often a better option than Middlefield

19. Just moderately

20. On a bike, ECR works well both south and north

21. just barely good enough.

22. I usually go to Palo Alto for needs (although I live in the Willows, Palo Alto is closer to me), it meets my needs fine when I come to Menlo.

23. ECR serves my travel needs. It would be improved by another vehicle lane in each direction

24. I only use it to get to/from shopping. For that it's just fine.

25. Reasonably

26. Ok

27. I only travel short distances on El Camino and for those distances it serves my transportation needs. However, I wouldn't want to drive long distances on it.

28. It's not bad, given that we need roads. Kudos to Menlo Park for the landscaping.

29. It's ok but I would love a direct route from Stanford Campus to Menlo Caltrain. In general the bike bridges are really nice but add significant time to my commute.

Not Well

1. Poor! Too much congestion because of lane merges and poorly sequenced traffic lights.

2. I mostly bike and walk to shop, exercise, and reach recreation. I need ECR for this, especially at night, but often challenged by traffic, lack of bike space, and right-turners not looking for me.

3. It is slow and stressful. I often take parallel routes which are longer and residential just to get somewhere more quickly.

4. I bike and walk for most local trips, use transit where practical, and driving when needed. I use ECR to patronize local businesses - Safeway, coffee shops, Staples, BevMo, Borrone, etc. ECR is not friendly for bicycling and walking - if it were improved, more people would be able to take short local trips without a car. Since a lot of trips are local, helping improve active transportation for local trips might relieve congestion more than additional vehicle capacity.

5. poorly

6. Harly. Too busy now.
   Biking is great but I doubt you get more people to ride them
   More empty buses won't help
   The survey is too long and to hard to follow. I gave up half way through.

7. Not well. Too much traffic.

8. It doesn't. I avoid ECR as much as possible and take residential streets to avoid it and its stoplights when I have to go north/south. I zig zag along side streets. The lights should be timed so traffic flows along ECR, but we may need an over or underpass for vehicles at ECR/Ravenswood intersection. Bikes and pedestrians need to be away from cars. There have been far too many deaths of drivers hitting pedestrians and bikers in and around Menlo Park. They need to be separated.

9. Poorly, and getting worse all the time. I avoid ECR as much as possible, but there's often no practical alternative.

10. It can be slow and frustrating driving El Camino. The lights should favor people traveling along El Camino.

11. Not well. Too much through traffic. Additional construction on the street will increase number of cars.

12. I avoid El Camino as much as possible. It is an ugly, dangerous street, and it is only going to get worse after you allow those monster office buildings to be constructed.

13. I avoid it if possible. For example, I live to the north of town. For example, if I want to travel to Little House, I go up Valpariso, left at University, then eventually down Middle.

14. too much congestion at rush hour. Looking at El Camino Real ONLY is totally missing the fact that we have really poor east/west connectivity and really poor transit options both in general and to get around within town.

    El Camino Real is absolutely frightening for bike riders. The east/west connections also are really frightening because they are so narrow - think Middle and Menlo where there aren't bike lanes at all.

    The sidewalks are too narrow, and if we have to wait until all parcels are developed, this won't be improved in any significant way in my lifetime or even my children's lifetimes.

15. it's horrible. i avoid driving on or crossing el camino whenever possible. i would never allow my children (11, 9, and 7) to cross el camino on their own.

16. Not very well

17. Not too well. Congested traffic, people blatantly disobeying traffic laws (running red lights especially), unsafe conditions for bikers and pedestrians

18. Too much car congestion during peak travel times. Absolutely need a bike solution.

19. Poorly. It is highly congested many times of the day and traffic moves slowly with frequent stops. The back up can be extensive making it 20 minutes to go 2 miles often at rush hour from Stanford. Development of ECR will likely make this even worse.

20. terribly. the traffic is horrible (see below). It doesn't feel safe for pedestrians or bicyclists either. And it's hideosly ugly and embarrasing with the vacant lots...

21. ECR functions as a means to get in and out of Menlo Park. I try to avoid traveling along ECR during peak hours. The left turn from Southbound ECR onto Alma in Palo Alto is particularly bad. I find it frustrating when vehicles block the intersection for cross traffic, esp. x Roble.

22. ECR is too congested, particularly at peak commute times. It is also a major EW barrier. Solving these two apparently contradictory issues is a critical challenge. Don’t make ECR a bigger barrier just to improve traffic flow.

23. Not well, I avoid it as much as possible.

24. not very well, the increasing traffic indicates we need to take steps now to optimize throughput

25. I avoid El Camino if at all possible.

26. I try to avoid using ECR where possible and go across to other parallel streets at commute times due to congestion. ECR is a more direct route, so I would prefer to use it for my transportation needs if the flow were better.

27. Poorly. Almost always too much traffic and only going to get much worse if proposed development goes ahead.

28. I hate driving on ECR. It is busy, the lights are slow, and it is ugly.

29. ECR is difficult for bicycles. As I am car-free and commute to many clients by bicycle, I am very strongly in favor of improved bicycle access along ECR.

30. I avoid El Camino whenever possible. I do love the trees that were installed a decade or so ago, it greatly improves the beauty and comfort of the road (it's nice to have shade when stopped at traffic lights, it reduces glare when driving, it just makes the whole experience more pleasant).

31. Too busy. Feels dangerous when walking along sidewalks.

32. horribly. it's dangerous and congested.

    try walking a stroller or biking from Cambridge to Burgess

    look at the left turn to Alma in the morning.

    watch all the red light runners from Sand Hill going left.

    try getting from Alma to Cambridge in the evening.

    look at all the cars that go thru neighborhoods instead of using ECR.

33. The flow of traffic through downtown Menlo Park is too slow due to poorly coordinated lights. Pedestrian safety is a real problem due to the lack of properly maintained audible crossing signals.

34. It's slow by car, and the empty lots and abandoned holes in the ground are scary to go by on foot or bike at night.

35. I try to avoid it.

36. I would give it a C-. It gets the job done, but just barely. It only works for cars. I'd like to ride my bike more but getting across El Camino is scary. The bike lane on Ravenswood appears and disappears right where it is most needed. I hate driving for short trips but El Camino feels like it's only for cars. Sidewalks are too narrow. Forget riding a bike!

37. It cuts my route to downtown MP. For downtown's business sake it would be great if there's a link over or under ECR.

38. not very well, since I ride my bike everywhere and it is no fun to ride my bike on ECR

39. Weak. I bike but it's so dangerous to x in bike

40. Walking or biking along El Camino, crossing El Camino is required to get to Palo Alto, Safeway, Stanford shopping center, library, pool, parks, MH school.

    Currently it is no fun and scary

41. Not great

42. We are only one block from el camino in allied arts and when i can avoid it i do. I go way out of my way to walk so i dont have to travel by foot or bike or even a car on ecr. This even affects my spending- where do i shop? At the standford mall. Why? Because its a pleasent walk or bike over with or without kids in tow.

    Menlo park needs to improve pedestrian and bicycle routes around town- it has such potential to be a safe and bikable city but its just unsafe. And my kids? No way would i even let them walk on ecr let alone bike.

43. Cars stalled too often so traffic crawls. Too many cars funneling onto ECR for uTurn onto Cambridge. Cars should be able to go directly from sand hill rd.

44. It is too congested at all times of day, but particularly during commute hours. It can take multiple lights to get through an intersection. Drivers are so frustrated they cut across lanes dangerously, and cut off other drivers, in order o get ahead. There are too many cars trying to make a U-turn at Cambrige and many can't negotiate the turn, then stop at the curb, and then dangerously back up into oncoming traffic! Ther is not enough space for Stanford's south-bound construction trucks to safely turn west onto Sand Hill. They often attempt to right fom the adjcent lane which is simply not safe. There are too many frustrated drivers who try to avoid getting caught in a second wait at a light who will run a yellow or red light only to be stopped "in" the intersection, blocking traffic during someone else's turn. these are not the exceptions. These things are happening multiple times a day, day in and day out.

45. Not well. It is very frustrating to drive El Camino, with too much time spent idling at lights. And I would ride my bike, but I don't feel safe doing that.

46. The vulgar way of putting it is that El Camino sucks. The more eloquent way of stating the same thing is that El Camino is discordant with the community it serves. It is an ugly, litter-strewn eyesore that is packed with cars at all hours of the day. It is unsafe for bicyclists, unpleasant for pedestrians, and a disaster for motorists. Try driving from the MP/PA border to the MP/Atherton border at 5:30 pm.

47. Not very. It's a major thoroughfare that every other community on the peninsula seems to have gotten right, but traffic once it hits Menlo Park just jams up. I think with proper traffic-dependant timing on the signals to sync them to allow through traffic it would work, but now the signals do not seem to be synced properly.

48. By car it is time consuming and always seems to be congested within Menlo Park. would love easier access across el camino to arriallga/burgess. would definitely bike and walk rather than drive if I felt safer.

49. Not well

50. Not very well. In a car, the lights are ill timed. On foot, it's unpleasant. On a bike, it's terrifying.

51. Not well too much traffic and unsafe

52. Poorly. It is currently only safe for autos, and even then the traffic speeds are too high. If we add more car lanes, we will continue to encourage more car traffic- which is mainly single occupant

motorists. We need to encourage cycling and walking on ECR, and make it an attractive, multi-modal resource for the city.

53. Poorly

54. There is a segment through Atherton that works well for my bicycle travel because there's a pretty good shoulder and no parking. The Menlo Park segment of El Camino is very uncomfortable for me as I ride my bicycle to shop.

55. Poorly. I ride a bike and user Caltrain more than drive.

56. El Camino Real is a legacy of prioritizing cars over people. I avoid it as much as possible.

57. It's a bit scary. Cars go too fast, it's too much of a highway.

58. ECR operates as a freeway, when in fact it should operate as a neighborhood arterial. It is a very unpleasant road to bike or walk along.

59. Not that well. I mostly bike on El Camino, and it's not exactly a friendly place to ride.

60. Poorly: cycling on ECR is only good prior to 8 am. After that it becomes miserable. Bus service on ECR is unusable due to delays. I don't drive a car, and don't want to.

61. I currently avoid travel on ECR as much as possible opting instead for adjacent parallel alternatives and feel very unsafe crossing it when I do because of red light runners.

62. Not very well. It's scary to bike on ECR, but some time I have no choice since any alternate routes add considerable time or distance and often require crossing El Camino multiple times. I commute from Mountain View to Menlo Park, and many businesses are near ECR so to get to those businesses, travel on ECR is required.

63. I already travel mostly by bicycle or foot and El Camino Real is currently a very poor choice for me. I do not feel safe cycling along the road and only do so when I have no other option.

64. Poorly. As a pedestrian, it is very difficult to walk along or accross due to the traffic lights. In particular, it is a horrid situation where one is expected to press a button, and then potentially wait an entire light cycle to cross in either direction (north-south or east-west). I understand that the buttons are used to increase length of time for the signal (and thereby improve traffic flow), but it sends a strong signal that the city of Menlo Park does not want people walking along ECR, or even more generally since there are currently no contiguous walking routes that parallel ECR.

    As a cyclists, ECR is a large, high-speed road with no dedicated cycle lane. Additionally, there is no convenient, contiguous bike throughfare with right-of-way priorities over crossing traffic as an alternative. Again, this makes it seem as though the city is trying to encourage everyone to drive.

65. It is a dangerous road that I avoid riding my bike on at all costs. I mostly ride my bike in Menlo Park.

66. Poorly. I primarily travel by bike, and I virtually never travel on ECR, even though it is the most direct route. It is completely unsafe for cycling.

67. I am a bicyclist who does not own a car. I use El Camino as my main route to get to work. El Camino, going through Menlo Park, is not well configured for bicycle use. Example: southbound, from Encinal to Valparaiso: you should provide a bicycle pocket lane between the "right turn only" lane and the next through lane. Or you should re-designate the "right turn only" lane to indicate an exception for buses and bicyclists.

68. I mainly take El Camino by car to do local shopping or go to restaurants. At some times of day traffic is terrible when this becomes a commute route/alternative to the freeway. In my opinion that isn't a good use of the road. El Camino isn't an expressway; it has many intersections and is lined by shops with driveways and on street parking. It isn't optimized for high traffic volumes or high speeds, and it shouldn't be.

    I would love to feel like I could ride my bike on it, but I don't feel like it would be wise due to the width, amount of on street parking, and lack of a bike lane.

69. I make every effort to avoid traveling, biking, or walking along El Camino Real in Menlo Park when possible. This means putting more traffic on neighborhood streets, which is not a good alternative.

70. Being a local, I know how to circumvent the traffic on ECR, but that really doesn't solve the problem, now does it? It's a problem that only continues to get worse.

71. El Camino is a bottleneck at multiple times during the day when I try to travel to Palo Alto or Redwood City.

72. I live near El Camino Real, and use it as a motorist, a cyclist, and a pedestrian. As a motorist, El Camino in Menlo Park is the most congested and slowest portion of my commute. As a cyclist (and Bicycle Commuter), El Camino is a hazard which must be carefully navigated at the beginning and end of my daily commute. As a pedestrian, El Camino is ridiculously dangerous.

73. Not very well. There is lots of traffic and delays, especially in the afternoons

74. Very poorly due to the fact that it is extremely unsafe for cyclists. The lights on el camino are very inefficient at night, turning green for cars and pedestrians even when there is no one waiting.

75. Generally poorly. While El Camino is excellent for driving, it is dangerous to walk or bike on the corridor. Transit is too slow for effective transportation.

76. I avoid this road whenever possible. I never walk on the sidewalks there unless there aren't other options. It is invariably an unpleasant traveling experience.

77. It's a necessary evil. You can't get from one end of MP to the other without crossing it. And quite often it's the only direct route to where I need to be without taking a circuitous route through a residential neighborhood.

78. It is too congested in the Menlo park area

79. Rather Poorly due to bad light timing

80. Not so well. It is clogged with traffic most of the time.

81. It's crowded, there should not be parking on El Camino with in a couple blocks of Santa Cruz Ave. I realize some businesses seem to need parking on the street, I have even used it. But isn't there some parking in back or side of buildings? or shouldn't there be? Often the right hand turn from ECR North at Ravenswood is blocked by cars or trucks cutting through then cutting in to a main through lane, but since it's a red light or stopped traffic, everything stops. Same for the ECR southbound at Valparaiso or Oak Grove, needs a right hand turn lane.

82. It too congested with through traffic

83. It's not great. I only travel it in my car if I have to/it's the only convenient route. Living in Linfield Oaks, I cross El Camino on foot to get to downtown. I don't enjoy standing at the intersections to get downtown with traffic roaring by. A bike barrier, slower speed limits might improve this. I never travel it on bike even though I live so close - I don't want to compete with the traffice and the parked car. Biking seems dangerous.

84. I live and work off ECR and drive from home Menlo to work in MV each day. During peak times it seems the flow of traffic could be better as I can drive up from MV with little congestion...but once I pass Sand Hill it gets very congested coming through MP. It seems the train also plays a part in cutting off through traffic East to West.

85. It is a direct route, but very slow in the mornings and afternoons. The worst part of El Camino for me is trying to cross it because the lights at the intersections are too long, and I often have to wait for two or three light cycles in order to cross in the mornings and afternoons.

86. The congestion near Santa Cruz ave and south is awful. Way too many large trucks and construction vehicles clog the corridor. I think those commerical trucks should use alternate routes.

87. Not very well. Too busy / crowded so avoid driving there. Use my bicycle on weekend but ECR is not a bike-friendly road. Vehicle traffic and parked cars create hazards.

88. It's a terrible place to be. Like a highway with stupid, long, untimed lights, and not safe for bicycles. Not nice to walk along, cross, or people watch. Just gross. Add sensors so the lights change when someone's trying to cross and there's no one else around. Be bold and make it a park with bike lanes and a local rail line.

89. Not so well.

90. It does a poor job. There are too many conflicting requirements and I don't how it can be improved.

91. El Camino Real is a barrier to cyclists and a parking lot for cars.

92. Very poorly for bicycle and pedestrian usage. Crossing is unsafe and I have witnessed many close calls between vehicle and non auto mobile traffic.

93. I have no choice.It has been congested and getting worse in the 25 years that I have lived in the area. It is much worse in Menlo Park that Palo Alto and Redwood City.

94. I avoid it during commute times and any other time I think it'll be crowded. I take alternate routes to get to businesses in downtown M. P..

95. Does not serve well as primary transportation corridor for either cars or bikes in any in San Mateo or Santa Clara Counties. It's the nature of a regional thoroughfare bisecting local commercial districts. It only worked optimally when vehicles moved at the speeds of bicycles (20 mph) and there was only one stop sign per town.

96. It's pretty bad at after work rush hour.

97. It is so busy during the day that I avoid it if possible. That makes me take a longer, more circuitous (but much more pleasant) route through the neighborhood.

98. I do not feel safe biking near or across ECR.

99. It does not meet my transportation needs. I am not comfortable bicycling on ECR in Menlo Park.

100. Too congested, people lane hop to get ahead. People go straight on right turn only lines to get ahead, so dangerous.

101. I mostly ride a bicycle and take caltrain, so ECR does not serve my transportation needs well, it is too auto-oriented and is dangerous for me as a bicyclist.

102. ECR barely does the job as a motorist, pedestrian and cyclist. The intersection at ECR and Menlo/Ravenswood is awful for pedestrians. Why are pedestrians only allowed East-West access on one side of the road? It is double jeopardy for pedestrians who have to cross Ravenswood to get the Menlo Park Library. If there was East-West access on both sides of the ECR Menlo/Ravenswood intersection, pedestrians wouldn't have to use the Crosswalk of Death at Alma and Ravenswood.

103. Very poorly. El Camino Real is, in its current state, hostile to pedestrians and bicyclists. I try to limit the use of my car, and make as many trips as possible on foot or on bike, so I experience this hostility on a daily basis. I do not ever ride my bike on El Camino, just getting across is intimidating enough. Car traffic is too heavy and aggressive. The sidewalks are extremely narrow in some places.

104. El Camino Real doesn't serve my transportation needs. Lights are not timed and its too dangerous for bicycles and pedestrians. Its also an eyesore.

105. North/south and south/north traffic a mess.....do something to get the traffic through the city more quickly...(timed lights, more lanes,etc)

106. In my opinion, the section of El Camino Real in downtown Menlo Park is not serving my transportation needs; rather, it is obstructing my transportation.

107. Most of my trips within Menlo Park are by bicycle, so I tend to avoid ECR when convenient; the current traffic speeds and lane setup is not conducive for low-stress cycling.

108. When I drive, I prefer to take Central/Alma as the regional route north-south, however this is not an option in Menlo park because of the barrier at Sandhill. Consequently, when I need to traverse Menlo Park, I must take El Camino, even though I don't like it, because it is too wide, too busy, and too slow.

     When I bike, I avoid El Camino at all costs because it is just not safe. Currently there is no safe route to cross from the south side of Camino to the Palo Alto bike corridor (along Bryant) on the north side of Camino, except at Sand Hill, which is often out of the way.

109. Not at all well. It's a very inefficient route to take by car and one I try to avoid using. I was recently stuck through multiple signal changes attempting to cross El Camino Real in Menlo Park because cars in gridlock blocked the intersection. Traffic on ECR was barely moving.

110. I rarely bike El Camino and when I do I like to take the entire lane so that I don't get slammed by car doors or buses pulling out. I do not need a bike lane on El Camino - I don't recommend biking on El Camino. I find the traffic light coordination is not quite good enough - need longer times of green for cars on ECR and then longer stop signs particularly at Santa Cruz to cross. I'd consider overhead bridges for pedestrians, especially school children. Valparaiso is fine for bikers as it is.

111. Dangerous for pedestrians and bicyclists

112. poorly. My main use is to go to north or south from menlo park on el camino real. I generally cut through menlo park rather than use el camino until I have to.

113. Very poorly. Too much through-traffic.

114. It is unsafe to ride on a bike, and has poor flow for cars.

115. There is too much traffic. Also, very dangerous for school children to cross.

116. I live in the Willows. The traffic going through Menlo Park along the ECR has increased tremendously over the years to the point that I more frequently shop in Palo Alto or Redwood City to avoid driving along the ECR. Walking along the El Camino is NOT pleasant due the narrow width of the sidewalks interrupted by light poles and the lack of pedestrian friendly crossings. The goal of the 'Grand Boulevard" should be for pedestrians, cars and bicycles together and not just for cars.

117. I am very hesitant to walk or bike along El Camino. I have three kids and who need more space to bike. This means I take the car more often than I'd like to go for a quick shopping trip to downtown Menlo Park, to a restaurant, or to visit friends.

118. Crossing El Camino is unsafe with poorly maintained and typically nonfunctional audible crossing signals.

119. Not well. During commute and school pickup/drop off hours, it is impossible to get from Redwood City to Palo Alto via ECR in less than 15 minutes.

120. I avoid El Camino as much as possible because it is so often gridlocked. And with all the new development, it is going to be an absolute nightmare.

121. Horrible to bike on or across, horrendous during rush hour in a car, and usually bad. It serves it's purpose in that it's a road but it's a very infective one.

122. I tend to avoid ECR when possible, taking back streets to navigate north and south.

123. NOT WELL AT ALL! I can't cross it on my bike with anything like a feeling of safety. I can't walk on it more than a block or so because the rush of traffic is loud, obnoxious, and scary.

    The best place to cross on a bike now is all the way back at the Stanford Shopping Center. Even then, there is not enough time for pedestrians to get across 8 lanes of traffic. But it's impossible to ride the narrow sidewalk all the way to the MP biz district from the Stanford crossing. I've tried. Instead, you have to go way down to the Vi and cross at the bike bridge into MP there. Then you have to find your way to the business district downtown. More signs downtown to the bike bridge by the Vi and the Stanford crossing would help right now. I had to ask two people to find my way through the winding streets when I decided to leave Safeway and go back to the bike path to the Stanford Shopping Center crossing for El Camino.

    I love biking and this community has made it very hard to cross El Camino and get all businesses in downtown MP. I should think the Chamber of Commerce would fund the signs to and from downtown to the bike bridge by the Vi at Stanfrod Shopping Center. Have you ased them?

    If you made it more bike friendly, you'd need fewer parking places.

124. Poorly. I use other routes when possible.

125. Too many cars held back by poorly synced lights and poor detection. biking is dangerous. I drive off hours but bike to work.

126. The stretch where ECR goes through Menlo Park is horribly congested during traffic hours.

127. Not well at all. During rush hours it is unbearable. It is terrible for children and menlo park is a community of families. I bike everywhere and I wish it were incentivized by the city. I dont want any more downtown traffic and we need to reduce the cars in MP.

128. Not well at all. It is frightening to cross on bike or on foot. It is terrifying to use on a bicycle. It is somewhat ok for getting around in a car, but I'd prefer not to use a car. There are zero viable alternatives because El Camino has to be part of a system that gets me from home to where I need to go, and that isn't just on El Camino.

    Crossing El Camino is a HUGE problem that must be addressed holistically.

129. Try to avoid it, by auto, rather use bicycle.

130. Poorly - as a bicyclist, I am terrified of biking on both El Camino and on Middlefield, the two main roads that I need to bike on to efficiently get to my home from Stanford.

131. ECR currently serves my transportation needs quite poorly. I live at the intersection of ECR and Santa Cruz Ave. and exclusively bike or walk. ECR is a death trap for cyclists, but I must cross it to get to work. My commute to work is only ~15 minutes, but a good portion of that is simply being stuck waiting to cross ECR. ECR is not much better for pedestrians...at least there is a sidewalk, but there should be more frequent crosswalks during daytime. Right now, I would never bike for any reasonable distance on ECR...it's way too dangerous. Drivers have yelled out their window for me to use the sidewalk, but that's just not right, and it's dangerous to pedestrians.

132. Not well. I live locally and do most of my errands in Menlo Park, but I always try to avoid ECR as much as possible, whether I'm in my car or on my bike. I seldom walk along ECR.

133. I think it's a really unfortunate development in Menlo Park. It cuts off businesses from pedestrian traffic. Making a more welcoming environment for pedestrians and bicyclists in dowton menlo park should be a priority for urban planning. I only use ECR for a car when I'm trying to leave Menlo Park: I live close enough to walk/bike to businesses. However I find walking/biking to be very unpleasant on ECR.

134. too fast and dangerous for bikes with no bike lanes, too slow for cars because of all the traffic lights (and them being out of sync with each other)

135. I ride my bike everywhere, and I have to take an incredibly complex route of side streets to get through Menlo Park. The times I've biked on El Camino I feel scared.

136. Poorly. It is incredibly unsafe to bike on ECR, and I often have to go far out of my way to find safe biking routes home.

137. Not well due to the multiple signalized intersections

138. El Camino is impossible in Menlo Park during rush hour. When traveling from Palo Alto on Alma at those key times, I dread getting onto El Camino because I know it will be horribly blocked. When you have to wait through a couple of light changes because the car on the other side of the intersection has not budged at all, it is depressing. It would be great to have the equivalent of the sheltered bike path through Palo Alto that runs by the train tracks, so that there would be further incentives to bike through the city instead of dealing with traffic. It would be great to have a better car route too, but if we had to choose between the two, a bicycle route would be terrific. Wouldn't it be great to have a "bike freeway" to encourage people to get out of their cars?

139. I travel on ECR mostly when I am going north and south. I try to avoid ECR during lunch and commute hours because ECR is like a parking lot. The traffic is heavy and the traffic lights are NOT set to make getting traffic through this city quickly. I have lived here for almost 25 years and the city has done nothing to improve traffic on this corridor through this city. A HUGE disappointment and the worse thing about visiting or trying to shop in this city.

Mixed

1. It is fine -- very busy, certain times of day are very difficult. I avoid ECR, but it is a major connector between MV, MP, Redwood City

2. El Camino is the way I get from MP to RWC and PA -- it is the only way I travel to these two neighboring communities where I frequently do errands and have business. Crossing El Camino is the ONLY way to get from West Menlo/Downtown to the Civic Center/MAHS/rest of Menlo Park. El Camino serves my needs, but I try to avoid commute hours, as the traffic bottlenecks in MP due to the reduction to 2 lanes from 3.

3. When travel time is not important -> quite well

   When travel time is important -> not very well

4. Functions fine for auto traffic and ok where there are pedestrian sidewalks. Need to improve bicycle safety.

5. It only serves my needs if I eant to avoid MP.

6. Somewhat, but the disjointed nature of coming off of sand hill road and making u turns is ridiculous and the traffic back up at the foot of middle road near Safeway is also ridiculous and maxed out

7. Ok, except for bike crossings for kids

8. Mediocre. It gets too congested.

9. It's fine for driving needs, though slow during rush hour.

   It's awful for bicycling and an impairment to my riding more frequently. I never ride along El Camino and I very much dislike crossing it due to not always being noticed by drivers who are turning or simply passing me as I cross.

   Not nearly enough time to cross as a pedestrian....dangerous!

10. Ecr is ok for car travel. I need it to accommodate walking and biking. If we make walk and bike viable themn car traffic will decline a bit. More bikes on ecr will make drivers accustomed to sharing the road.

11. car: acceptably

    walk: acceptably

    bike: I cross El Camino with the pedestrians' green light. I do not dare ride my bike along El Camino; I am too scared. I would only do so on a separated path.

    Alma between Ravenswood and the bridge to Palo Alto is pleasant.

12. Serves my transportation needs beautifully when the traffic flow is light. When the traffic flow is heavy, sometimes I am not being transported at all, but PARKED on El Camino.

13. It does ok, considering the complexity of the area. I confess that I avoid it whenever possible.

14. It works but it's slow during rush hour and is dangerous when I cross at Sand Hill intersection to Alma in Palo Alto

15. Quite well when I am in the car, but it feels unsafe to walk along and bike along. It is also hard to bike across the train tracks. An under or overpass would be nice.

16. Most of the time it is ok, but late afternoon and evening it is very difficult to get anywhere in a timely manner thus leading to drivers cutting thru city streets to get to their destination or just to bypass El Camino from one end of MP to the other.

17. I avoid driving on El Camino during rush hours so it generally serves my needs. I would ride a bike more if there was a safe North-South route along/near ECR.

18. Moderately adequate. It is congested southbound in my am commute

19. Okay, but it could accommodate bicycles better.

20. It's the shortest route but quite dangerous!

21. 1) As an occassional motorist, ECR work OK most of the time. Of course, timing one's trip on ECR is essential. I drive ECR for occassional trips from home in RWC to Trader Joes and other trips in Palo Alto using Alma (I drive ECR perhaps once or twice per month)

    2) On bike, I CROSS ECR on twice a day going to and from work. I use both at Ravenswood/Menlo and Glenwood/Valipariso. At best, the Ravenswood/Menlo crossing can be a challenge -- especially for inexperienced cyclists -- fortuneately, I'm able to travel close to the posted speed limits for short periods of time -- not everyone can (and is willing to) do this. Better, more frequent crossings would help -- including Middle/Cambridge area

22. It does well in providing north-south transportation but is a huge barrier to east-west travel.

23. Adequate for auto, inadequate for walking and cycling

24. It is the most direct route. In heavy traffic, it is very slow. There is no other choice. "how well does it serve my transportation needs?" It gets me there, but I fear the future with even more cars on it. Don't know the solution.

25. good but slow for the car; too dangerous to have cyclists on the same road; traffic signals are killer!

26. I can get where I need to go fairly easily, but the lights are too long in many cases and the congested traffic moves too slowly. I try to avoid downtown/el camino during commute time, lunch time, and school afternoon pickup time. These are the worst times to have to use El Camino. Unfortunately, this is most of the daylight hours.

27. In many cases the best of a bad lot but generally to be avoided if possible.

28. Problematic serving my needs. El Camino is too narrow for the number of cars on it, but I don't see how it could be widened. I get onto it from Middle, and if I am going across the tracks, I like that there is a designated right turn lane which starts a ways before Ravenswood. There should be a right turn lane from El Camino on to Middle. Most of the time, the turn left lane into PaloAlto and across the tracks is very filled with cars. Sometimes there are 12-14 cars and the lane is used up and then blocks a travel lane going south. Walking across at Middle and ECR is dangerous. Cars turning left don't wait.

29. So-so. It is too congested with cars for my local usage. I think through traffic should be strongly discouraged.

30. useful road. but traffic isbad

31. Ok, but frustrating. I tend to avoid when feasible.

32. Depends on the time of day -- during high-traffic hours, it sucks. Otherwise, it's pretty good. (this is for driving -- I don't bike much because I don't feel that it's very safe)

33. Adequately, could be better for bicycling, sidewalk widths, and pedestrian crossing, i.e. full phase signals.

34. If I were not interested in changing my driving habits, El Camino Real would be fine. However, I would like to drive less and bike/walk or take transit more, both for commuting and to run errands on evenings/weekends. At this time, El Camino Real does a poor job of encouraging alternative modes of transport.

35. As a bicyclist, In terms of connectivity -- pretty well. In terms of safety -- not well.

36. Only using a car, not cycling or walking.

37. Works fine for driving. I do bike in the area but I do not bike on ECR - it is too dangerous

38. Mostly for riding my bike to get to the train station or Palo Alto. Occassionally, I will drive but mostly I use my bike. It's not that safe for bikers-- it's direct but no dedicated bike lanes means that I'm on my own.

39. Only ok - too many cars. Need better conditions for biking, walking and ECR bus route.

40. I drive on El Camino quite often, and at certain times of day, the traffic is terrible because the lights don't seem to be timed properly to allow for traffic flow. I often bike to work and would love to take ECR as it's the most direct route; however, there are no bike lanes and I absolutely do not feel safe biking on the street.

41. It's okay, but I do find it frustrating to bike on. Cars are often annoyed that there are bikes, but we can't really bike on the sidewalks. Additionally, the edges of the right lane are often scattered with drains that are below the surface level of the road (specifically, southbound near Ravenswood). This makes it either exceptionally bumpy or forces one to bike a littler further into the right lane--either seems unsafe with the level of traffic.

42. Barely OK.. It's a bottleneck for car traffic since traffic from Alma (and to some degree Foothill) converge onto it in Menlo Park (other North/South primary roads end at the Menlo Park / Palo Alto border). Also, the lack of good East/West connectivity pushes more traffic onto El Camino. It's generally way too hard to get to or through Menlo Park downtown from points east, west, north and south!

43. It is ok to drive on, but i would never bike on there, and i would be a little nervous having my kids cross to hillview.

44. I avoid driving across town in commuter hours.

45. It could be impro ved .

46. Too much spill over from Sand Hill Road (i.e. non-Menlo Park traffic)

47. the bottom line is there is too much traffic & too many people trying to use the same space; I make do by riding my bike on less congested streets & only driving in non rush hour times; but it could be more convenient

48. ok, i would bike if I felt safe to cross ECR>

49. Except for the bottleneck between Valparaiso and Roble, it does its job. I use Hoover to enter downtown if coming from the north. Crossing ECR on most streets is tolerable at most hours but Ringwood/Menlo is just slow.

50. Good for driving, which I do occasionally, but poor for biking, which I do every day!

51. Slow but OK for car traffic. Terrifying for bicycle riding.

52. By car: adequately.

    By bike: it is completely unsafe.

53. I drive down it on weekends and it is fine. I commute by bike on weekdays but always avoid El Camino because it is unsafe for bikes.

54. Well in my vehicle (though congestion is high during rush hour), but very poorly on my bicycle, requiring me to navigate on less direct roads for both safety and efficiency.

55. Depends on the time of day. Disastrous during morning and evening commutes. During day and late night there is a good flow.

56. Rush hours are terrible, otherwise not bad.

57. Moderately well, but bike lanes should be a priority especially considering the amount of bike traffic to and from Stanford.

58. ok - not great. the congestion continues to grow and it is a bottleneck both NS and EW

Other

1. major access to menlo park
2. I travel on ECR only when visiting businesses on ECR. Otherwise I use it for travel from Palo Alto southward, or Atherton northward.
3. no opinion
4. We don't trust Menlo Park to do what is best for Residents - this survey is a great example of that.
5. There needs to be a cut-through /underpass from El Camino Real to Burgess Park (for pedestrians & bikes) somewhere in the vicinity of Middle Road (similar to what they have in Palo Alto). It needs to go under the train tracks and provide better access to Burgess Park for the residents of Menlo Park.
6. It is the ONLY WAY to get through Menlo Park! I use it to get to Redwood City or Palo Alto.
7. Its almost unavoidable.
8. Traffic lights need to be better coordinated so that traffic can move more freely.
9. Needs bike lanes.

Question 18

Specifically, what is the most important traffic/transportation/circulation issue to you on the El Camino Real corridor in the City of Menlo Park?

1. 3 through lanes to connect with Palo Alto and Atherton as a continuous 3 lane corridor
2. Separate bike lanes!
3. Bottleneck from Valparaiso to Sandhill somewhat caused by parking allowed on ECR
4. We take the lane when on bike, so it's okay. Probably [?] unsavy bike riders feel unsafe
5. Time the lights! During commute time; put in lots of trees, plants!
6. There is not adequate safety for students who need to cross El Camino to attend school, or anyone else!
7. For the city - safe pedestrian and bicycle crossing for schoolchildren.
8. Traffic flow ! Please synchronize stop-lights to provide for maximum traffic flow. Please remove the 3=>2 lane bottleneck that often brings traffic to a stand-still in the commute hours. Please install traffic sensors to allow cross-traffic to trip the lights during non-commute hours so cross-town traffic is able to move. Please stop obstructing flow.

9. safety and parking

10. poor east west --- too mch raffic now

11. Too much traffic now. Imagine what build-out will bring.

    Add lanes to El Camino with there are two lanes on either end? Insane.

12. too much Palo Alto traffic in Menlo Park

13. Vehicular (includes bicycles) crossing of ECR

14. Getting across it in no more that 1 signal cycle. And getting through more than 1 signal cycle per block while travelling on it.

15. Bicycle safety, especially for kids biking to school.

16. Too much traffic.

17. Trying to cross it on bikes is not very safe.

18. It is much too congested trying to get across town. Traffic backs up from Trader Joe's and across ECR to the other side of the train tracks, in both directions. Put a pedestrian/bike overpass with a clear acrylic roof to protect from rain, without being an eyesore, over ECR at Middle Ave., then a lane down the train tracks, for children to safely get to Burgess to and from west Menlo Park. Get rid of parking on Middle. This might decrease some of the vehicle traffic at the ECR/Ravenswood intersection, which is by far the worst, if people could safely walk/bike instead. I have imagined this solution for years. Make the overpass a beautiful, sculptural, mostly clear (obviously except for the floor) structure, and it won't be an eyesore.

19. Gridlock. For example, having to wait for three traffic light cycles to make a left turn from southbound ECR to Alma.

20. I would like to see more dedicated bike paths in Menlo Park that are not on the street. I love the idea of a dedicated bike bath that runs along side El Camino. I don't like the idea of a bike lane next to El Camino, it would be too dangerous.

21. Pedestrian/bicycle crossing (subway) under the RR tracks between Ravenwood and Sand Hill, e.g., connect Middle to Burgess

22. Safety for bikes and pedestrians

23. Completely unsafe for bicyclists, either for transit or to simply cross ECR. Safety upgrades to the approaching streets (Oak Grove, Ravenswood, etc.) need to be part of the solution.

24. Make crossings and turn directions that make sense to mitigate traffic back ups which are ridiculous

25. no opinion

26. Reducing flow of traffic through downtown

27. There isn't one most important. People who think they're driving on the freeway, speeding, running red lights, no enforcement. I would also like to see a turn arrow for the northbound right turn only lane on El Camino. People in that lane seem to think they have the right of way no matter what, and I have seen/experienced too many near collisions.

28. Speeding traffic north past Encinal Avenue.

29. Vehicle traffic reduction

30. rush hour congestion, safe passage along and across El Camino by bike and on foot. I believe we need to seriously re-look at undergrounding a lane or two each direction for through traffic on El Camino, funded by low interest bonds available now and by Fast Track payments per use of the lanes.

    And we also need to do grade separation at the train tracks - soon. Removing delays related to the trains will help intersections. PLEASE STUDY THIS in combination with the corridor.

31. Bike safety. We bike as a family a lot. Our youngest daughter attend a daycare across ECR so we need to cross and also bike along ECR. I do not feel comfortable biking along ECR on the street (especially when I have my kid on the back) so we use the sidewalk. Often there are signs, or cars (we live close to a car work shop that apparently use the sidewalk for parking cars..) blocking our way, and of course we have to look out for the occasional pedestrian. When we bike with our oldest kid (who's on her own bike) we use detours because I do not think ECR is fit for kids on bikes. I often choose the car instead when I know we have to cross ECR and I think that's a shame!

32. Lack of safe alternatives to driving alone. That's the #1 way to reduce congestion.

33. congestion caused by poorly timed lights and too few car lanes. i also think there are too many traffic lights on ecr through menlo park, considering ecr in mp is only 11 blocks long.

34. Week day traffic is very bad especially on Wednesdays

35. Ease traffic congestion and make bike/pedestrian travel safer. Consider making a more direct route from 101 to ECR, maybe via Willow to ease traffic around Burgess Park/MA, etc. Open more pedestrian routes to ECR - like at Burgess and Willow. I like the idea of a bike/pedestrian route along train corridor.

36. No bike capacity

37. Gridlock through Menlo Park

38. logjams of cars on ECR.

39. Addition of bike lanes

40. The congestion at Sand Hill Road and ECR.

41. Crossing ECR with the bike is so dangerous that I take the car when I have to go from downtown to burgess! If I have enough time I rather prefer to walk. Biking safe should be resolved. Also,

there are not enough bike rake on ECR.

42. merging of lanes due to fewer lanes in Menlo Park on El Camino is root cause of most problems. Creates terrible traffic (the last mile of my commute takes as long as the previous 5 miles). Makes it unsafe for bicyclists and pedestrians (because of the traffic). I also suspect that the timing of the signals could be improved.

43. Providing a safe bike corridor along *and* across ECR, i.e., a bike bridge at Middle, Roble, etc. Please make sure that this accommodates bike trailers!!!

44. Lack of coordination of traffic timing between neighboring jurisdictions (primarily Menlo Park and Palo Alto).

45. The most important issue is how much of a physical barrier ECR is between the east and west sides of Menlo Park.

46. It has less capacity in Menlo Park than Atherton or Palo Alto, this causes traffic jams.

47. People who get in the Ravenswood right turn lane northbound on ECR who then pull into ECR traffic at the last minute and slow the traffic flow in the next lane. Narrow sidewalks also not good.

48. Bottled up traffic and pedestrian crossing safety. Bottled up traffic leads to frequent turns on yellow & red arrows and drivers running red lights at most intersections. Better count to 3 after the light changes before you proceed or you will get hit.

49. Pedestrian & Bicylist safety & traffic flow

50. ECR is a highway, and a much needed North/South travel route. Traffic is already too heavy and too clogged because of overdevelopment in Menlo Park and the surrounding towns. Stop overdevelopment, help the traffic flow better and faster on ECR through Menlo Park. Pedestrians and bicycles should not be mixed with cars in heavy traffic, or areas where cars are moving quickly. When a car collides with bicyclist or pedestrian, everyone loses, but the pedestrians and bicyclists could lose their life. Segregate vehicles from pedestrians and bicycles! Then everyone can move faster and safer.

51. Too many cars for too narrow a corridor .

52. I think we need to make it more bicycle/pedestrian friendly, while also doing something to improve the vehicle traffic. I would never let my children cross ECR on their own to go to Burgess because I think it is way too dangerous. This should be changed.

53. Bicycle access and usage.

54. Alma being close to through traffic in Palo Alto

55. improving bicycle and pedestrian access and safety by eliminating on street parking and widening sidewalks on both sides of the corridor.

56. Increase safety for pedestrians and cyclists. Make it more friendly for residents of Menlo Park to stroll through the neighborhood.

57. safety. narrow or restricted sidewalks, sharing with bikes, short 3 lane merges at Alma and Cambridge.

58. CONGESTION at most times during the day. Need to move through traffic through!

59. Pedestrian safety while walking along and attempting to cross El Camino. Access to public transit and business is hampered by difficult and dangerous crossings with poor signaling, especially for visually impaired pedestrians.

60. Wish I could bike safely from Palo Alto to Menlo Park. Currently there are no bike lanes along El Camino.

61. I would like to see the pedestrian/bike bridge over ELC from downtown to civic center move forward. It is very sketchy to bike east-west across El Camino, even with some of the latest bike lane/signage improvements.

62. Creating more pedestrian friendly zones will help businesses along the route.

63. There should be no parking on El Camino, and that space should be used to add lanes for traffic to move swiftly through MP. Traffic is worse in MP because of the bottleneck between PA and Atherton. Open up lanes and traffic will flow better. It's a terrible waste of gas and gets on everyone's nerves. Contrary to many MP residents, I don't believe that opening up lanes will increase traffic. It will make the traffic we already have get through faster.

64. Please make El Camino more pedestrian and bike friendly.

65. ECR is very ghetto and an eye sore. A city like Menlo park deserves a better looking and better functioning thorough street that also connects MP on the civic center side to the downtown area. On a regional scale, a better pedestrian/bicycle route could make it a more pleasant street. Please look at examples from countries who prioritize pedestrian and bicyclist. A slower traffic there is alright that way less people would use ECR.

66. Pending overwhelming proposed Stanford and Greenheart projects--more than general area and ECR specifically can bear

67. It takes too long for the light to change allowing me to cross ECR at Sand Hill.

68. Need more lanes

69. Being able to comfortably walk and bike

70. Too much vehicle traffic!

71. Safety for crossing El Camino on bike. The bridge sidewalk is very narrow over the creek and the crossing to Alma in Palo Alto is dangerous

72. Pedestrian and bycycle safety followed by frustration of sitting in traffic for three blocks. Unsafe to walk but a hassle to drive.

73. Biking across and along el camino, and the traffic light at ecr and alma and sand hill road.

74. Keeping traffic moving.Cars should be able to go directly from sand hill rd.

75. Reduce the amount of traffic on our dangerously congested, already over-crowded corridor.

76. The people who speed through lights and almost kill me, whether I'm walking or biking or driving.

    On a more utopian note: I think el camino should eliminate one lane in each direction, in the middle, to create a bike and pedestrian median that is landscaped, and put a monorail overhead, to eliminate public transportation on the roadway. Obviously this doesn't work just for menlo park, but doesn't it sound lovely?

77. A combination of better bike routes and smoother driving times.

78. There's a two-fold issue and that appears contradictory. There are stretches of road that are absolutely packed with cars. But where the traffic lightens up, drivers speed indiscriminately. Don't believe me? Try positioning a radar speed sign at the border of MP and Atherton and watch what happens the moment cars break free of downtown MP gridlock.

79. Too many cars for the number of lanes.

80. Awful congestion during peak hours. Much of this could be ameliorated if MP would just put Palo Alto into a chokehold and get Sand Hill Road southbound to connect with Alma Expy directly like it did years ago. Now people wanting to head south on Alma Expy have to come into Menlo Park and make a U-turn on El Camino.

81. timing of traffic lights - sand hill & el camino. in the morning I commute to mountain view and this intersection is just a disaster.

    as a driver, bikes riding along el camino. seems incredibly unsafe for all.

82. Safety

83. Too much priority to cars, too little attention to pedestrians and bicyclists.

84. Make it more bike and pedestrian friendly. This will help get people out of their cars.

85. Safety

86. Too many people compensating for Sandhill-Alma disconnect. Also too much traffic traveling too slowly during rush hours.

87. ECR, due to high speed, multiple lane auto traffic, is very unattractive and unsafe for any other users. More auto lanes and auto traffic is not the answer. This is 2014, the era of multi-modal roadway design. Let's bring ECR into the 21st century. Let's make ECR available to all users, no matter what type of travel option they choose. Why are we even considering accommodating more auto traffic?

88. Wait times and cycles at signal lights

89. Less constriction to traffic

90. WIDER WIDER

91. No protected cycle path. (I'm not a huge fan of bicycle lanes per se, protected cycle paths are the way to go on a route with such high vehicle volumes (and speeds) as El Camino). This route is the place for the cycle path because it is primarily a commercial corridor, lots of businesses here.

92. The need for continuous bike lanes and lower traffic speeds on ECR. Also better pedestrian crossing and wider sidewalks.

93. Make it more bike friendly. I would ride my bike more places if El Camino didn't terrify me. Just crossing ECR in any way other than by car is already really hard. Actually riding my bike ON it is something I have never done, but would if it had protected bike lanes.

94. Needs bike lanes or at least sharrows.

95. Encourage less cars, more bicycles

96. Lack of safe bicycle and walking facilities, both along ECR and when trying to cross ECR.

97. Lack of cycling facilities, poor signal timing.

98. Bus service should be improved

99. Red light runners on ECR at Santa Cruz and Sand Hill.

100. Lack of bike lanes on El Camino Real

101. Dedicated, separated bicycle lanes.

102. As discussed in my answer to #17, I feel that the most important issues are 1) improved pedestrian access (primarily with regards to having conveniently timed traffic signals) and 2) bike lanes.

103. It is a very dangerous road for cyclists and alternative parallel routes are confusing and hard to navigate.

104. Safe biking and walking access

105. Bicyclist safety on ECR.

106. You need signage and infrastructure (lane markings) to make it clear that bicyclists are allowed to use the roadway. Southbound, just north of San Francisquito Creek, the lane markings are very confusing and daunting for bicyclists.

107. The most important issue to me regarding El Camino is bicycle access to and across the street as well as connections to public transit, especially that transit which crosses El Camino.

108. Lack of alternatives to traveling by car.

109. Better accomodation of bicycling, not only along ECR, but on other routes parallel and perpendicular to ECR. Although many of the routes have bike lanes (or in the case of Middle Ave; "School Bike Safety Corridor"), these bike lanes have shared parking and/or are too narrow

and put the cyclist squarely in the 'Door-zone'. If substancial funds are applied to improve cycling facilities, more drivers would see that cycling could be faster then being stuck in traffic for their short trips... The biggest challenge is to undo the 80 years of heavily subsidizing motor-vehicle travel.

110. Separating through traffic from local traffic.

111. improvements in pedestrian and cycling

112. If the Caltrain were electric and ran more times a day in and out of Menlo Park, I think it would really help the traffic all along the pennisula. We need to be able to get to work and school and shopping...

113. Free flow - timed lights, more lanes (get rid of parked cars, they scare me - door could fling open, pedestrian or biker jump out from between them, they could pull out into traffic suddenly). Move more traffic faster.

114. The most important one unfortunately is something you probably cannot fix. The bottleneck created at ECR and Alma/SandHill because of East-bound drivers who want to go to Palo Alto need to turn left and then also do a u-turn sets off a chain reaction of mess in MP. (yes, I'm stating the obvious, but you asked what I think the biggest issue is…)

The 2nd biggest issue to me is the Middle Ave/ECR crossing for pedestrians… Middle Ave cars turning left onto ECR are in complete conflict with pedestrians also trying to cross there. VERY dangerous, and admittedly, I can see how the cars are frustrated too because as they have to wait for pedestrians to cross, then traffic backs up on Middle.

115. Jammed traffic!

116. Allowing through traffic to move in a north/south direction

117. Pedestrians wishing to cross El Camino Real west to east at Middle Avenue get a crossing signal at the same time as motor vehicles turning left off Middle to go northbound on ECR. This results in a situation which puts pedestrians directly in the path of "green-lighted" motor vehicles. This is always absurdly dangerous, and very often results in harassment of pedestrians and unsafe operation of motor vehicles trying to get around, either in front of or behind pedestrians crossing with the pedestrian crossing signal. This absolutely must be changed, and pedestrians must have a dedicated portion of the light sufficient to cross ECR without motor vehicles trying to be in the same space.

118. Traffic delays

119. Safe travel by bicycle .

120. I think some education about sharing the roads, both for cars as well as those on bicycles. Also, this survey is a bit light on the trade-offs: how would more space for bikes be accommodated without loosing lanes? A paragraph up front would be helpful.

121. start separating bicycles from cars - folllow the rule that the worst will happen if you try and

mingle cars, bicycles and pedestrians.

122. 2 things: 1) Bicycling is hazardous on ECR and bike path paralleling train tracks would be very helpful, and 2) Light timing seems deliberately designed to /not/ pass traffic efficiently along and across ECR. I know a long-term Menlo Park resident familiar with transportation issues, and he is convinced that's the case.

123. Bike safety. Most drivers in MP are respectful of cyclists, but there's something about the morning commute that makes people on ECR drive like speed-drunk, incautious fools, heedless to the presence of the fragile/vulnerable cyclists sharing the road with them.

124. Inadequate bike lanes.

125. Overcrowding and slow movement on El Camino for nearly the entire length of that part of the road. Very unsafe for bike riders. People using right turn only lane at Ravenswood to move further north on El Camino, then holding up those who are turning as th4ese folks try to merge back into the thru lane to the right. This happens ALL the time.

126. Crossing El Camino as a pedestrian is dangerous (i.e., from turning cars not looking where they're going), and quite slow--crosswalks are very widely spaced, not at every intersection, or even both sides of most intersections that have crosswalks, and the light timing often means excessive waiting. These two problems collide when needing to cross three times (i.e., northbound across Menlo, eastbound across El Camino, and southbound across Menlo again to get from the residential neighborhoods west of El Camino to the library) with long wait times at each crossing.

127. This road always feels unsafe. It does not connect well with side streets and the local community. It is unsafe for biking and walking (two options that, if safer, might reduce car traffic for short trips). The traffic lights are incredibly annoying in their timing/lack of sensible programming.

128. Backup at left turn lanes. Risky behavior getting to left turn lanes.

129. The large business development planned for the Stanford property--former location of car lots. Things are bad now, imagine what it will be like once it is done but also while it is being done. I am concerned about people trying to avoid Sand Hill and traffic flowing up through neighborhoods that are residential--places where bike riding and walking are encouraged. I like the idea of a bike and pedestrian path along the back of this development and all the way up to the train station. You need to think about this although at the city meeting on the traffic plan, the consultants did not seem to want to go near the issue. You need to plan ahead!! Those developments must be located on your maps with the anticipated driveways. For example, a drive which would lead traffic across to ECR and Middle.

130. Safety for non-drivers and drivers is the top priority. Better non-car transportation (bicycles, buses) is next most important. We should be moving away from cars and toward greener modes of transportation.

131. How poorly traffic moves along ECR. Not sure if it's the timing of the lights, the fact that there is parking on ECR, or if driver's are just spending too much time on their cell phones that they don't notice when the lights change.

132. Too often there are too many large vehicles using El Camino Road which should be encouraged

to use 191 or 280 as they seem to come off of Woodside Road and continue through Menlo Park well into Palo Alto and Mt. View.

133. lack of safe bike lanes.too much car traffic

134. Traffic

135. Insanely inefficent timing of lights end=courages cut-through traffic

136. The most important issue is clogged and dangerous streets.

137. Through traffic north and south from about Safeway / Middle to Glenwood. But the trains make it dangerous on side streets too, especially Oak Grove and Ravenswood at Alma, this affects crossing ECR. I also suggest taking down the "police red light cameras" It doesn't make any difference and I am sure there are a high percentage of people who get a ticket when they shouldn't or fight it. What a waste of time.

138. Get through traffic through town faster

139. Improve pedestrain friendliness.

140. Bike lanes is an issue so I drive on ECR usually. I would bike more to Safeway for example if ECR and the surrounding area was more pedestrian or bike friendly. A bike path separate from ECR or near caltrain would be ideal.

141. Again, it's the fact that the lights are timed to be too long of a wait to cross, and then not enough cars get through the green light at that time, making me miss the light often 2 or 3 times.

142. ECR is unsafe for bicyclists. Need a parallel route to get through Menlo Park. Palo Alto utilizes Alma to take a lot of heavy traffic off ECR. Consider developing another pathway, like Alma, through Menlo Park.

143. Make the route more friendly to cyclists and pedestrians.

144. Addition of a bike friendly lanes to ECR.

    The bike path along the tracks is a great idea and should be looked at seriously.

145. It's a disaster for walking and biking, and it doesn't do that well for cars, either.

    THE PROBLEM IS TOO MANY VEHICLES, DUE TO TOO MUCH DEVELOPMENT. You didn't ask about this in your survey.

146. Timing of the lights to handle peak traffic flows.

147. An undercrossing go the Caltrain right of way that does not require a cyclist to walk their bike. A ground level undercrossing, which is the cheapest is only possible at alma and a Willow.,

148. Empty car dealerships! More retail is desirable.

149. Bikability

150. Safely crossing on foot or by bicycle.

151. Less big box stores, and more cute local restaurants, shops, markets, housing - with plenty of wide sidewalks and trees/landscaping, so it looks and feels lovely and green.

152. It's not safe for biking

153. Safer pedestrian and bike lanes and crossings. Parallel streets are non connected and inconvenient.

154. Bike/pedestrian under crossings of Caltrain opposite both Cambridge and Middle Avenues.

155. Problem of few roads going from Middlefield, for example to ECR. An Palo Alto, for example

there are more streets that go from Middlefield to Alma. It would be grat if there were some way to extend Alma to RedwoodCity or further North. Ain't gonna happen, however

156. Facilitating other modes of transportation up and down El Camino Real, not just driving, and ensuring those alternate modes of transportation have good access to storefronts and are supported by proper infrastructure (e.g., bike racks and/or frequent bus service at all times of day).

157. Too crowded and alternative transportation, like bicycle travel, is not safe there.

158. Flow from Sandhill Rd to Santa Cruz around 6pm is very poor.

159. It is not a very pleasant road. It is loud and congested. Pedestrians and cyclists are discouraged.

160. Bicycle safety.

161. The flow of traffic is high. The right-hooks and door-hooks are potential problems.

162. Lights sequences allow traffic to move more smoothly

163. Balance: realizing that space is at a premimum, my opinion is that there should be no more than 2 lanes of traffic each way, parallel parking buffering a bicycle track between parked cars and a widened sidewalk with street trees located in the parking lane to maximize sidewalk space.

164. It's hard to cross ECR within Menlo Park between Menlo/Ravenswood and Sand Hill Road as a pedestrian, cyclist or motorist. It's hard to believe that with all the money in this zip code, this city is so ugly, boring and difficult to get around it. Is this the best that the city can do? The only thing that is keeping me and the people I know in this municipality is the schools. Once we're done, I can't wait to get out.

165. Being able to cycle safely.

166. We need to make El Camino more friendly to people on foot or on bicycles. I strongly believe that "if you build it, they will come." Already we see people riding their bikes on El Camino. If we had better bicycle infrastructure I could leave my car at home more often and do errands by bike. We don't need six lanes of fast-moving traffic cutting through the middle of town; if people want a freeway they can go use 101 or 280. We need wider sidewalks and protected bike lanes. I do not support giving away parking for free on El Camino- that is a giveaway to a tiny number of

merchants at the expense of many. Put bike lanes there instead of parking.

167. Crossing El camino on foot or cycling is a major problem. The issue is a lack of secure way to cross El camino to go on the East side and come back. For example, if you live on College Ave and you need to go from West to East, you essentially have only two options: go North to Ravenswood and cross the track or go South and cross the track at Sand Hill. In both cases it is just not practical on foot besides being very unpleasant. Cycling is even worst since cycling on EC is quite dangerous on these segments.

168. Too many cars making uturn at Cambridge Ave (when going north on ECR) due to sand hill traffic flow

169. Safe routes to Schools and Parks should be a top priority. many kids that are old enough to bike to soccer games, baseball practice, the library, Arillaga, etc. don't do it because its not safe to cross El Camino on a bike. All bike travel and pedestrian safety issues should be top priorities.

170. Safety of bikers and pedestrians!

171. See above comments

172. Safety

173. Safety for pedestrians and bicyclists, particularly school age children.

174. Enhanced bike access and safe cycling for all user groups, not just hardcore bike commute enthusiasts.

175. Menlo Park is a choke point for ECR. Traffic moves well in communities north and south of Menlo Park. Because it is a choke point, there is limited resources for bike/ped/transit.

176. Additional vehicle lanes in both directions

177. Improved crossings and trails for pedestrians and bicycles! There is already too much vehicle traffic in the Bay Area--adding an additional lane for cars would only encourage more. Walking and biking are pollution free and healthy; these activities are really what we should encourage!

178. Improving venhicle, pedestrian, and bike transit through this corridor. On street parking should be eliminated to avoid the bottleneck that currently plagues Menlo Park's section of ECR. Bike lanes are a must but ideally should be managed off the street, as a separate sidewalk type path. If a continuous corridor can be established between the railroad tracks and ECR similar to the bike path in Palo Alto that would be ideal. Having bikes and pedestrians utilize the same narrow sidewalk is a diservice to both and creates a risk to pedestrians and cyclists alike.

179. Lack of bike lanes. I feel like this is one of the surest ways to decrease traffic congestion. I would choose bike commuting over driving every day if I felt safe doing so.

180. Cars are frequently stopped - too many traffic lights on El Camino - too many access roads - lights need retiming to ensure continuous flow of cars.

I'd put an underpass on Ravenswood at the Caltrain Tracks as a much higher priority than bike or bus lanes on El Camino.

181. North-south bicycle routes through Menlo Park are poor, especially near the downtown business district where many bicyclists are heading. Please add bike lanes to El Camino Real.

182. preventing traffic from using residential streets both to avoid ECR and to access ECR.

183. Bicycle lanes

184. ECR is dividing "canyon" between East and West Menlo Park. Increase size of central island, include walking path (see European Boulevards). Improve pedestrian ECR crossing in downtown MP; make two-stage process.

185. Making travel across and through Menlo Park bicycle friendly!

186. Creating bike lanes and improving bike safety is my top issue. Secondary, improve the flow of traffic by properly timing the stop lights.

187. See above, but #1 would be to make it easier to get to/from our downtown from points north and south.

188. It is very time consuming to go from the Willows to West Menlo Park, and a lot of the time is wasted near ECR, because there are too many turns, stop signs, lights, etc. Facilitating cross town commuting to schools, practices and shopping would be a huge help.

189. Don't encourage more traffic by widening lanes or taking away parking spots.

190. Safety

191. The lack of support by the city staff to encourage a pedestrian friendly environment. We are still a suburb. The weather is perfect and it further supports a pedestrian and bicycle friendly environment. Crossing and using the ECR (by foot, car and bicycle) at most times of the day interrupts the ability of all residents to enjoy living, working and shopping in Menlo Park.

192. Timing lights to keep traffic flowing North/South during peak traffic times.

193. Effective north south corridor for bicycles.

194. Cars are not paying attention to bikers. There is no safe space for bikers. I'm currently in London on a visit and it's amazing how this town has embraced its bikers. 10 years ago it was very rare to see bikers here, but today there are tons of bikers who are seemingly successfully sharing the road with cars, often by taking up a whole car lane.

195. Bike lanes on el cami no and bike access to/from the street

196. More accessible bike lanes

197. Pedestrian safety.

198. Too many cars for 2 lanes

199. Bicycles should be prohibited. Abike / pedestrian underpass would be good.

200. Very crowded at times.

201. balancing transportation needs for vehicles and bike commuters; ensuring safety for all

202. bike lane availability. too many cars on ECR.

203. Hundreds of thousands of new square feet of development, and the best we can hope for is elimination of parking on the street?

204. Bike and pedestrian safety.

205. It is not safe for bikers.

206. Bicycle safety.

207. Too congested.

208. I'd love to have a BIKE path off El Camino but parallel to it with a crossing at a point convenient to go east/west straight into downtown MP's biz district.

     I've tried riding my bike on the sidewalk along El Camino and it's almost impossible. The sidewalks are narrow to begin with and there are driveways and poles that intrude. It's really risky business.

     There was some talk at planning meetings for downtown's new vision several years ago about a SF-style crossing in which all traffic stops and pedestrians and bikes can to all four directions plus cross-wise. What happened to that?

209. Poor bicycle lanes and safety

210. Bike lanes.

211. Must separate bike / pedestrian crossings from the roadway, at least a couple of locations. If ECR were a river it would be a no brainer to build a bridge, why is the city too cheap to create separated bike/ped crossings?

212. Adding bike lanes!

213. Traffic not related to residents using ECR to bypass the 101.

214. Traffic on valparaiso avenue has to be decreased. El camino needs to be way more bike friendly.

     We have a chance here to be an internationally recognized community that promotes biking. We could be the amsterdam of the united states -- why not promote that?

215. It would help tremendously to provide a safe and efficient bike route parallel to ECR, preferably on the South/West side.

216. Crossing ECR safely and being able to get from point A to B within Menlo Park. There is NO

safe route other than in a car.

217. More safe bike lanes and sidewalks at the North end of El Camino near Celia's Restaurant.

218. Car backups during heavy traffic periods

219. Bicycle safety, lack of biker visibility both for bikers and drivers.

220. I would like a dedicated and safe bike lane. The Bay Area is very unique in being a bike friendly community. Having a safe bike line on ECR would fit in with that philosophy. I am originally from Boston, where you should only bike if you want to get offed by a car. I really appreciate being able to bike anywhere here; it's great for your health and for the environment. If you are able-bodied, there is no reason to drive to work if it's only several miles away. Having a safe and efficient bike route encourages that.

221. bike safety

222. I especially hate riding along it on my bike, but, to get to some places, unless I go quite far out of my way, there aren't any alternative routes. With the parked cars on one side and the moving cars on the other and people on the sidewalks, there's really nowhere a bicyclist can ride safely. Riding on ECR is a real white-knuckle experience! Having a good, safe bike lane along ECR through Menlo Park would be great. Increasing the smoothness of traffic flow by timing the lights better would be good too.

223. I would like a more direct bike corridor through Menlo Park. If it's along El Camino, it would have to be physically separated from cars and/or wide enough to give a safe separation distance from cars, and definitely not adjacent to parallel parked cars because of the danger of people opening their doors into the bike lane.

224. Bike lanes would be fantastic!

225. Personally I have the biggest problem between Partridge Ave, where I live, and Palo Alto Ave, where I would be coming from via bike or by walking from downtown Palo Alto. That section of ECR seems especially dangerous for bikes/pedestrians, and like a really good place to develop commercially if it was at all pleasant to access by bike or walking.

To get to work, my bike

226. Lack of safety for bicycles. It could be a fantastic route for many.

227. Less "through" traffic.

Better light timing.

Improve cycling safety.

I live 1 block east of ECR and cars FLY down our street trying to avoid traffic.

228. Basically unrealistic to use ECR as a biking route.

229. bike friendliness!

230. We need space for bikes!! We don't need more for cars - remember the study that if you build more lanes, it just brings more cars?!

231. Making ECR more bike friendly.

232. Bike safety

233. Safe biking lanes.

234. I would like to see dedicated & separated bicycle and pedestrian pathways

235. Bike lanes.

236. Walkability

237. Bike safety is a bike one but so is rush hour traffic that goes through this area. It is always blocked! Better light synchronization might help? Lights are too long going west-east.

238. I would like to see safe bike crossings at key intersections and a good bike route that parallels El Camino.

239. Get traffic through this city as quickly as possible. Get the signals timed properly.

Question 19

Specifically, what intersection or portion of El Camino Real do you have concerns with traffic/transportation/circulation, if any?

1. Ravenswood

2. Stretch of ECR from Stanford Shopping Center to Ringwood -- especially at night when bike bridge is unsafe (people camp there). Cars come up behind and close to me not look for me -- even with my light and reflective vest. Trees planted on side walk keep me from riding on walkway. During the day is bad too, night is worst.

3. Turning left onto El Camino off of [O...] the light won't change for just bikes. You need to for a car to come up behind you. Bad sensors!

4. Middle Ave, Valparaiso

5. Middle Avenue/El Camino -- Pedestrian signal directs pedestrians to walk across, impatient motorists turning left from Middle Ave. Also motorists speeding through during walk signal (North/South)

6. The intersections without full pedestrian crossings are very inconvenient and convey the message that the city prefers to discourage walking. This will be even more of an issue when there is more development on El Camino Real following the Downtown/ECR Specific Plan.

7. The section between Middle Avenue and Oak Grove seem to be the most impacted, although often traffic is backed up all the way to Valparaiso, too. Please go back to 3 lanes of traffic. Also, a simple request is to install a pedestrian cross-walk on the south side of the Middle Avenue intersection, so kids biking to MAHS from West Menlo can easily dismount, walk their bikes across with the light, and remount their bikes on the opposite side instead of either swooping across Middle to the Safeway sidewalk in the middle of all the traffic, or waiting to cross and then cross again (and hold up left-turning vehicles).

8. menlo ave

9. Valparaiso, Middle, Ravenswood (pretty much all of them.

10. Middle / El Camino

11. From Ravenswood to Palo Alto left turns need longer stacking capacity.

12. IRavenswood, Valparaiso, Middle.

13. Crossing El Camino north of Valparaiso, very unsafe except at signaled intersections.

14. From border of Redwood City to Palo Alto.

15. Around the RR station

16. Getting across town is the biggest problem, by far, for locals. Huge numbers of children and families need to get from west Menlo Park to the entire Burgess community center often, to the pool, gym, library, classrooms, etc. The combination of traffic on ECR and having to stop for the trains makes cross-town traffic a nightmare, and utterly unsafe for bikers and pedestrians. The ECR/Ravenswood intersection is clearly the most congested and worst problem. The left turn onto Ravenswood toward ECR coming from the library and gym is a total nightmare and backs up traffic. There is not nearly enough parking at the gym/library, which creates traffic problems. It is totally unsafe for children to get to Burgess-area activities after school from west Menlo Park.

17. Sand Hill Road to Ravenswood.

18. Circulation at Alma/Ravenswood and Ravenswood/ECR.

19. Menlo Ave, Oak Grove, Valparaiso intersections with El Camino.

20. Oak Grove x ERC and Ravenswood x ERC. It would be lovely if there were a Willow x ECR intersection, even if just for bikes, peds. tunnel.

21. Foot of Middle at EL CAMINO and the foot of Sand Hill at El Camino....that whole section is a cluster f$&@

22. no opiion

23. At Sandhills rd/ Stanford the lights are short and confusing

Left turn on ecr at ravenswood west is hard for bikes

24. Seriously? The MP portion of El Camino is not that long, and it is bad everywhere during rush hour. And now you are going to intensify rush hour use with new office buildings. Major fail.

25. Left turn onto Palo Alto Ave / Alma. Right turn onto Ravenswood. Middle Ave. gets too much traffic from ECR and is a bike-to-school route

26. Middle intersection because it is narrow and there is considerable gridlock near it because of the way the Safeway driveway and gas station driveways gum up traffic. I cannot imagine another lane of westbound traffic on Middle from El Camino. There is NO safe place for bicyclists from Kenwood east.

    I worry about Cambridge intersection. It's already messed up because of u-turns. Whatever is built on Stanford site will make things exponentially worse. I worry about more cut-through traffic.

27. Ravenswood

    Oak Grove

    Menlo Ave.

    Creek Drive

    (Those are the 4 I would be using frequently)

28. menlo/ravenswood is the worst. more specifically, trying to get out of burgess, cross the train tracks, and cross ecr.

29. area from Middle ave to Oak grove has the heaviest traffic on working days

30. ECR and Ravenswood

31. Ecr from palo alto border to downtown has no bike accommodation

32. Ravenswood

33. mainly between middle and valparaiso

34. ECR + Ravenswood/Santa Cruz

35. The congestion at Sand Hill Road and ECR, and the lack of timing of lights. I think the lack of timing probably leads to much of the congestion as does the lack of through traffic on ECR.

36. From Valparaiso to Sand Hill

37. between ravenswood and valporaiso is where the majority of the problems seem to be... but this spills over in both directions. It causes problems all the way as far south as the STanford shopping mall.

38. x Roble (cars blocking intersection, see #17)

39. Cambridge/ECR. There are a tremendous number of U turns by cars coming from Alma who want to continue onto Sand Hill Road. These should be prevented.

40. The intersection at Middle Road, including the Safeway entrance/exit on Middle.

41. Santa Cruz crossing. Ravenswood/Menlo crossing.

42. Pedestrians crossing at Santa Cruz Ave. For most people the time alotted to cross is quite sufficient, but for older or disabled pedestrians it's not always enough.

43. The section where it narrows from three lanes to two. This creates tremendous traffic logjams. I think getting rid of parking on El Camino (replacing it with close by alternative parking) creates the opportunity for 3rd lanes/turn lanes that could greatly enhance traffic flow.

44. ECR and Ravenswood/Menlo Ave

45. Oak Grove crossing is really bad for red light runners.

46. Traffic congestion north on ECR at Cambridge - many cars making a U-turn. This signal seems to take a long time to trigger the turn light even when there is no oncoming traffic. Discussion needs to be had with the City of Palo Alto to reconfigure the Alma/Sand Hill/ECR intersection. Traffic should cross from Alma to Sand Hill.

    Traffic congestion from south ECR onto Alma during commute will back up beyond Cambridge, reducing ECR to two lanes. Needs immediate improvement.

    Most importantly, sidewalk along bridge crossing San Fransicquito Creek is inadequate for pedestrian and bicyclist safety. No barrier between sidewalk and vehicle traffic. It will only take a distracted driver a second to jump the curb. Would recommend a separate pedestrian/bicycle bridge here to connect to the bike path in Palo Alto. This is an issue on both sides of the bridge.

47. ALL of the intersections on ECR are a hazard, and all intersections get clogged with traffic.

48. none specifically

49. The portion between approximately Santa Cruz Ave and Middle.

50. Alma/Sand Hill Road, Middle and ECR

51. The bridge at Creek and El Camino is far too narrow for pedestrians. The on street parking at the Shell station at Middle blocks visibility and restricts traffic flow. The Middle intersection is a mess with traffic trying to get in/out of Safeway and the Shell station.

52. Middle (I've almost been hit several times while trying to walk across ECR - with the walk sign on by people turning left onto ECR) - also, gets jammed up with cars turning into gas station and Safeway.

    Sandhill

Ravenswood

53. Middle to Sand Hill.

54. None specifically

55. Santa Cruz, Oak Grove, Ravenswood. All three intersections have problems for various reasons, but especially due to improperly maintained audible signals.

    Also, the condition of sidewalks on the northern end of El Camino from Encinal onward is terrible. They don't exist on the southbound side, making access to the bus difficult. On the northbound side, they are filled with obstructions that make it difficult to walk. Wheelchair users are forced into the street at several places due to encroachment from vegetation or CalTrans equipment (boxes, wires, poles, etc.)

56. From the Main Menlo Park Library to downtown, there are train tracks and El Camino to cross. It could prove dangerous for young kids.

57. Middle and ECR is very dangerous for biking across to get to civic center/M-A high school. There is no bike lane, there are lanes go both left and right, and the crosswalk is on the left side when traveling eastward. I instruct my kids, who are competent cyclists, to avoid the intersection.

58. All portions that have street parking. It messes up the entire stretch.

59. Ravenswood is hard to cross on foot and bikes have to jostle with cars for space. Please make it easier to get between downtown and Burgess without a car.

60. ECR / Ravenswood

61. All of it during commute hours--total flow is insufficient

62. El Camino and Sand Hill should have a pedestrian/bike overpass for people to get to Stanford

63. Sand hill

64. The segment between Middle Ave and Palo Alto border

65. Cambridge/ECR intersection

66. Crossing as a pedestrian is challenging. The lights do not support pedestrians (especially at Cambridge and ECR)

67. Sand Hill and El Camino trying to cross into Palo Alto.

68. Ravenswood/menlo ave is the worst for traffic. Between valpariso and sand hill rd is just awful.

69. ECR and alma and sand hill intersection.

70. Cambridge ave. to middle

71. sand Hill is a problem, southbound onto Alma is a problem, Cambridge u-turns is a problem,

Middle is a problem, Ravenswood is a problem. The whole Menlo Park corridor is crowded!

72. cambridge ave and el camino.

73. Sand Hill Road. I live on Creek Drive and it is very difficult to even get onto El Camino from Creek due to the back up at Sand Hill Road and the dedicated right turn lane. It is very dangerous for pedestrians walking from Palo Alto to Menlo Park on the west side of El Camino because drivers are only looking south and could easily miss seeing a pedestrian.

74. All of them. Any intersection that is used by bicyclists, especially children.

75. Any left turn off of El Camino into Menlo Park.

76. From the creek on the south to about Glenwood on the north.

77. el camino & sand hill. awful.

    ravenswood & Alma - backs up onto el camino

78. Across Safeway

79. The entire section through Menlo Park.

80. Sand hill/Alma/El camino

81. At Cambridge there is a lot of u-turn traffic because Sandhill does not go through to Alma so drivers turn north on ECR and then u-turn at Cambridge to get onto Alma. Likewise people on Alma need to go straight onto Sandhill. Crazy --- Sandhill and Alma should connect.

82. Every intersection is dangerous on ECR- the wide boulevard and multiple lanes, with no bicycle and poor pedestrian infrastructure, encourages high speed travel, which further discourages other users, and makes every intersection dangerous. ECR needs to be made a human scale resource, not a roadway out of the 1960's.

83. Ravenswood

84. None

85. Ravenswood

86. I avoid it - last time I had trouble was at Menlo College heading south bound.

87. Ravenswood is the worst, hands down. Unfriendly to pedestrians and hostile to bicyclists.

88. Intersections with RTO lanes are sometimes problematic.

89. all of ECR through Menlo

90. Red-light running at the intersection of ECR and Oak Grove is rampant for both through traffic and left turns. There should be red light cameras installed there like in the other nearby intersections.

91. Near train station.

92. Red light runners on ECR at Santa Cruz and Sand Hill.

93. South bound El Camino Real between Santa Cruz Avenue in Menlo Park and University Avenue in Palo Alto.

94. When cycling along El Camino Real I am mainly on the section from Sand Hill Road to Atherton Ave. I avoid cycling along El Camino Real unless I have no other option as there are no bicycle lanes and the traffic moves far too fast for me to feel safe. I would love to use the direct route El Camino Real provides if there were bike lanes, especially if they were fully separated bike lanes.

    I cross El Camino Real both on foot and by bike at the Ravenswood/Menlo cross street multiple times a day. On foot the wait for a crossing light is far too long, if one arrives right at the proper time to cross, but the button has been pushed there is no crossing light and you have to wait a full very long cycle to cross. I support allowing the pedestrian signal to interrupt the normal traffic signal to allow pedestrians to cross quickly. On bicycle, there are no bicycle lanes in that cross intersections, it is a share the road bike lane, but it always feels extremely dangerous and I have had encounters with aggressive drivers who attempt to edge me out. I have been nearly hit both by cars giving me far less than the three feet required passing space, and by vehicle doors that are opened into me if I am traveling farther to the right on the roadway.

95. Intersections with Oak Grove, Santa Cruz, Menlo/Ravenswood, and Roble.

96. I rarely bicycle northbound on El Camino through Menlo Park because the lanes are too narrow to accommodate a bicycle and a car to proceed side by side. Therefore, I need to ride my bicycle in the middle of the lane, to be visible, safe and legal. But motorists have no indication that this is appropriate cycling behavior. Some motorists think the logical thing to do is to "buzz" past me (pass dangerously close) or honk their horns at me, to "get out of the road." This is unacceptable, as well as dangerous.

97. I believe that the area of El Camino which needs the most attention is from Palo Alto to just north of downtown.

98. Left turn from El Camino to Alma Street in Palo Alto is a big problem for me. Sometimes lots of cars are allowed to turn left. At other times, the light is very short, allowing just a few cars to turn. The result is often a long back up that cannot be cleared for several cycles.

99. See above item with respect to Ravenswood/Menlo crossing of ECR

100. Middle and El Camino and the section between Middle and Palo Alto

101. Not specifically ECR but my cycle route to work in the Bohannon Business Park area requires riding on Marsh Road. In my opinion the number one priority for Menlo Park should be dedicated bicycle lanes on Marsh Road between Middlefield and 101. It took cycling deaths to address the problem on Page Mill, Alpine and Sand Hill Roads at 280. Hopefully I'm not the one killed on Marsh Road that results in new bike lanes there. There is no alternative way to get to the Business Park and it is very unsafe. Middlefield has a nice bike lane that disappears on Marsh Road.

102. During rush hour ECR is basically a parking lot... It's hard to cross it by either car, walking, or

bicycle.. We shouldn't have to "hit a button" to be able to cross the street! Pedestrians should have a higher priority!

103. Embarcadero, and any place where it tends to back up.

104. Middle/ECR.

And quite frankly all pedestrian crossings at ECR seem like ridiculously long waits, and then there are impatient cars in conflict with pedestrian crossings. I have to admit, I'm hesitant to encourage my child to do a lot of biking around town, which I perceive to be even more dangerous. I personally do a LOT of walking around town, and ECR is just an ugly place to walk. I lived in Manhattan for 7+ years… I get traffic and noise, but Menlo Park/ECR area is so pedestrian unfriendly :(I would LOVE to bike more. 30 years ago, I would bike ECR all the way to Palo Alto. Not in a million years would I do that now. Good luck!! We need all the help we can get to try and improve the ECR situation.

105. Any intersection where people blatantly run red lights. The Middle Ave intersection is bad.. but they all are at certain times of day.

106. From Middle Ave through Valparaiso is a big bottleneck. I suggest creating an additional lane by eliminating on street parking.

107. El Camino Real at Middle has the extremely dangerous hazard described above.

As a resident, I consider El Camino Real virtually "unpassable" from Roble to Valparaiso and avoid it as much as possible.

108. From Safeway and passed Santa Cruz avenue

109. Middle Avenue traffic speeds are not observed.

110. Where do most children cross to go to Hillview in the mornings? I think Oak Grove. But whichever it is, I suppose that is the place of my concern. Would a bike bridge be best?

111. not sure, guessing around the el camino and stanford shopping centre (where bikes and pedestrians go from there to palo alto).

112. In 30 years of driving around Menlo Park I think I have never got through town without at least 2 red lights even after midnight, especially Ravenswood/Menlo Ave intersection and Santa Cruz Ave intersection.

113. I definitely feel unsafe riding on ECR from Menlo College to University, and I would love to see a dedicated bike lane on that stretch of road.

114. Sandhill and el camino is a disaster because 90% of the traffic coming from the mall and 280 is forced to turn left through Menlo park

115. El Camino and Ravenswood. See the reasons noted above in questions 17 and 18. Folks also frequently cut thru the shopping center there to avoid the lights when they need to turn right at Ravenswood..

116. El Camino and Menlo. El Camino and Oak Grove. El Camino and Middle. Most of the crossings (except, to some extent Santa Cruz) are terribly designed for pedestrians. At, say Live Oak and El Camino, the sidewalks even curve so far, crossing the small side street as a pedestrian is an adventure. An El Camino crossing, say to patronize the businesses across the street, isn't even possible.

117. Quarry Road/El Camino and Sandhill/El Camino

    These are both unnecessarily complicated and slow intersections.

118. Southbound left turn to Palo Alto plus the three full intersections: Ravenswood, Oak Grove, Glenwood/Valparaiso.

119. Middle Ave is already a big problem with the Safeway and gas station entrance. At some times of day there is a "train of cars" coming down Middle or up Middle. At those times, getting out of or into Kenwood and Morey is a problem. There are two parks; Nealon Park (includes a pre-school and senior center) and Jack Lyle park which has another senior center adjacent to it. Each of these is of concern in terms of parking(backing out along Middle) and of course seniors and kids. Further up, there is a nursery school at the Baptist Church. And then, there is Oak Knoll with 800 children.

120. The Menlo Ave/Ravenswood/ECR intersection is getting worse. The crosswalk at Alma and Ravenswood causes cars to stop and back up on the railroad tracks and behind to El Camino. Trains also cause traffic to back up onto El Camino and on Menlo Ave. We have the most automobile traffic at rush hour and the most trains stopping during rush hour as well, creating huge backups. It shouldn't take me 3 to 5 changes of the light to cross ECR from Menlo Ave. to Ravenswood. We need a grade separation for the train so traffic isn't backed up.

121. Santa Cruz and the intersection at Ravenswood.

122. Middle and ecr

123. From Valparaiso to Ravenswood

124. The area of Ravenswood and EL Camino--the intersection that includes the crossing to the library, at Alma, and the intersection at El Camino. People make illegal turns at Alma. The pedestrian crossing there is better since the flags and lights have been installed, but still hazardous.

125. Oak Grove and Ravenswood crossings at ECR. I participated in many of the planning studies, walk throughs of the area, meetings years ago, it seems like none of this has made any difference. The general plan didn't reflect what I thought was said at the early meetings and workshops that I attended. Keep a small town feel. Don't have huge buildings right on the ECR (there is already a ghastly apartment complex - way too close to the sidewalk - next to Planet Auto), have big setbacks, wider sidewalks, don't increase traffic with overly large developments. Not sure any of this helps, but... there you have it. THANK YOU for doing a survey! :-)

126. Menlo Ave/Ringwood crossing with El Camino is always busy.

127. Between Sandhill and Ravenswood seems to get the worst during rush hour.

128. Primarily the crossing lights at Glenwood/Valparaiso and Oak Grove.

129. Awful congestion on ECR between Valparaiso and Middle.

130. Make the Ravenswood railroad and ECR crossings more friendly to cyclists or create a bike tunnel under the tracks, preferably at Middle Ave.

131. Encinal crossing

132. Well, ECR/Ravenswood is a disaster because it's all cars speeding. Walkers and bicyclists feel very threatened there. They need a better place to cross the tracks. Middle/ECR is also too congested.

     WE NEED TO DECREASE DEMAND FOR TRANSPORTATION!!! Changing transportation supply (the nature of lanes, sidewalks, etc.) is a band-aid. The real problem is demand.

133. Border of Palo Alto to Atherton.

134. Oak grove needs Sharrows from ECR to University.,

     Adding more lanes and a rt turn lane on to Ravenswood from northbound ECR will turn MP into a DeAnza Blvd..if the city does this, the lane closest to the curb should have Sharrows the entire distance through MP AND GREEN LANES AT INTERSECTIONS.

135. From Middle to Valparaiso.

136. The worst region is from the Santa Clara border through downtown MP.

137. Ravenswood & EC

138. I dislike the shopping center with Chili's, Staples, the sports store… it's very unattractive and unappealing from El Camino.

139. From Sandhill to the caltrain station.

140. All of it!

141. Ravenswood- crowded major portions of the day. I go from Ringwood to

     Oak Grove or Encinaljust to cross el Camino even though Ringwood is

     closest to my house.

142. Improving bicycle infrastructure all along the El Camino Real corridor, paying particular attention to bicycle access to/from the Caltrain and nearby shopping/other points of interest.

143. The portion between San Francisquito Creek and Valpariso.

144. Sandhill Rd to Santa Cruz

145. The portion of ECR immediately adjacent to downtown Menlo Park and Caltrain is painfully slow and congested. The vacant lots between Sand Hill and the Safeway are ugly and filled with

homeless people who make me feel unsafe walking home alone (I've been approached in a threatening manner).

146. Menlo Ave. & El Camino.

147. Santa Cruz and El Camino Real.

148. El camino and ravens wood. People get in the right turn lane and then cut back in which ends up blocking traffic from moving down ravens wood. People lane hop to get ahead. People drive thru the cvs parking lot to skip the corner. Why not have a dedicated right turn only lane that stops traffic either re merging or going straight.

     Take the cross walk near the train tracks and build an overhead structure to protect the pedestrians and fence off the intersection so that traffic can move more smoothly and pedestrians aren't at risk by crossing the road.

149. Ravenswood because the west bound free right lane causes bike/ car conflicts

150. I would really like to see a bike tunnel from Middle Ave on the ECR side go under the railway tracks and connect to Willow. This would be great for kids on the east side of ECR to bike to Hillview Middle School and great option to get to the library and environs from the west side of ECR.

151. South border with Palo Alto (at Alma?) past Ravenswood headed north. Very high speed traffic; no room to ride.

152. The intersection of El Camino Real at Ravenswood is terrible for both bicyclists and pedestrians. Pedestrians cannot cross ECR on the south side of the intersection, which means that if you approaching from the south and your destination is on the south you still have to criss Ravenswood twice, needlessly, just to get across ECR. This really discourages people from walking. Bicyclists have no clear place to wait safely for the light to change without risking a right hook from a car turning right to go south on ECR. Coming from the other way, the bike lane just evaporates two blocks before the intersection, and cars do not understand that bikes have the right to the full lane!

153. The Sand hill intersection is dangerous for pedestrian and cyclist. Cars coming from Sand Hill often turns even after the light has turned green for pedestrian. Cars on El Camino stop too close to the pedestrian crossing which blocks the view for other drivers and may cause accident when pedestrian are short on time to cross. The Middle Ave and El Camino crossing is also very problematic. You can cross only at one place, but cars can turn on that side and they can come fast. It is just not safe to cross there on foot and I ask my daughters never to cross there on foot or cycling.

154. See above

155. Encinal & El Camino, Ravenswood towards el Camino. Middle and El camino, Santa Cruz & El Camino

156. Length of ECR between Encinal and Sand Hill.

157. Valparaiso through SandHill

158. Portion near Santa Cruz Ave. and portion near Middle Ave.

159. ECR between Sand Hill Rd and Santa Cruz Avenue in both directions.

160. Ravenswood and El Camino

161. I would love for the Ravenswood to Santa Cruz section to be more bike friendly. It's a major way to connect the residential neighborhood around Ravenswood to the downtown area on Santa Cruz, but right now the crossing from Ravenswood to Menlo Ave is really unsafe for cyclists.

162. They are all bad but the intersection at ECR and Encinal is particularly bad, especially as school traffic is involved.

163. Between Menlo College and Roble Ave.

164. When you come from Palo Alto and hit Middle Avenue the traffic seems to have a hard time choosing the lane and it gets blocked up. Maybe put El Camino underground from Safeways to Valparaiso and make a pedestrian precinct on top is the answer.

165. Please add bike lanes to the entire length of El Camino Real, including neighboring cities

166. Middle. The Safeway and Shell station make it impossible for pedestrians and bicyclists. If bike under crossing at middle extension is ever constructed, there will be no safe way to access it, not even a practical way to use it. I often ride my bike to work in palo alto, but go through stanford rather than use ECR. I would use my bike to go to East Menlo Park, but there is not practical way to get there. Even using a car I cut through neighborhoods to get to valparaiso, because only practical way to get across town E/W

167. From Middle to Valparaiso.

168. Sandhill to Valparaiso has terrible traffic flow and should be fixed. The entire stretch is unsafe for biking.

169. #1. Ravenswood/Ringwood and El Camino. Especially heading northbound on El Camino approaching that intersection.

170. El Camino and Middle, which is a major route from children from the WIllows biking to Hillview.

171. El Camino at Middle, Menlo, Oak Grove, Cambridge are the worst intersections. Lights at Ravenswood/Menlo create a North / South pile up because they are not geared to the increase traffic demands early of the commute hours. Bicycle traffic for Middle and High School students across the ECR early in the am and late in the afternoon is dangerous.

172. From British Bankers Club / McD over to Santa Cruz. From Glendale over to Valparaiso, Oak Grove crossing over El Camino. From Watkins Ave to Ravenswood along El Camino

173. Oak Grove, Santa Cruz and Ravenswood are unsafe for visually impaired pedestrians because the crossing signals are not properly installed or maintained.

174. Oak Grove Ave intersection

175. Ecr and ravenswood

176. El Camino / Ravenswood light could be longer for pedestrians.

177. REngsdorf

178. Ravenswood always feels dangerous; the u-turns on Cambridge make it pretty scary too.

179. The cross walk on ECR just north of Buckthorn, no one stops, it is very dangerous.

180. The bike safety issue applies to the entire length of El Camino.

181. Santa Cruz, ravens wood, sand hill.

182. The area from Ravenswood to Valpariso is usually a bottleneck in both directions.

183. It's easy to ride the pedestrian/bike path along Alma east of El Camino to Ravenswood. But there is not a good place to cross over to the business district. The Ravenswood bike lane disappears beside Kepler's. The cars there are pushing to get across at the light. They are not looking for bikes. It is scary.

     Coming back the other way, you have to merge with the traffic, some of which is turning right on red opposite Applewood pizza. You have to be brave to cross there on a bike. Your other option is to get off you bike, walk across to Applewood Pizza corner and then wait to cross with your bike as a pedestrian. Then somehow you've got to get to other side of the street to get yourself in the correct bike lane. The SF-style crossing of all directions and diagonal crossing all at once would eliminate this dilemma.

     I do NOT like bikes on the sidewalks in downtown MP. But I understand why children do it. Please give them a safer option -- especially the middle schoolers going to Hillview who have to cross El Camino.

184. Cycling between Palo Alto and Menlo Park downtown

185. The worst is that the lights don't detect bikes. Also, the right hand turn lane going north to ravens wood should have a physical barrier since too many cars use it to skip the line.

186. Ravenswood is a disaster crossing ECR, Alma and the train X three different modes (bike, ped and motor vehicle). And why does all the crossing traffic have to squeeze into one lane on Menlo?

187. El Camino & Sand Hill

188. Ravenswood crossing

189. El Camino and Santa Cruz/two blocks north and south.

190. The whole thing is hazardous from a biking perspective. From an automobile perspective, the sections where it narrows from three to two lanes are the most dangerous.

191. Between Partridge and Glenwood. Can't cross easily or safely on foot or on bike. Can't connect between downtown and city center/Burgess.

192. Between Spruce Avenue and Encinal is not safe for bikes, especially if you want to head south. It is not realistic to cross El Camino, but biking against traffic is also not safe.

193. Ravenswood crossing.

194. Many in the Menlo Park area

195. ECR @ Santa Cruz Ave.

     ECR @ Ravenswood/Menlo Ave.

     ECR @ Sand Hill Rd.

196. ECR and Ravenswood

197. It's all pretty much the same.

198. The most congested area seems to be between Roble and Valparaiso - either adding more lanes for vehicles or removing the right turn only lanes and making them both right turn or straight, may help.

199. Sand Hill rd intersection.

200. In our household we would bike between Menlo Park and San Mateo.

201. Valparaiso/Glenwood and ECR. Single lane for turn and straight travel headed west on Glenwood is a mess. I wait 2-3 lights each morning to cross or turn right onto ECR.

202. Between safeway and Sand Hill Road is particularly bad for bikes, and dangerous for people / bikes alike.

203. None

204. Sandhill through edge of Redwood city.

205. Ravenswood-Menlo Ave and El Camino

     Santa Cruz Avenue and El Camino

206. & Oak Grove

207. Spruce ave to watkins

208. Ravenswood and El Camino by Bevmo is always a disaster at rush hour and it's impossible to bike there.

209. There is no way to safely get across El Camino at Ravenswood heading west--those bike markings in the car lane are a joke, there would be no way I would feel comfortable maneuvering my bike into that spot with all the trucks and SUVs jockeying for position there. Likewise, the

sharrows on Ravenswood west of El Camino are right smack in the middle of the car lane, which seems laughable--bikes are really supposed to bike in the middle of the lane and hog the road? I realize that the city is trying to acknowledge bicyclists, but putting them in harm's way doesn't strike me as the best choice.

210. Menlo Avenue intersection mainly but I find that the traffic really bottlenecks from where you enter San Mateo County (coming north from Palo Alto) all the way through where the Atherton starts.

I am convinced that nothing has ever been done with the signals to get things moving through this city.

I would kill all street parking on ECR through MP as a starter. We need a narrow lane north and south for bicycles.

DYETT & BHATIA
Urban and Regional Planners

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APPENDIX B

General Plan Goals and Policies

Regulatory Setting

Menlo Park General Plan

The *Menlo Park General Plan* adopted in 1994 provides the framework for transportation planning within the city. The General Plan established goals that are concerned with the safe and efficient movement of people and goods in and around the city, while promoting alternative modes of transportation. Transportation-related goals and policies included in the Circulation and Transportation Element of the Menlo Park General Plan that are relevant to this study include the following:

Goal II-A: To maintain a circulation system using the Roadway Classification System that will provide for the safe and efficient movement of people and goods throughout Menlo Park for residential and commercial purposes.

- Policy II-A-1: Level of Service D (40 seconds average stopped delay per vehicle) or better shall be maintained at all City-controlled signalized intersections during peak hours, except at the intersection of Ravenswood Avenue and Middlefield Road and at intersections along Willow Road from Middlefield Road to US 101.

- Policy II-A-2: The City should attempt to achieve and maintain average travel speeds of 14 miles per hour or better on El Camino Real and other arterial roadways controlled by the State and at 46 miles per hour or better on U.S. Route 101 (Level of Service D).

Goal II-B: To promote the use of public transit.

- Policy II-B-1: The City shall consider transit modes in the design of transportation improvements and the review and approval of development projects.

- Policy II-B-2: As many activities as possible should be located within easy walking distance of transit stops, and transit stops should be convenient and close to as many activities as possible.

- Policy II-B-3: The City shall promote improved public transit service and increased transit ridership, especially to office and industrial areas and schools.

Goal II-C: To promote the use of alternatives to the single occupant automobile.

- Policy II-C-1: The City shall work with all Menlo Park employers to encourage the use of alternatives to the single occupant automobile in their commute to work.

- Policy II-C-7: Commuter shuttle service between the industrial work centers and the Downtown Transportation Center should be maintained and improved, within fiscal constraints. The City shall encourage SamTrans and other agencies to provide funding to support shuttle services.

Goal II-D: To promote the safe use of bicycles as a commute alternative and for recreation.

- Policy II-D-2: The City shall, within available funding, work to complete a system of bikeways within Menlo Park.

- Policy II-D-4: The City shall require new commercial and industrial development to provide secure bicycle storage facilities on-site.

Goal II-E: To promote walking as a commute alternative and for short trips.

- Policy II-E-1: The City shall require all new development to incorporate safe and attractive pedestrian facilities on-site.
- Policy II-E-2: The City shall endeavor to maintain safe sidewalks and walkways where existing within the public right of way.
- Policy II-E-3: Appropriate traffic control shall be provided for pedestrians at intersections.
- Policy II-E-4: The City shall incorporate appropriate pedestrian facilities, traffic control, and street lighting within street improvement projects to maintain or improve pedestrian safety.

Goal II-F: To provide adequate parking in the Downtown area, especially for retail customers and Caltrain patrons.

- Policy II-F-1: Adequate off-street parking should be required for all new development in the Downtown Area

Menlo Park El Camino Real and Downtown Specific Plan

Adopted by the City Council in June 2012, the *Menlo Park El Camino Real and Downtown Specific Plan* establishes the framework for private development and public improvements along the El Camino Real corridor in the City of Menlo Park, as well as downtown Menlo Park and the Menlo Park Caltrain Station area. For circulation, the Specific Plan envisions the following:

- *A vehicular circulation system that accommodates both local traffic and north/south through traffic on El Camino Real.*
- *An integrated pedestrian network of expansive sidewalks, promenades and paseos along El Camino Real and within downtown. The network provides opportunities for safe crossing of El Camino Real and the railroad tracks and connects the east and west sides of town, including the City's civic center with downtown.*
- *A bicycle network that builds upon existing plans and integrates more fully with downtown and proposed public space improvements in the area.*
- *An integrated circulation plan that supports transit use.*
- *A public parking strategy and management plan that efficiently accommodates downtown visitors and supports downtown businesses.*
- *Modified parking rates for private development based on current industry standards.*

The Specific Plan includes a series of recommended enhancements to the pedestrian and bicycle networks as well as transit access along El Camino Real and within Downtown Menlo Park.

City of Menlo Park Complete Streets Policy

In January 2013, the Menlo Park City Council passed a resolution establishing the *Complete Streets Policy of City of Menlo Park*. The policy establishes complete streets as being those that serve all users and are developed based on the context of the situation that requires a collaborative effort between many City departments to implement. The policy further requires incorporation of a complete streets approach into all phases of all projects, unless a project is found to meet limited exemption criteria.

City of Menlo Park Comprehensive Bicycle Development Plan

The 2005 *Comprehensive Bicycle Development Plan* (CBDP) provides a blueprint of strategies and actions to further the integration of bike usage as a commute alternative and for recreation. The goals of this

Plan provide the framework for specific policies and actions addressed in the Bike Plan. The goals of the CBDP provide a long-range vision, while the policies provide specific action descriptions to implement the Plan. Following are the relevant bicycle-related goals and policies:

Goal 1: Expand and Enhance Menlo Park's Bikeway Network

- Policy 1.1: Complete a network of bike lanes, bike routes, and shared use paths that serve all bicycle user groups, including commuting, recreation, and utilitarian trips.

Goal 2: Plan for the Needs of Bicyclists

- Policy 2.1: Accommodate bicyclists and other non-motorized users when planning, designing, and developing transportation improvements.
- Policy 2.2: Review capital improvement projects to ensure that needs of bicyclists and other non-motorized users are considered in programming, planning, maintenance, construction, operations, and project development activities.
- Policy 2.3: Encourage traffic calming, intersection improvements, or other similar actions that improve safety for bicyclists and other non-motorized users.
- Policy 2.4: Require developers to adhere to the design standards identified in this Comprehensive Bicycle Development Plan.

Goal 3: Provide for Regular Maintenance of the Bikeway Network

- Policy 3.3: Develop a program to ensure that bicycle loop detectors are installed at all signalized intersections on the bike network and are tested regularly to ensure they remain functional.
- Policy 3.4 Require that construction or repair activities, both on street and of adjacent building, minimize disruption to bicycle facilities, ensure bicyclist safety at all times, and provide alternated routes if necessary.

Goal 4: Encourage and Educate Residents, Businesses and Employers in Menlo Park on Bicycling

- Policy 4.6: Encourage major Menlo Park employers and retailers to provide incentives and support facilities for existing and potential employees and customers that commute by bicycle.
- Policy 4.9: Promote bicycling as a healthy transportation alternative.

San Mateo County Comprehensive Bicycle and Pedestrian Plan

The City/County Association of Governments of San Mateo County (C/CAG), with support from the San Mateo County Transportation Authority (SMCTA), developed the *2011 San Mateo County Comprehensive Bicycle and Pedestrian Plan* (CBPP) to address the planning, design, funding, and implementation of bicycle and pedestrian projects of countywide significance.

The following are the relevant goals and policies:

Goal 2: More People Riding and Walking for Transportation and Recreation

- Policy 2.6: Serve as a resource to county employers on promotional information and resources related to bicycling and walking.

Goal 4: Complete Streets and Routine Accommodation of Bicyclists and Pedestrians

- Policy 4.1: Comply with the complete streets policy requirements of Caltrans and the Metropolitan Transportation Commission concerning safe and convenient access for bicyclists and pedestrians, and assist local implementing agencies in meeting their responsibilities under the policy.

- Policy 4.5: Encourage local agencies to adopt policies, guidelines, standards and regulations that result in truly bicycle-friendly and pedestrian-friendly land use developments, and provide them technical assistance and support in this area.

- Policy 4.6: Discourage local agencies from removing, degrading or blocking access to bicycle and pedestrian facilities without providing a safe and convenient alternative.

Caltrans Implementation of Deputy Directive 64-R1: Complete Streets – Integrating the Transportation System

El Camino Real is designated as State Route 82, so is operated by the California Department of Transportation (Caltrans) in coordination with the City of Menlo Park. Caltrans has adopted a Deputy Directive relevant to complete streets, noting that they provide safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, and contribute to the Department's mission/vision. The goals of implementing the complete street policy are to provide more options for people to go from one place to another, reduce traffic congestion and greenhouse gas emissions, promote walkable communities, and reduce barriers for persons with disabilities.

While there are no specific goals and policies of this Directive, local agencies are working in cooperation with Caltrans to further the intent of the Deputy Directive. Deputy Directive 64-Revision #1: Complete Streets: Integrating the Transportation System (DD-64-R1) was signed on October 2, 2008. Under this Directive Caltrans is directed to provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System (SHS). Caltrans views all transportation improvements (new and retrofit) as opportunities to improve safety, access, and mobility for all travelers and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Bicycle, pedestrian, and transit travel is facilitated by creating "complete streets" beginning early in system planning and continuing through project delivery, maintenance, and operations.

Providing complete streets increases travel options which, in turn, reduces congestion, increases system efficiency, and enables environmentally sustainable alternatives to single driver automotive trips. Implementing complete streets and other multi-modal concepts supports the California Complete Streets Act of 2008 (AB 1358), as well as the California Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 375, which outline the State's goals of reducing greenhouse gas emissions. With AB 1358 and DD-64-R1, both Caltrans and local agencies are working to complete and address common goals.

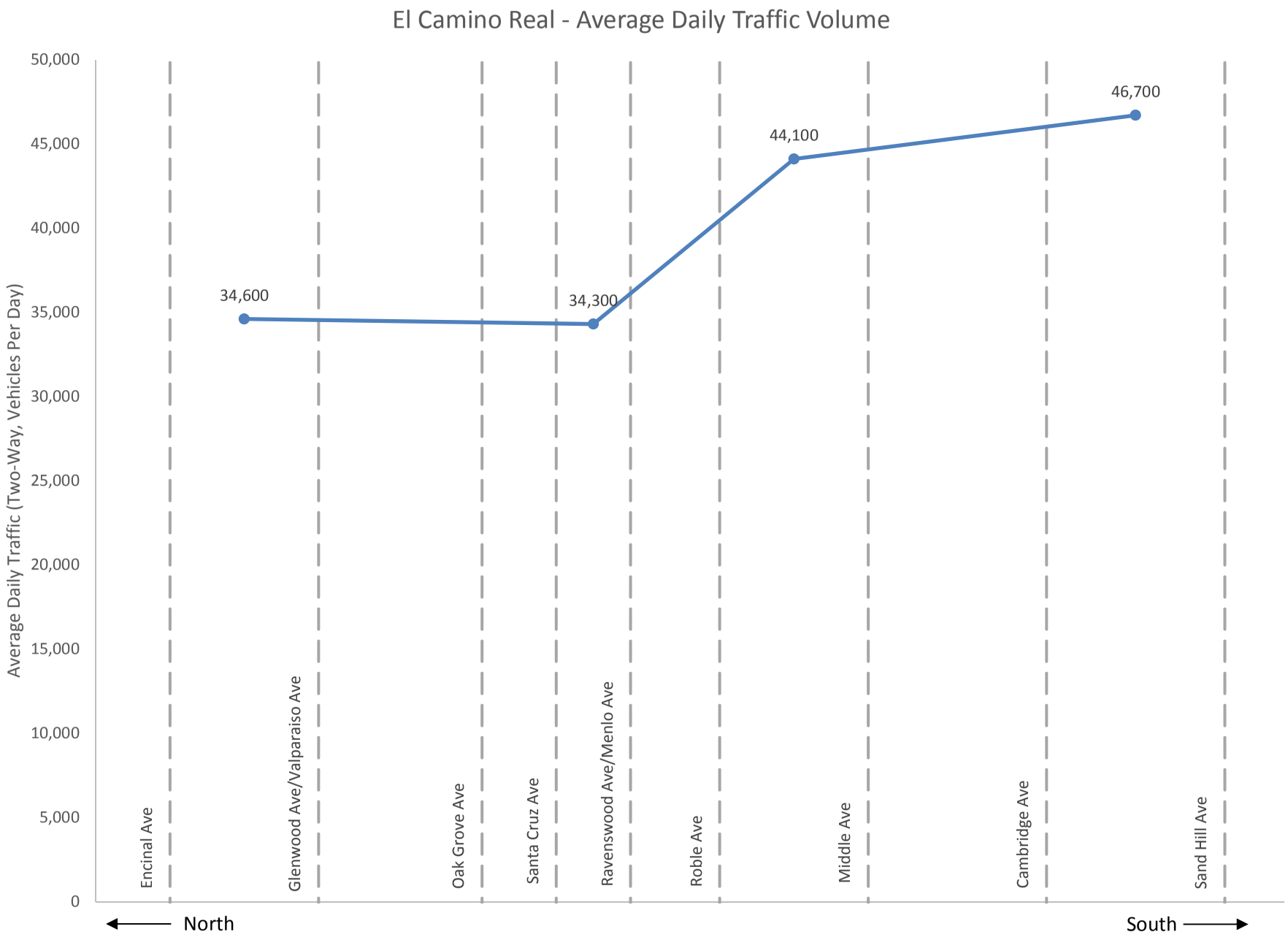
Grand Boulevard Initiative

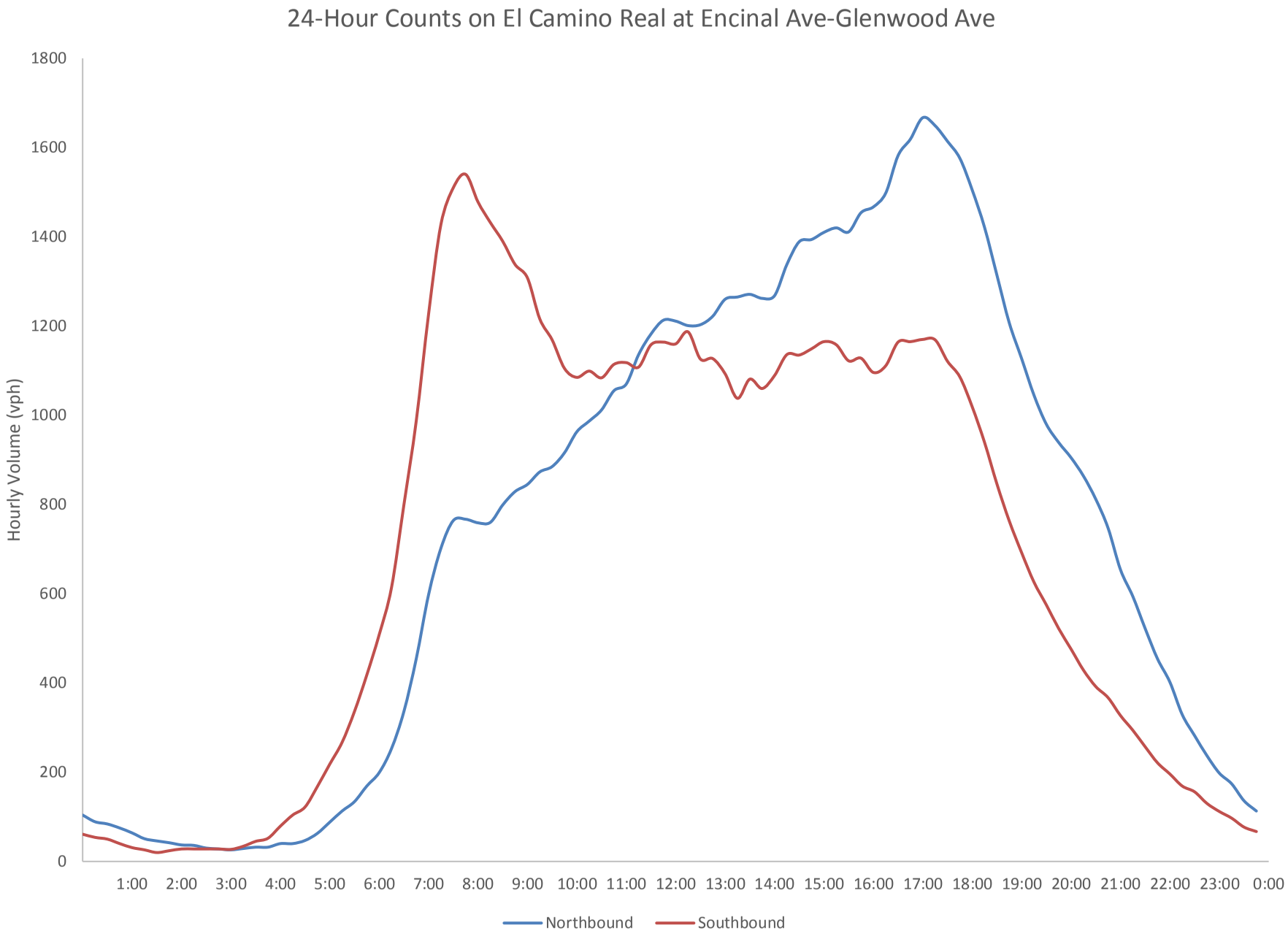
The Grand Boulevard Initiative is a regional collaboration of public, private, and nonprofit organizations in San Mateo and Santa Clara counties with the goal of revitalizing the El Camino Real corridor. Both the *El Camino Real and Downtown Specific Plan* as well as this El Camino Real study are part of Menlo Park's efforts towards implementing the overall goals of the Grand Boulevard Initiative.

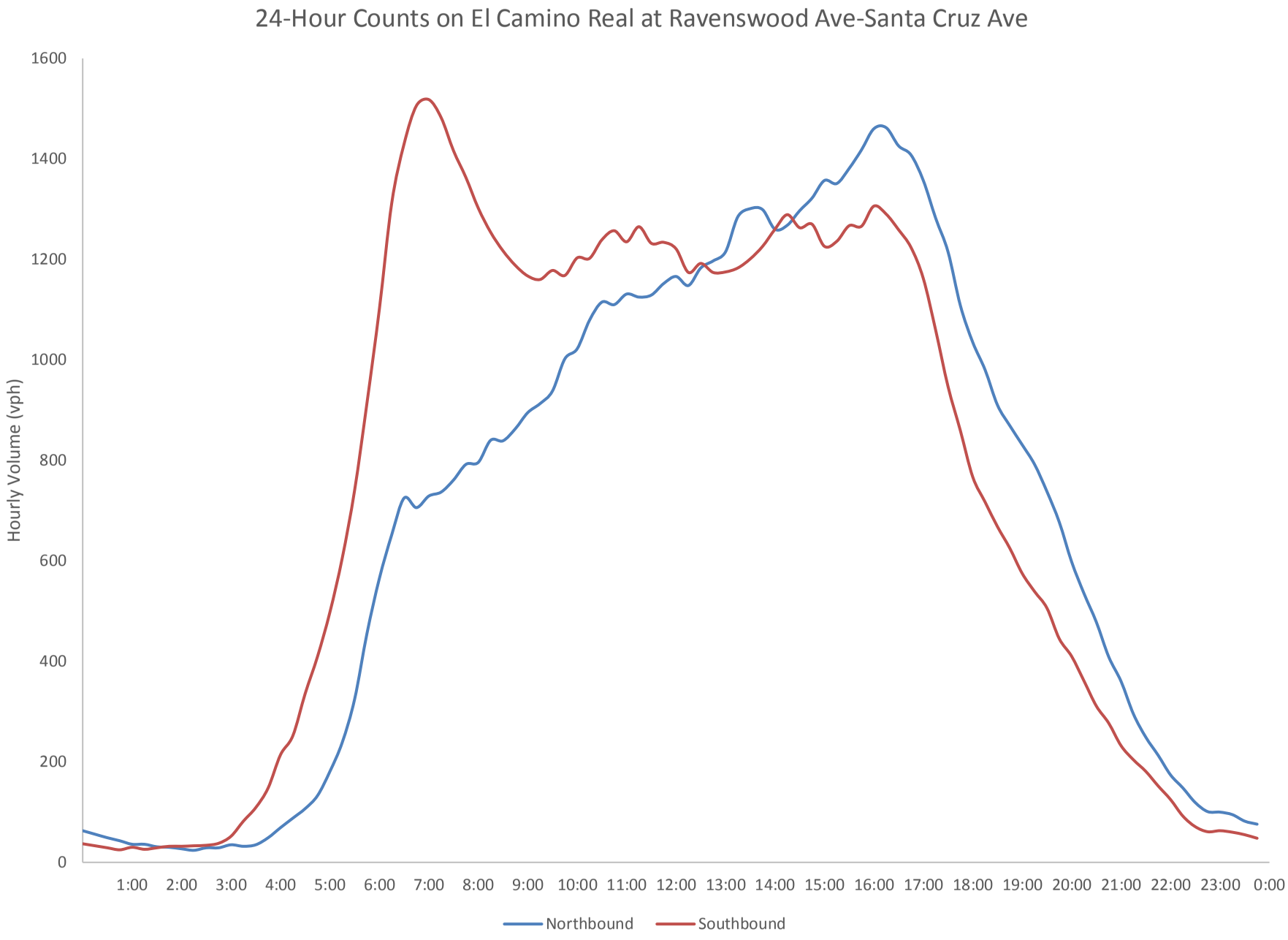
APPENDIX C

Existing Conditions Data

El Camino Real Segment Volume Data


El Camino Real - Average Daily Traffic Volume
Average Daily Traffic (Two-Way, Vehicles Per Day)
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
34,600
34,300
44,100
46,700
Encinal Ave
Glenwood Ave/Valparaiso Ave
Oak Grove Ave
Santa Cruz Ave
Ravenswood Ave/Menlo Ave
Roble Ave
Middle Ave
Cambridge Ave
Sand Hill Ave
North
South


24-Hour Counts on El Camino Real at Encinal Ave-Glenwood Ave
Hourly Volume (vph)
1800
1600
1400
1200
1000
800
600
400
200
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Northbound
Southbound


24-Hour Counts on El Camino Real at Ravenswood Ave-Santa Cruz Ave
Hourly Volume (vph)
1600
1400
1200
1000
800
600
400
200
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
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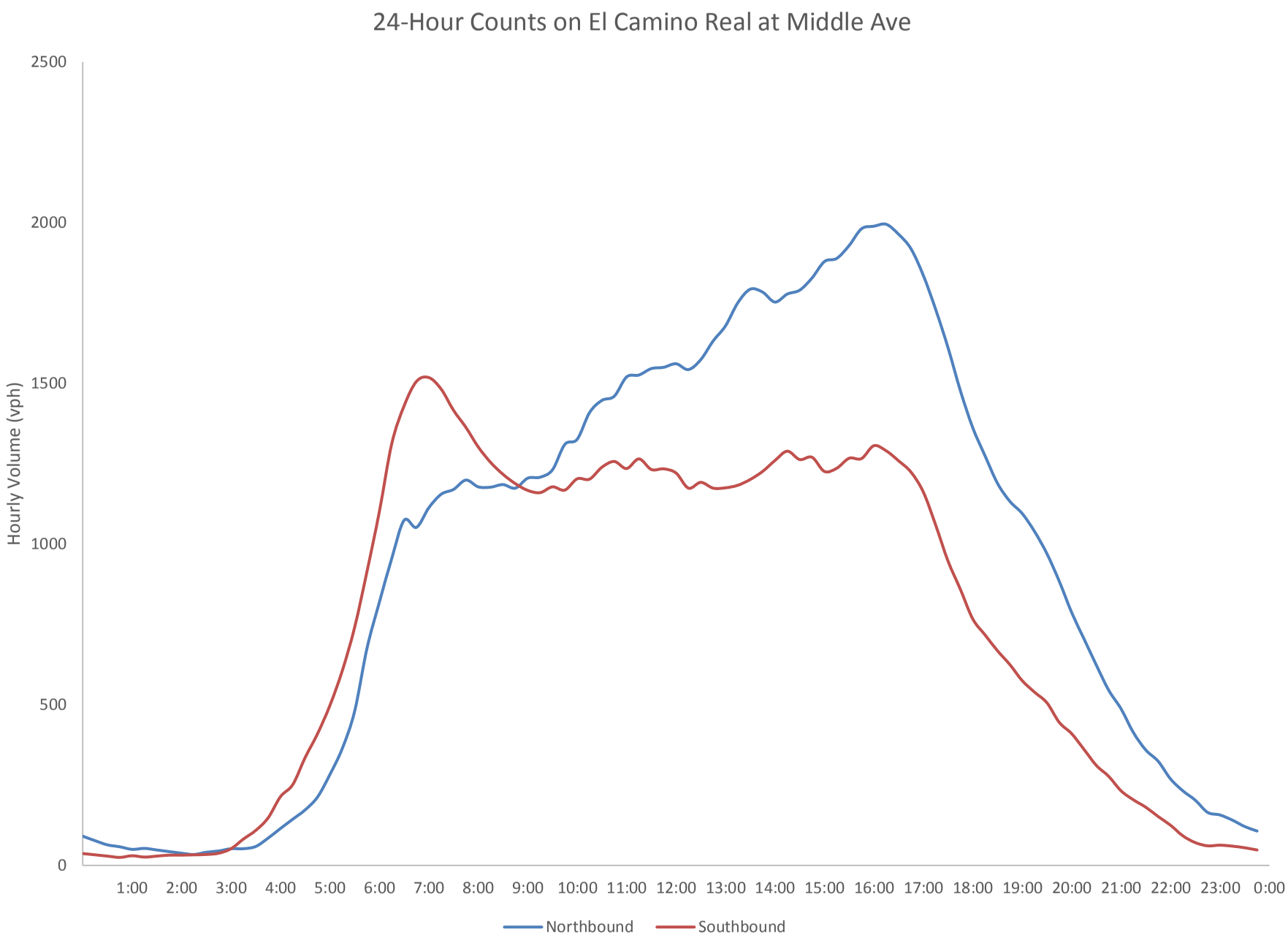
23:00
0:00
Northbound
Southbound


24-Hour Counts on El Camino Real at Middle Ave
Hourly Volume (vph)
2500
2000
1500
1000
500
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
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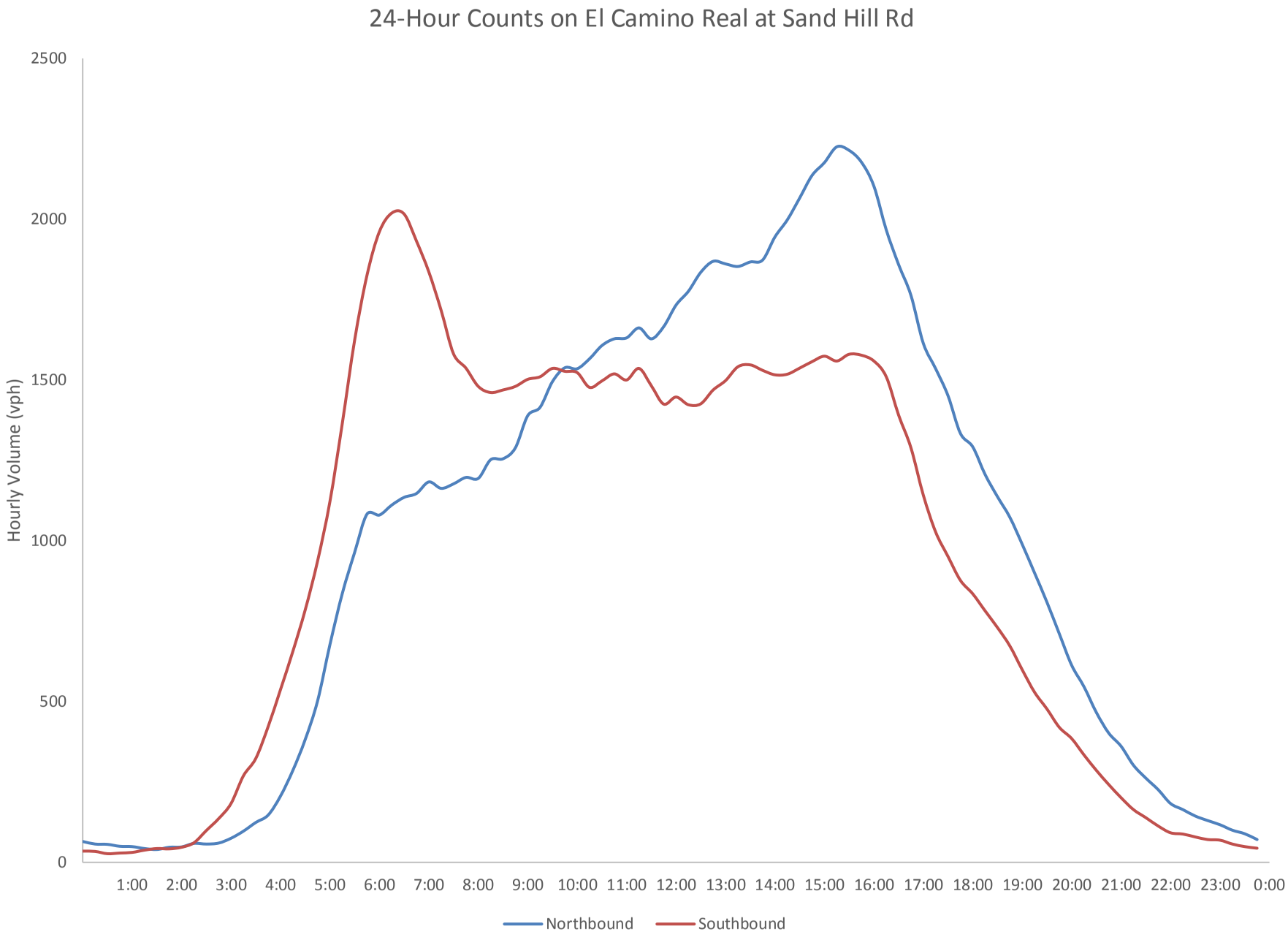
23:00
0:00
Northbound
Southbound


24-Hour Counts on El Camino Real at Sand Hill Rd
Hourly Volume (vph)
2500
2000
1500
1000
500
0
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Northbound
Southbound

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
BETWEEN ENCINAL AND GLENWOOD
DATE: WEDNESDAY APRIL 2, 2014

DIRECTION:		NB			
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	43	17	21	24	105
01:00	21	16	15	13	65
02:00	1	14	13	8	36
03:00	3	9	5	6	23
04:00	3	13	8	14	38
05:00	8	15	21	45	89
06:00	34	40	57	70	201
07:00	80	117	171	206	574
08:00	172	177	164	204	717
09:00	222	221	204	215	862
10:00	221	241	246	263	971
11:00	248	260	262	274	1044
12:00	298	298	312	270	1178
13:00	284	292	320	316	1212
14:00	316	313	338	316	1283
15:00	361	361	326	329	1377
16:00	378	337	361	358	1434
17:00	410	440	409	406	1665
18:00	392	419	379	317	1507
19:00	300	300	264	257	1121
20:00	237	221	227	223	908
21:00	203	179	165	126	673
22:00	132	111	93	79	415
23:00	57	66	40	32	195
				TOTAL	17693
AM PEAK HOUR		1100-1200			
VOLUME		1044			
PM PEAK HOUR		1700-1800			
VOLUME		1665			

DIRECTION:		SB			
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	14	15	11	14	54
01:00	6	18	2	4	30
02:00	3	6	7	9	25
03:00	5	5	7	9	26
04:00	14	18	12	39	83
05:00	39	34	66	91	230
06:00	95	103	130	176	504
07:00	189	287	327	409	1212
08:00	372	363	377	362	1474
09:00	368	311	329	313	1321
10:00	241	273	245	303	1062
11:00	255	256	275	294	1080
12:00	250	307	284	310	1151
13:00	276		267	267	1074
14:00	229	270	274	290	1063
15:00	265	310	264	336	1175
16:00	282	262	279	289	1112
17:00	285	304	269	296	1154
18:00	291	288	250	234	1063
19:00	209	170	148	147	674
20:00	143	115	103	102	463
21:00	88	79	67	57	291
22:00	58	43	59	43	203
23:00	37	29	13	12	91
				TOTAL	16615
AM PEAK HOUR		0745-0845			
VOLUME		1521			
PM PEAK HOUR		1515-1615			
VOLUME		1192			

TOTAL BI-DIRECTIONAL VOLUME	34308

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
BETWEEN ENCINAL AND GLENWOOD
DATE: THURSDAY APRIL 3, 2014

DIRECTION:		NB			
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	25	29	24	24	102
01:00	17	19	12	13	61
02:00	11	12	7	8	38
03:00	7	5	10	6	28
04:00	12	6	8	13	39
05:00	7	19	26	32	84
06:00	32	35	60	67	194
07:00	94	125	183	220	622
08:00	209	189	196	206	800
09:00	162	222	216	226	826
10:00	218	226	235	272	951
11:00	239	257	305	291	1092
12:00	322	312	317	292	1243
13:00	316	321	348	322	1307
14:00	294	313	311	333	1251
15:00	388	367	333	352	1440
16:00	392	372	384	349	1497
17:00	422	438	410	397	1667
18:00	403	389	365	344	1501
19:00	328	293	266	244	1131
20:00	227	242	221	211	901
21:00	178	180	152	121	631
22:00	130	105	89	65	389
23:00	59	56	51	33	199
				TOTAL	17994
AM PEAK HOUR		1100-1200			
VOLUME		1092			
PM PEAK HOUR		1700-1800			
VOLUME		1667			

DIRECTION:		SB			
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	19	17	14	15	65
01:00	13	5	3	8	29
02:00	7	5	7	10	29
03:00	4	6	7	8	25
04:00	9	16	16	33	74
05:00	34	35	54	81	204
06:00	77	105	153	175	510
07:00	195	291	333	423	1242
08:00	414	378	342	346	1480
09:00	325	347	286	334	1292
10:00	268	291	242	305	1106
11:00	282	277	273	321	1153
12:00	267	327	275	297	1166
13:00	296	247	295	273	1111
14:00	233	327	246	307	1113
15:00	290	286	284	293	1153
16:00	259	261	281	277	1078
17:00	287	325	292	279	1183
18:00	278	245	241	208	972
19:00	201	178	178	153	710
20:00	134	131	116	105	486
21:00	95	92	102	71	360
22:00	60	54	39	35	188
23:00	27	43	32	29	131
				TOTAL	16860
AM PEAK HOUR		0745-0845			
VOLUME		1557			
PM PEAK HOUR		1215-1315			
VOLUME		1195			

TOTAL BI-DIRECTIONAL VOLUME	34854

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
BETWEEN RAVENSWOOD AND SANTA CRUZ
DATE: WEDNESDAY APRIL 2, 2014

DIRECTION:	NB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	24	16	17	16	73
01:00	15	11	11	9	46
02:00	17	3	6	2	28
03:00	9	12	5	10	36
04:00	6	11	21	37	75
05:00	30	38	41	80	189
06:00	78	114	168	195	555
07:00	157	191	156	204	708
08:00	202	233	189	215	839
09:00	211	229	216	252	908
10:00	234	239	276	253	1002
11:00	299	277	257	288	1121
12:00	288	251	293	305	1137
13:00	287	295	325	323	1230
14:00	317	324	320	239	1200
15:00	363	347	336	315	1361
16:00	340	373	376	355	1444
17:00	341	351	353	287	1332
18:00	270	278	260	233	1041
19:00	210	202	204	197	813
20:00	178	162	143	114	597
21:00	116	110	81	69	376
22:00	44	62	32	28	166
23:00	18	25	13	20	76
				TOTAL	16353
AM PEAK HOUR	1100-1200				
VOLUME	1121				
PM PEAK HOUR	1615-1715				
VOLUME	1445				

DIRECTION:	SB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	14	11	12	10	47
01:00	8	6	0	15	29
02:00	5	10	7	16	38
03:00	5	6	8	27	46
04:00	31	37	53	97	218
05:00	83	130	118	196	527
06:00	178	246	272	362	1058
07:00	397	357	375	374	1503
08:00	365	305	317	331	1318
09:00	297	270	273	313	1153
10:00	273	260	315	318	1166
11:00	302	332	275	353	1262
12:00	340	294	295	292	1221
13:00	274	284	301	287	1146
14:00	290	331	307	332	1260
15:00	322	287	333	274	1216
16:00	344	323	298	325	1290
17:00	324	321	278	254	1177
18:00	245	192	185	167	789
19:00	176	134	141	121	572
20:00	128	104	80	81	393
21:00	78	52	67	45	242
22:00	51	35	16	17	119
23:00	15	14	16	21	66
				TOTAL	17856
AM PEAK HOUR	0700-0800				
VOLUME	1503				
PM PEAK HOUR	1415-1515				
VOLUME	1292				

TOTAL BI-DIRECTIONAL VOLUME	34209

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
BETWEEN RAVENSWOOD AND SANTA CRUZ
DATE: THURSDAY APRIL 3, 2014

DIRECTION:	NB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	14	16	11	11	52
01:00	8	7	5	5	25
02:00	6	4	8	5	23
03:00	8	5	8	10	31
04:00	6	13	20	22	61
05:00	19	23	53	75	170
06:00	88	119	187	178	572
07:00	183	188	162	215	748
08:00	153	195	190	213	751
09:00	232	197	211	240	880
10:00	246	236	279	278	1039
11:00	295	271	288	286	1140
12:00	294	305	298	296	1193
13:00	259	330	295	314	1198
14:00	369	334	296	321	1320
15:00	338	368	330	315	1351
16:00	350	403	363	359	1475
17:00	353	353	350	324	1380
18:00	274	292	230	233	1029
19:00	223	227	204	193	847
20:00	177	159	143	118	597
21:00	114	97	66	64	341
22:00	55	54	44	27	180
23:00	30	32	26	34	122
				TOTAL	16525
AM PEAK HOUR	1100-1200				
VOLUME	1140				
PM PEAK HOUR	1615-1715				
VOLUME	1478				

DIRECTION:	SB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	10	7	4	5	26
01:00	8	3	8	11	30
02:00	3	6	7	9	25
03:00	4	11	13	27	55
04:00	39	35	47	88	209
05:00	62	109	130	165	466
06:00	183	263	323	372	1141
07:00	386	388	373	384	1531
08:00	347	308	324	304	1283
09:00	318	269	311	281	1179
10:00	329	315	249	345	1238
11:00	298	317	324	267	1206
12:00	319	290	309	302	1220
13:00	292	336	266	308	1202
14:00	292	325	311	331	1259
15:00	318	316	299	302	1235
16:00	315	342	331	331	1319
17:00	304	282	281	277	1144
18:00	176	188	199	181	744
19:00	145	147	157	126	575
20:00	121	111	95	97	424
21:00	73	64	41	42	220
22:00	44	34	34	16	128
23:00	15	14	14	16	59
				TOTAL	17918
AM PEAK HOUR	0700-0800				
VOLUME	1531				
PM PEAK HOUR	1600-1700				
VOLUME	1319				

TOTAL BI-DIRECTIONAL VOLUME	34443

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
NORTH OF MIDDLE AVENUE
DATE: WEDNESDAY APRIL 2, 2014

DIRECTION:	NB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	37	22	21	22	102
01:00	15	12	15	10	52
02:00	21	6	4	5	36
03:00	10	16	9	12	47
04:00	10	18	38	45	111
05:00	42	53	65	107	267
06:00	127	161	249	259	796
07:00	246	270	252	323	1091
08:00	338	297	277	315	1227
09:00	289	328	265	327	1209
10:00	304	345	325	352	1326
11:00	389	367	385	376	1517
12:00	381	377	366	418	1542
13:00	378	394	427	456	1655
14:00	436	467	410	418	1731
15:00	459	455	458	465	1837
16:00	478	525	503	475	1981
17:00	474	477	467	392	1810
18:00	377	357	321	305	1360
19:00	269	267	276	264	1076
20:00	231	200	194	160	785
21:00	152	136	113	106	507
22:00	81	79	65	38	263
23:00	36	41	36	29	142
				TOTAL	22470
AM PEAK HOUR	1100-1200				
VOLUME	1517				
PM PEAK HOUR	1600-1700				
VOLUME	1981				

DIRECTION:	SB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	18	13	13	12	56
01:00	9	7	0	16	32
02:00	6	11	12	24	53
03:00	11	12	15	22	60
04:00	12	12	18	46	88
05:00	29	67	64	73	233
06:00	223	304	345	428	1300
07:00	449	441	447	467	1804
08:00	433	378	407	362	1580
09:00	343	300	344	361	1348
10:00	358	321	354	418	1451
11:00	345	397	367	421	1530
12:00	409	314	354	339	1416
13:00	329	361	357	371	1418
14:00	342	356	399	393	1490
15:00	399	339	380	376	1494
16:00	399	382	356	412	1549
17:00	385	363	364	316	1428
18:00	305	251	223	212	991
19:00	201	194	185	154	734
20:00	168	123	96	99	486
21:00	103	78	77	53	311
22:00	52	38	19	21	130
23:00	14	19	16	23	72
				TOTAL	21054
AM PEAK HOUR	0700-0800				
VOLUME	1804				
PM PEAK HOUR	1600-1700				
VOLUME	1549				

TOTAL BI-DIRECTIONAL VOLUME	43524

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
NORTH OF MIDDLE AVENUE
DATE: THURSDAY APRIL 3, 2014

DIRECTION:	NB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	18	27	17	16	78
01:00	13	12	10	12	47
02:00	12	7	12	7	38
03:00	15	12	14	14	55
04:00	16	23	37	41	117
05:00	41	46	91	118	296
06:00	118	170	298	252	838
07:00	272	300	252	310	1134
08:00	263	303	284	277	1127
09:00	310	288	274	326	1198
10:00	302	317	372	333	1324
11:00	382	371	339	429	1521
12:00	403	401	366	409	1579
13:00	369	446	420	466	1701
14:00	456	456	420	441	1773
15:00	482	492	447	497	1918
16:00	483	502	506	502	1993
17:00	500	489	453	420	1862
18:00	384	370	330	276	1360
19:00	317	291	263	242	1113
20:00	243	219	174	152	788
21:00	157	119	98	90	464
22:00	81	68	77	48	274
23:00	52	48	30	40	170
				TOTAL	22768
AM PEAK HOUR	1100-1200				
VOLUME	1521				
PM PEAK HOUR	1615-1715				
VOLUME	2010				

DIRECTION:	SB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	12	9	4	7	32
01:00	16	5	7	17	45
02:00	10	8	8	14	40
03:00	8	12	21	32	73
04:00	52	47	63	115	277
05:00	97	160	169	245	671
06:00	240	317	364	436	1357
07:00	456	480	440	451	1827
08:00	444	405	367	378	1594
09:00	366	330	383	324	1403
10:00	391	381	338	414	1524
11:00	351	386	378	323	1438
12:00	447	365	366	372	1550
13:00	332	365	325	374	1396
14:00	337	345	392	370	1444
15:00	357	373	364	374	1468
16:00	397	378	374	393	1542
17:00	387	352	345	312	1396
18:00	265	232	242	220	959
19:00	200	180	205	168	753
20:00	151	117	106	106	480
21:00	91	95	55	52	293
22:00	54	45	41	27	167
23:00	27	18	17	23	85
				TOTAL	21814
AM PEAK HOUR	0700-0800				
VOLUME	1827				
PM PEAK HOUR	1200-1300				
VOLUME	1550				

TOTAL BI-DIRECTIONAL VOLUME	44582

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
NORTH OF SAND HILL ROAD
DATE: WEDNESDAY APRIL 2, 2014

DIRECTION:	NB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	22	19	14	12	67
01:00	10	20	8	8	46
02:00	5	14	18	7	44
03:00	17	7	12	23	59
04:00	35	32	45	84	196
05:00	111	139	163	255	668
06:00	280	243	278	258	1059
07:00	315	306	292	292	1205
08:00	294	294	314	292	1194
09:00	353	320	357	344	1374
10:00	386	391	385	405	1567
11:00	384	404	420	378	1586
12:00	448	386	434	464	1732
13:00	484	442	479	424	1829
14:00	474	443	482	532	1931
15:00	521	508	573	571	2173
16:00	561	517	512	482	2072
17:00	421	413	426	341	1601
18:00	358	312	308	286	1264
19:00	283	263	242	199	987
20:00	199	162	151	121	633
21:00	118	87	89	77	371
22:00	49	43	46	31	169
23:00	34	21	35	17	107
				TOTAL	23934
AM PEAK HOUR	1045-1145				
VOLUME	1613				
PM PEAK HOUR	1530-1630				
VOLUME	2222				

DIRECTION:	SB				
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	7	11	10	0	28
01:00	9	4	9	6	28
02:00	16	11	10	9	46
03:00	33	41	46	59	179
04:00	130	99	141	167	537
05:00	227	224	287	369	1107
06:00	471	477	478	500	1926
07:00	545	490	392	419	1846
08:00	412	342	347	346	1447
09:00	385	356	370	336	1447
10:00	419	337	389	394	1539
11:00	391	405	377	316	1489
12:00	382	351	345	356	1434
13:00	371	353	365	407	1496
14:00	412	379	360	387	1538
15:00	423	379	359	424	1585
16:00	389	407	385	401	1582
17:00	348	296	263	227	1134
18:00	239	200	203	203	845
19:00	174	154	141	114	583
20:00	101	109	83	81	374
21:00	62	50	43	28	183
22:00	25	29	20	14	88
23:00	17	18	11	16	62
				TOTAL	22523
AM PEAK HOUR	0630-0730				
VOLUME	2013				
PM PEAK HOUR	1545-1645				
VOLUME	1605				

TOTAL BI-DIRECTIONAL VOLUME	46457

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: W-TRANS
PROJECT: MENLO PARK
LOCATION: EL CAMINO REAL
NORTH OF SAND HILL ROAD
DATE: THURSDAY APRIL 3, 2014

DIRECTION:		NB			
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	17	16	16	11	60
01:00	14	14	9	14	51
02:00	6	13	14	16	49
03:00	16	17	26	31	90
04:00	43	46	39	87	215
05:00	127	131	160	266	684
06:00	275	282	283	257	1097
07:00	303	268	293	296	1160
08:00	283	307	312	290	1192
09:00	341	287	336	437	1401
10:00	359	377	394	370	1500
11:00	424	446	401	403	1674
12:00	422	396	463	451	1732
13:00	471	457	486	475	1889
14:00	465	484	495	511	1955
15:00	524	556	544	553	2177
16:00	582	525	531	494	2132
17:00	450	413	426	337	1626
18:00	356	345	309	307	1317
19:00	259	257	248	226	990
20:00	164	175	143	109	591
21:00	112	91	76	71	350
22:00	62	55	48	30	195
23:00	39	36	30	19	124
				TOTAL	24251
AM PEAK HOUR		1100-1200			
VOLUME		1674			
PM PEAK HOUR		1515-1615			
VOLUME		2235			

DIRECTION:		SB			
START TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	9	14	6	12	41
01:00	4	7	11	9	31
02:00	11	10	7	17	45
03:00	23	57	45	60	185
04:00	98	107	148	182	535
05:00	239	239	307	350	1135
06:00	481	504	519	489	1993
07:00	523	485	438	378	1824
08:00	416	364	395	338	1513
09:00	404	366	393	391	1554
10:00	387	436	357	325	1505
11:00	322	409	412	366	1509
12:00	404	355	330	369	1458
13:00	366	358	397	376	1497
14:00	412	345	368	369	1494
15:00	404	383	408	366	1561
16:00	409	396	377	353	1535
17:00	352	270	294	232	1148
18:00	231	213	206	173	823
19:00	189	156	155	113	613
20:00	123	96	99	77	395
21:00	60	60	51	47	218
22:00	23	31	21	20	95
23:00	23	23	15	13	74
				TOTAL	22781
AM PEAK HOUR		0615-0715			
VOLUME		2035			
PM PEAK HOUR		1530-1630			
VOLUME		1579			

TOTAL BI-DIRECTIONAL VOLUME	47032

El Camino Real Vehicle Classification Data

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969 E-mail: info@wiltecusa.com

MID-BLOCK AXLE CLASSIFICATION COUNT SUMMARY

CLIENT: WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT: MENLO PARK - EL CAMINO REAL
LOCATION: EL CAMINO REAL AND CAMBRIDGE AVENUE
CITY: MENLO PARK
DATE: WEDNESDAY APRIL 2, 2014
PERIODS: 11:30 PM -1:30 PM AND 4:00 PM - 6:00 PM

MD COUNT RESULTS

PERIOD	NORTHBOUND					SOUTHBOUND					BOTH DIRECTIONS TOTALS			
15 MIN COUNTS	AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL
100-115	344	9	1	354		359	6	1	366		703	15	2	720
115-130	340	5	4	349		372	8	0	380		712	13	4	729
130-145	359	4	2	365		329	5	2	336		688	9	4	701
145-200	333	1	4	338		331	1	0	332		664	2	4	670
200-215	313	2	1	316		264	7	2	273		577	9	3	589
215-230	309	0	1	310		300	11	3	314		609	11	4	624
230-245	300	0	2	302		327	6	0	333		627	6	2	635
245-300	310	0	0	310		294	7	0	301		604	7	0	611
HOUR TOTALS														
100-200	1376	19	11	1406		1391	20	3	1414		2767	39	14	2820
115-215	1345	12	11	1368		1296	21	4	1321		2641	33	15	2689
130-230	1314	7	8	1329		1224	24	7	1255		2538	31	15	2584
145-245	1255	3	8	1266		1222	25	5	1252		2477	28	13	2518
200-300	1232	2	4	1238		1185	31	5	1221		2417	33	9	2459

PM COUNT RESULTS

PERIOD	NORTHBOUND					SOUTHBOUND					BOTH DIRECTIONS TOTALS			
15 MIN COUNTS	AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL
400-415	556	0	1	557		438	4	0	442		994	4	1	999
415-430	254	3	0	257		215	1	0	216		469	4	0	473
430-445	336	3	0	339		310	1	0	311		646	4	0	650
445-500	374	0	0	374		313	1	1	315		687	1	1	689
500-515	381	0	0	381		328	3	1	332		709	3	1	713
515-530	452	0	0	452		354	0	0	354		806	0	0	806
530-545	406	0	0	406		315	1	0	316		721	1	0	722
545-600	422	0	0	422		322	1	1	324		744	1	1	746
HOUR TOTALS														
400-500	1520	6	1	1527		1276	7	1	1284		2796	13	2	2811
415-515	1345	6	0	1351		1166	6	2	1174		2511	12	2	2525
430-530	1543	3	0	1546		1305	5	2	1312		2848	8	2	2858
445-545	1613	0	0	1613		1310	5	2	1317		2923	5	2	2930
500-600	1661	0	0	1661		1319	5	2	1326		2980	5	2	2987

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MID-BLOCK AXLE CLASSIFICATION COUNT SUMMARY

CLIENT: WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT: MENLO PARK - EL CAMINO REAL
LOCATION: EL CAMINO REAL AND MIDDLE AVENUE
CITY: MENLO PARK
DATE: WEDNESDAY APRIL 2, 2014
PERIODS: 11:30 PM -1:30 PM AND 4:00 PM - 6:00 PM

MD COUNT RESULTS

PERIOD	NORTHBOUND					SOUTHBOUND					BOTH DIRECTIONS TOTALS			
15 MIN COUNTS	AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL
100-115	355	10	1	366		414	7	3	424		769	17	4	790
115-130	363	11	1	375		395	10	0	405		758	21	1	780
130-145	382	5	1	388		393	3	3	399		775	8	4	787
145-200	306	6	4	316		394	5	0	399		700	11	4	715
200-215	304	4	3	311		322	7	2	331		626	11	5	642
215-230	392	5	1	398		433	6	2	441		825	11	3	839
230-245	406	6	1	413		471	8	1	480		877	14	2	893
245-300	340	4	0	344		348	6	1	355		688	10	1	699
HOUR TOTALS														
100-200	1406	32	7	1445		1596	25	6	1627		3002	57	13	3072
115-215	1355	26	9	1390		1504	25	5	1534		2859	51	14	2924
130-230	1384	20	9	1413		1542	21	7	1570		2926	41	16	2983
145-245	1408	21	9	1438		1620	26	5	1651		3028	47	14	3089
200-300	1442	19	5	1466		1574	27	6	1607		3016	46	11	3073

PM COUNT RESULTS

PERIOD	NORTHBOUND					SOUTHBOUND					BOTH DIRECTIONS TOTALS			
15 MIN COUNTS	AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL		AUTOS AND OTHER	LIGHT DUTY TRUCKS	HEAVY DUTY TRUCKS	ALL VEHICLES TOTAL
400-415	475	2	1	478		415	5	0	420		890	7	1	898
415-430	465	6	0	471		416	3	0	419		881	9	0	890
430-445	464	2	1	467		423	2	0	425		887	4	1	892
445-500	511	2	0	513		413	3	0	416		924	5	0	929
500-515	512	3	0	515		435	2	0	437		947	5	0	952
515-530	522	0	0	522		463	1	0	464		985	1	0	986
530-545	499	1	0	500		397	2	0	399		896	3	0	899
545-600	476	2	1	479		431	0	1	432		907	2	2	911
HOUR TOTALS														
400-500	1915	12	2	1929		1667	13	0	1680		3582	25	2	3609
415-515	1952	13	1	1966		1687	10	0	1697		3639	23	1	3663
430-530	2009	7	1	2017		1734	8	0	1742		3743	15	1	3759
445-545	2044	6	0	2050		1708	8	0	1716		3752	14	0	3766
500-600	2009	6	1	2016		1726	5	1	1732		3735	11	2	3748

El Camino Real Travel Time Data

El Camino Real - Travel Time Studies

Northbound El Camino Real			AM Peak Period				Midday Peak Period				PM Peak Period			
Node #	Length	Cross Street	Travel Time	# of Stops	Avg Speed	Total Delay	Travel Time	# of Stops	Avg Speed	Total Delay	Travel Time	# of Stops	Avg Speed	Total Delay
1	0	Sand Hill Ave.												
2	1268	Cambridge Ave.	32.3	0.3	26.8	10.5	38.1	0.1	22.7	16.1	31.5	0.2	27.4	9.5
3	1190	Middle Ave.	26.5	0.3	30.6	6.3	58.6	0.4	13.9	37.7	31.5	0.3	25.8	11.3
4	928	Roble Ave.	19.6	0.1	32.2	3.9	42.1	0.3	15.0	26.3	73.7	1.8	8.6	57.7
5	251	Live Oak Ave.	5.3	0.0	32.6	1.0	5.4	0.0	31.5	1.0	24.3	0.3	7.0	19.7
6	420	Menlo/Ravenswood Ave.	33.5	0.4	8.5	25.9	25.6	0.3	11.2	18.0	66.3	0.5	4.3	58.7
7	423	Santa Cruz Ave.	18.1	0.1	15.9	10.6	9.9	0.0	29.3	2.6	22.0	0.2	13.1	14.2
8	533	Oak Grove Ave.	16.3	0.1	22.4	7.0	12.7	0.0	28.6	3.6	14.2	0.0	25.7	4.7
9	1084	Valparaiso Ave.	58.1	0.8	12.7	39.8	32.6	0.1	22.7	13.6	43.0	0.3	17.2	24.0
10	1025	Encinal Ave.	16.1	0.0	43.3	2.6	52.0	0.6	13.4	35.9	19.5	0.0	35.8	2.0
Total	7122		225.8	2.0	21.5	107.5	277.0	1.9	17.5	154.7	326.0	3.7	14.9	201.7

Southbound - AM Peak Period			AM Peak Period				Midday Peak Period				PM Peak Period			
Node #	Length	Cross Street	Travel Time	# of Stops	Avg Speed	Total Delay	Travel Time	# of Stops	Avg Speed	Total Delay	Travel Time	# of Stops	Avg Speed	Total Delay
1	0	Encinal Ave.												
2	1173	Valparaiso Ave.	58.0	0.9	13.8	37.7	46.6	0.8	17.2	26.6	50.0	0.5	16.0	29.8
3	1044	Oak Grove Ave.	43.1	0.4	16.5	25.1	35.6	0.1	20.0	17.6	73.2	0.7	9.7	55.2
4	518	Santa Cruz Ave.	44.0	0.6	8.0	35.0	11.3	0.0	31.4	1.8	39.5	0.5	8.9	30.5
5	435	Menlo/Ravenswood Ave.	31.3	0.4	9.5	23.6	8.4	0.0	35.4	0.5	16.3	0.2	18.2	8.3
6	440	Live Oak Ave.	37.6	0.4	8.0	29.7	9.9	0.0	30.4	1.9	10.7	0.0	28.1	2.8
7	224	Roble Ave.	5.1	0.0	29.7	1.1	7.3	0.1	21.1	3.3	4.8	0.0	31.6	0.5
8	961	Middle Ave.	25.9	0.1	25.3	9.0	47.6	0.6	13.8	31.0	27.7	0.2	23.7	11.5
9	1126	Cambridge Ave.	23.0	0.0	33.4	3.4	24.5	0.0	31.3	5.1	39.7	0.5	19.4	20.2
10	1164	Sand Hill Rd	39.7	0.3	20.0	20.1	35.3	0.5	22.5	15.5	38.0	0.5	20.9	18.5
Total	7085		307.7	3.1	15.7	184.9	226.4	2.1	21.3	103.3	299.8	3.0	16.1	177.3

Notes:
Statistics are averaged based on a minimum of six travel floating car surveys per time period and direction of travel.
AM Peak Period: 7:00-9:00 a.m.; Midday Peak Period: 11:30 a.m. - 1:30 p.m.; PM Peak Period: 4:00-6:00 p.m.
Travel time and delay are reported in seconds; Speed is reported in miles per hour (mph)
Data Collected: April 2, 2014

Intersection Turning Volumes

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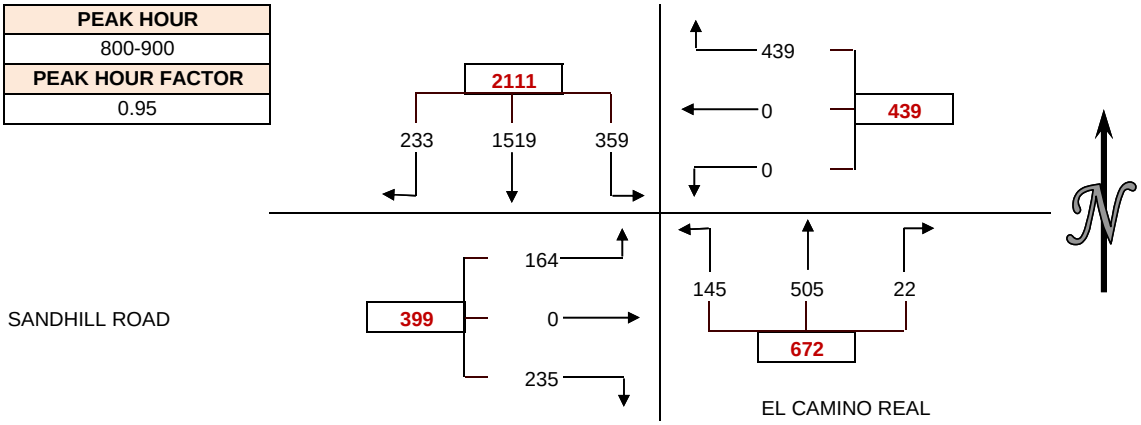
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK - EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	SANDHILL ROAD
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	51	135	53	46	0	0	1	65	32	26	0	39	448
715-730	70	224	71	68	0	0	4	86	37	53	0	41	654
730-745	71	303	99	105	0	0	7	103	44	61	0	54	847
745-800	58	280	98	121	0	0	7	140	30	58	0	41	833
800-815	74	383	88	107	0	0	3	115	36	46	0	41	893
815-830	73	398	98	100	0	0	5	144	34	57	0	39	948
830-845	44	417	105	107	0	0	5	127	36	56	0	36	933
845-900	42	321	68	125	0	0	9	119	39	76	0	48	847
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	250	942	321	340	0	0	19	394	143	198	0	175	2782
715-815	273	1190	356	401	0	0	21	444	147	218	0	177	3227
730-830	276	1364	383	433	0	0	22	502	144	222	0	175	3521
745-845	249	1478	389	435	0	0	20	526	136	217	0	157	3607
800-900	233	1519	359	439	0	0	22	505	145	235	0	164	3621

PEAK HOUR
800-900
PEAK HOUR FACTOR
0.95



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	0	0	2	4
715-730	3	0	1	4	8
730-745	7	0	0	8	15
745-800	13	1	0	13	27
800-815	13	0	0	4	17
815-830	14	0	1	16	31
830-845	18	0	3	17	38
845-900	5	1	1	0	7
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	25	1	1	27	54
715-815	36	1	1	29	67
730-830	47	1	1	41	90
745-845	58	1	4	50	113
800-900	50	1	5	37	93

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	4	0	2	1	7
715-730	7	0	1	3	11
730-745	10	0	2	5	17
745-800	12	0	1	9	22
800-815	8	0	2	13	23
815-830	18	0	5	14	37
830-845	13	1	1	16	31
845-900	14	0	1	1	16
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	33	0	6	18	57
715-815	37	0	6	30	73
730-830	48	0	10	41	99
745-845	51	1	9	52	113
800-900	53	1	9	44	107

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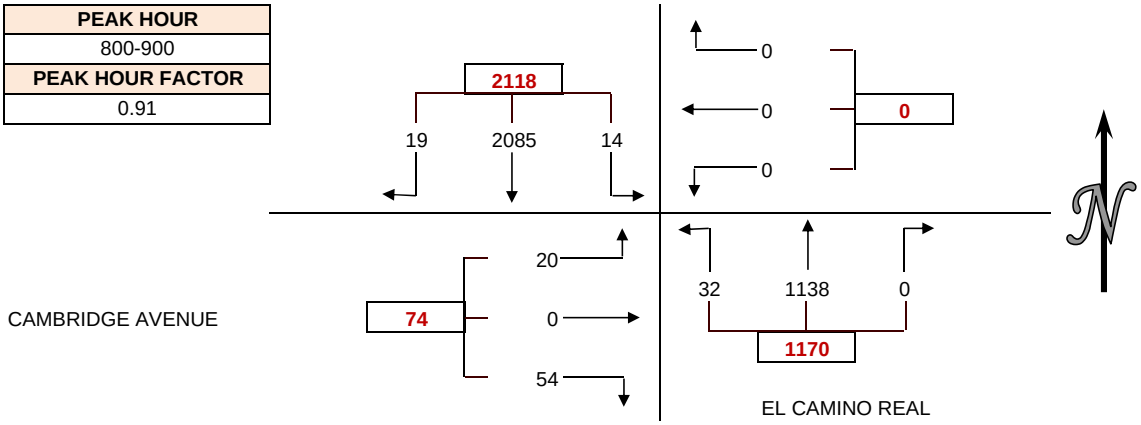
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	CAMBRIDGE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	1	230	3	0	0	0	0	170	3	5	0	2	414
715-730	1	333	2	0	0	0	0	222	11	3	0	3	575
730-745	1	422	4	0	0	0	0	245	9	12	0	3	696
745-800	1	476	6	0	0	0	1	291	4	20	0	2	801
800-815	5	485	3	0	0	0	0	246	9	13	0	4	765
815-830	6	510	5	0	0	0	0	276	6	18	0	7	828
830-845	7	527	2	0	0	0	0	290	8	11	0	3	848
845-900	1	563	4	0	0	0	0	326	9	12	0	6	921
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	4	1461	15	0	0	0	1	928	27	40	0	10	2486
715-815	8	1716	15	0	0	0	1	1004	33	48	0	12	2837
730-830	13	1893	18	0	0	0	1	1058	28	63	0	16	3090
745-845	19	1998	16	0	0	0	1	1103	27	62	0	16	3242
800-900	19	2085	14	0	0	0	0	1138	32	54	0	20	3362

PEAK HOUR
800-900
PEAK HOUR FACTOR
0.91



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	2	2
715-730	1	1	0	0	2
730-745	0	0	0	3	3
745-800	3	3	0	3	9
800-815	0	1	0	0	1
815-830	1	0	0	0	1
830-845	1	0	0	2	3
845-900	0	1	0	2	3
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	4	4	0	8	16
715-815	4	5	0	6	15
730-830	4	4	0	6	14
745-845	5	4	0	5	14
800-900	2	2	0	4	8

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	0	0	0	1	1
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	1	1
815-830	0	0	0	0	0
830-845	0	0	0	1	1
845-900	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	0	0	0	1	1
715-815	0	0	0	2	2
730-830	0	0	0	1	1
745-845	0	0	0	2	2
800-900	0	0	0	2	2

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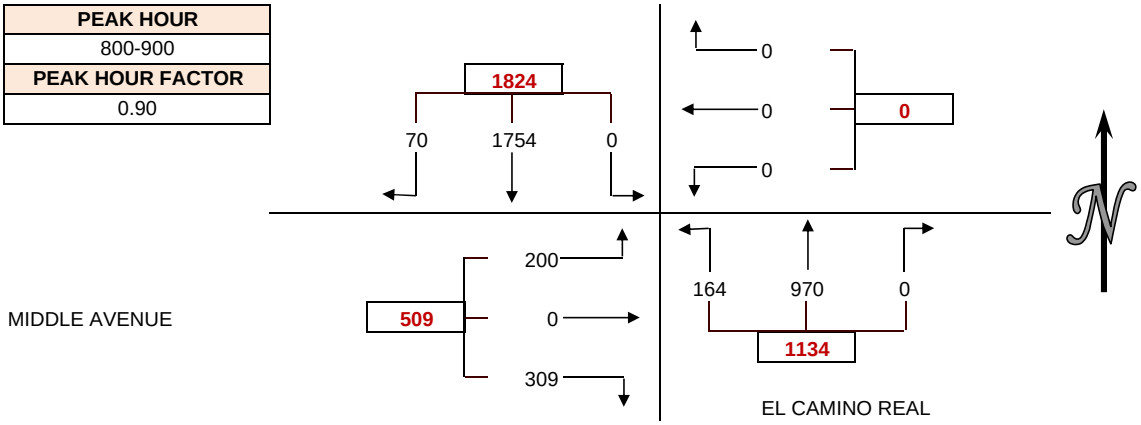
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	MIDDLE AVENUE
CITY:		MENLO PARK- EL CAMINO REAL

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	13	200	0	0	0	0	0	122	25	30	0	17	407
715-730	17	300	0	0	0	0	0	176	34	38	0	17	582
730-745	20	369	0	0	0	0	0	217	47	86	0	40	779
745-800	25	381	0	0	0	0	0	230	51	83	0	50	820
800-815	8	395	0	0	0	0	0	220	40	79	0	45	787
815-830	22	423	0	0	0	0	0	207	39	64	0	58	813
830-845	17	464	0	0	0	0	0	271	36	74	0	40	902
845-900	23	472	0	0	0	0	0	272	49	92	0	57	965
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	75	1250	0	0	0	0	0	745	157	237	0	124	2588
715-815	70	1445	0	0	0	0	0	843	172	286	0	152	2968
730-830	75	1568	0	0	0	0	0	874	177	312	0	193	3199
745-845	72	1663	0	0	0	0	0	928	166	300	0	193	3322
800-900	70	1754	0	0	0	0	0	970	164	309	0	200	3467

PEAK HOUR
800-900
PEAK HOUR FACTOR
0.90



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	1	1
715-730	0	0	0	2	2
730-745	1	0	0	5	6
745-800	1	0	0	3	4
800-815	1	0	0	0	1
815-830	0	0	0	1	1
830-845	0	0	0	5	5
845-900	2	2	0	2	6
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	2	0	0	11	13
715-815	3	0	0	10	13
730-830	3	0	0	9	12
745-845	2	0	0	9	11
800-900	3	2	0	8	13

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	0	0	0	1	1
730-745	0	0	0	3	3
745-800	1	0	0	0	1
800-815	2	0	0	1	3
815-830	0	0	0	2	2
830-845	0	0	0	1	1
845-900	1	0	0	1	2
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	1	0	0	4	5
715-815	3	0	0	5	8
730-830	3	0	0	6	9
745-845	3	0	0	4	7
800-900	3	0	0	5	8

WILTEC

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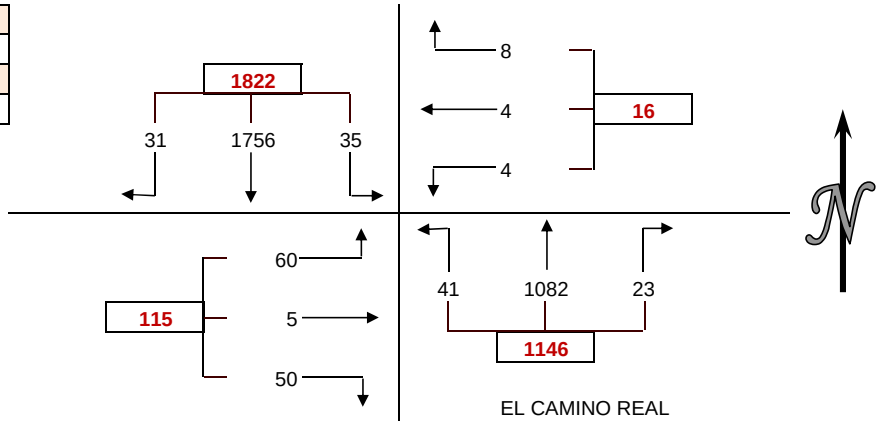
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	ROBLE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	4	215	1	0	0	0	2	132	2	8	1	8	373
715-730	2	293	7	0	0	0	1	164	6	5	0	1	479
730-745	4	352	9	0	0	0	9	235	10	6	0	7	632
745-800	10	417	10	0	1	0	3	260	6	9	3	12	731
800-815	8	407	7	2	0	0	9	249	7	14	1	15	719
815-830	9	431	12	3	0	3	5	272	8	15	2	17	777
830-845	2	459	6	1	2	0	3	254	13	10	0	12	762
845-900	12	459	10	2	2	1	6	307	13	11	2	16	841
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	20	1277	27	0	1	0	15	791	24	28	4	28	2215
715-815	24	1469	33	2	1	0	22	908	29	34	4	35	2561
730-830	31	1607	38	5	1	3	26	1016	31	44	6	51	2859
745-845	29	1714	35	6	3	3	20	1035	34	48	6	56	2989
800-900	31	1756	35	8	4	4	23	1082	41	50	5	60	3099

PEAK HOUR
800-900
PEAK HOUR FACTOR
0.92



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	0	0	0	0	0
715-815	0	0	0	0	0
730-830	0	0	0	0	0
745-845	0	0	0	0	0
800-900	0	0	0	0	0

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	1	0	0	0	1
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	1	3	4
845-900	0	0	2	1	3
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	1	0	0	0	1
715-815	1	0	0	0	1
730-830	1	0	0	0	1
745-845	1	0	1	3	5
800-900	0	0	3	4	7

WILTEC

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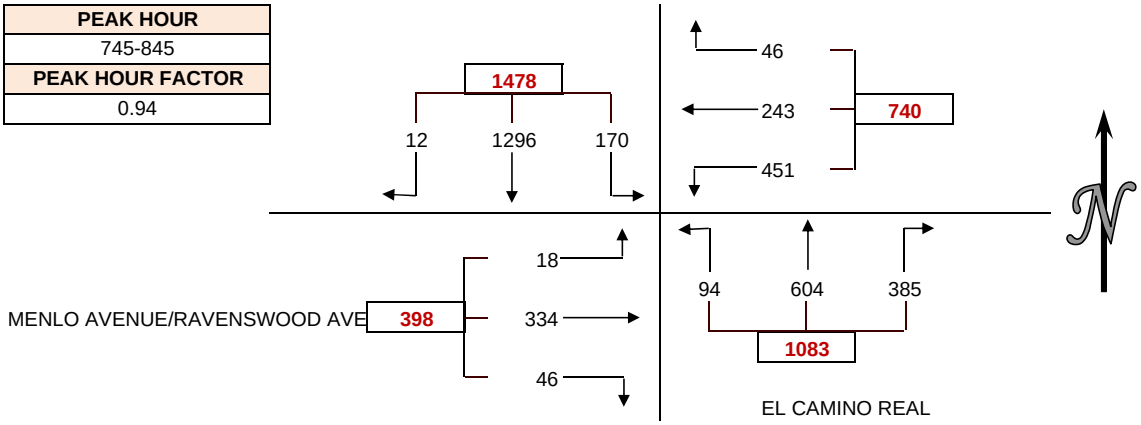
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		THURSDAY APRIL 3, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	MENLO AVENUE/RAVENSWOOD AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	2	151	16	9	27	71	37	75	8	4	18	2	420
715-730	1	226	23	10	46	105	45	112	12	2	38	3	623
730-745	6	278	39	9	45	99	98	173	18	9	56	4	834
745-800	2	330	40	21	87	117	81	145	17	11	83	4	938
800-815	6	324	43	8	60	108	88	150	16	13	86	4	906
815-830	3	313	49	9	49	115	132	173	33	10	93	6	985
830-845	1	329	38	8	47	111	84	136	28	12	72	4	870
845-900	4	333	40	14	54	118	107	159	29	10	62	7	937
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	11	985	118	49	205	392	261	505	55	26	195	13	2815
715-815	15	1158	145	48	238	429	312	580	63	35	263	15	3301
730-830	17	1245	171	47	241	439	399	641	84	43	318	18	3663
745-845	12	1296	170	46	243	451	385	604	94	46	334	18	3699
800-900	14	1299	170	39	210	452	411	618	106	45	313	21	3698

PEAK HOUR
745-845
PEAK HOUR FACTOR
0.94



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	0	0	0	1
715-730	4	2	1	7	14
730-745	3	1	0	6	10
745-800	3	1	0	4	8
800-815	0	0	0	3	3
815-830	2	0	0	6	8
830-845	0	2	0	1	3
845-900	0	2	0	4	6
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	11	4	1	17	33
715-815	10	4	1	20	35
730-830	8	2	0	19	29
745-845	5	3	0	14	22
800-900	2	4	0	14	20

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	1	0	0	2
715-730	0	0	1	0	1
730-745	1	0	5	0	6
745-800	1	2	4	1	8
800-815	0	2	4	2	8
815-830	2	0	0	2	4
830-845	1	0	3	0	4
845-900	3	2	1	3	9
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	3	3	10	1	17
715-815	2	4	14	3	23
730-830	4	4	13	5	26
745-845	4	4	11	5	24
800-900	6	4	8	7	25

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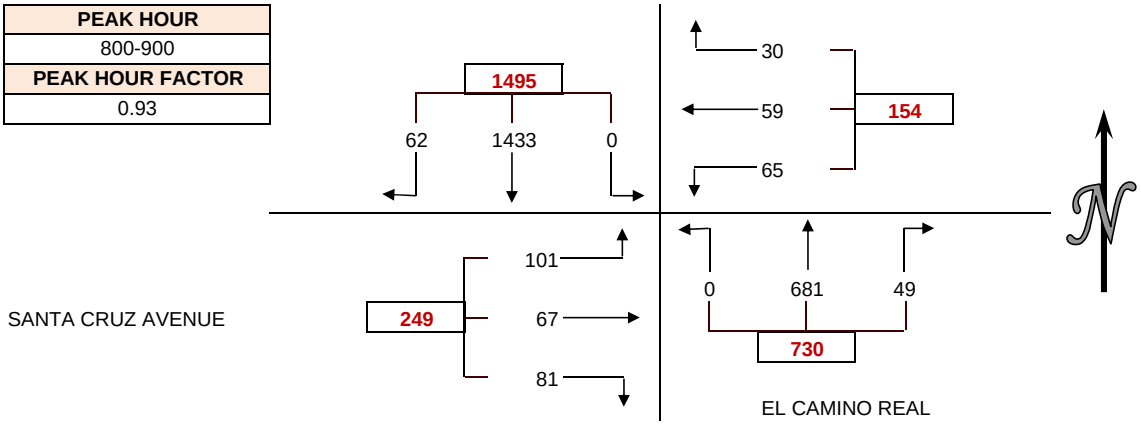
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	SANTA CRUZ AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	10	168	0	6	4	3	4	85	0	12	1	14	307
715-730	19	255	0	13	5	6	14	118	0	18	6	7	461
730-745	26	283	0	2	8	6	6	174	0	12	13	12	542
745-800	23	350	0	7	15	13	11	188	0	20	12	24	663
800-815	18	361	0	6	16	11	10	145	0	15	13	25	620
815-830	15	354	0	8	6	11	13	175	0	16	14	22	634
830-845	18	364	0	7	19	25	10	169	0	25	15	19	671
845-900	11	354	0	9	18	18	16	192	0	25	25	35	703
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	78	1056	0	28	32	28	35	565	0	62	32	57	1973
715-815	86	1249	0	28	44	36	41	625	0	65	44	68	2286
730-830	82	1348	0	23	45	41	40	682	0	63	52	83	2459
745-845	74	1429	0	28	56	60	44	677	0	76	54	90	2588
800-900	62	1433	0	30	59	65	49	681	0	81	67	101	2628

PEAK HOUR
800-900
PEAK HOUR FACTOR
0.93



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	0	0	1	3
715-730	4	4	11	2	21
730-745	8	1	7	0	16
745-800	2	3	8	0	13
800-815	4	5	9	1	19
815-830	8	5	14	1	28
830-845	4	2	16	1	23
845-900	13	2	11	0	26
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	16	8	26	3	53
715-815	18	13	35	3	69
730-830	22	14	38	2	76
745-845	18	15	47	3	83
800-900	29	14	50	3	96

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	0	1	0	2
715-730	3	0	0	0	3
730-745	2	0	1	0	3
745-800	0	0	2	0	2
800-815	5	1	3	0	9
815-830	2	1	2	0	5
830-845	0	0	0	0	0
845-900	1	0	1	0	2
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	6	0	4	0	10
715-815	10	1	6	0	17
730-830	9	2	8	0	19
745-845	7	2	7	0	16
800-900	8	2	6	0	16

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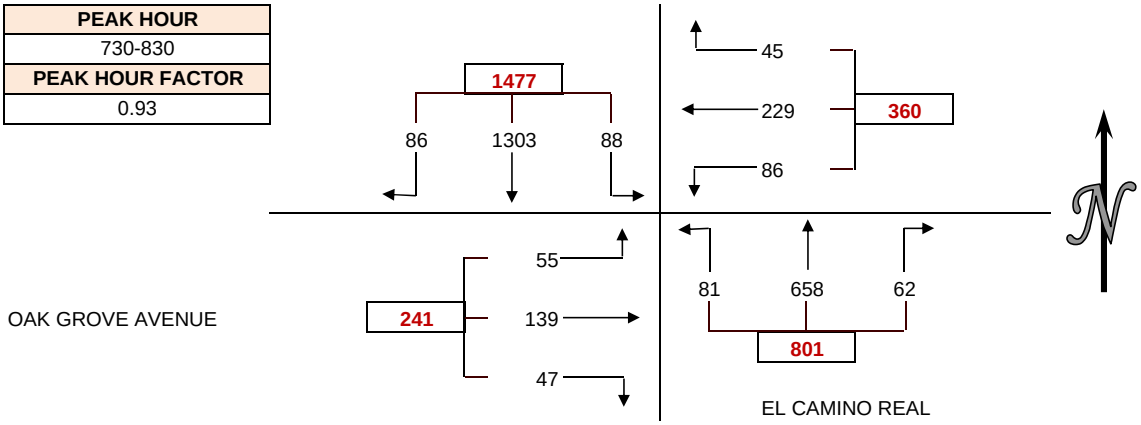
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	OAK GROVE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	7	164	12	7	20	12	7	85	7	1	25	3	350
715-730	16	257	26	8	36	10	6	118	9	12	36	7	541
730-745	25	283	19	9	46	17	10	166	19	6	25	13	638
745-800	18	362	29	9	57	21	20	175	24	15	29	17	776
800-815	22	328	15	19	86	26	19	142	12	8	47	17	741
815-830	21	330	25	8	40	22	13	175	26	18	38	8	724
830-845	19	322	21	9	-58	25	14	165	17	20	29	13	596
845-900	20	339	26	8	53	28	21	194	33	17	32	13	784
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	66	1066	86	33	159	60	43	544	59	34	115	40	2305
715-815	81	1230	89	45	225	74	55	601	64	41	137	54	2696
730-830	86	1303	88	45	229	86	62	658	81	47	139	55	2879
745-845	80	1342	90	45	125	94	66	657	79	61	143	55	2837
800-900	82	1319	87	44	121	101	67	676	88	63	146	51	2845

PEAK HOUR
730-830
PEAK HOUR FACTOR
0.93



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	2	2
715-730	1	2	1	0	4
730-745	1	0	8	0	9
745-800	2	0	8	0	10
800-815	5	1	7	0	13
815-830	2	2	6	0	10
830-845	4	5	8	0	17
845-900	2	2	9	0	13
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	4	2	17	2	25
715-815	9	3	24	0	36
730-830	10	3	29	0	42
745-845	13	8	29	0	50
800-900	13	10	30	0	53

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	0	1	0	2
715-730	1	0	1	0	2
730-745	5	0	1	0	6
745-800	8	0	1	0	9
800-815	3	0	0	0	3
815-830	1	1	1	1	4
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	15	0	4	0	19
715-815	17	0	3	0	20
730-830	17	1	3	1	22
745-845	12	1	2	1	16
800-900	4	1	1	1	7

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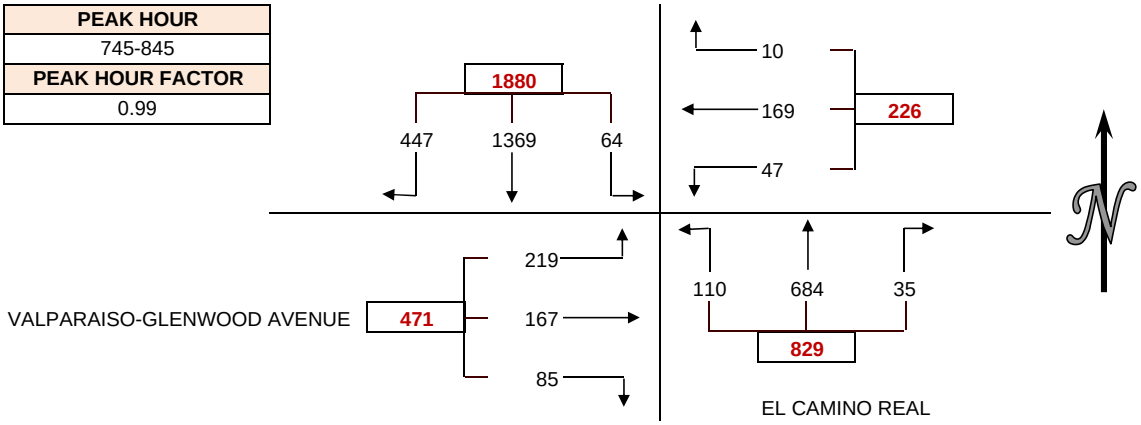
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	VALPARAISO-GLENWOOD AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	44	176	4	2	26	8	0	84	16	8	16	19	403
715-730	63	251	5	3	37	19	2	112	26	8	29	23	578
730-745	108	344	6	1	55	19	4	128	41	0	35	29	770
745-800	104	359	21	2	50	12	5	168	17	37	34	54	863
800-815	116	332	9	2	51	18	5	172	24	20	45	57	851
815-830	111	318	20	1	30	4	7	177	39	18	51	52	828
830-845	116	360	14	5	38	13	18	167	30	10	37	56	864
845-900	140	327	11	2	41	8	4	153	25	23	42	49	825
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	319	1130	36	8	168	58	11	492	100	53	114	125	2614
715-815	391	1286	41	8	193	68	16	580	108	65	143	163	3062
730-830	439	1353	56	6	186	53	21	645	121	75	165	192	3312
745-845	447	1369	64	10	169	47	35	684	110	85	167	219	3406
800-900	483	1337	54	10	160	43	34	669	118	71	175	214	3368

PEAK HOUR
745-845
PEAK HOUR FACTOR
0.99



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	1	0	1
715-730	0	1	1	0	2
730-745	0	0	3	0	3
745-800	1	1	2	2	6
800-815	0	0	3	0	3
815-830	0	0	0	0	0
830-845	0	2	3	0	5
845-900	0	12	2	1	15
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	1	2	7	2	12
715-815	1	2	9	2	14
730-830	1	1	8	2	12
745-845	1	3	8	2	14
800-900	0	14	8	1	23

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	0	1	0	3
715-730	0	2	0	1	3
730-745	2	0	2	6	10
745-800	4	1	1	1	7
800-815	1	0	3	0	4
815-830	0	0	4	1	5
830-845	1	1	2	2	6
845-900	0	0	4	3	7
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	8	3	4	8	23
715-815	7	3	6	8	24
730-830	7	1	10	8	26
745-845	6	2	10	4	22
800-900	2	1	13	6	22

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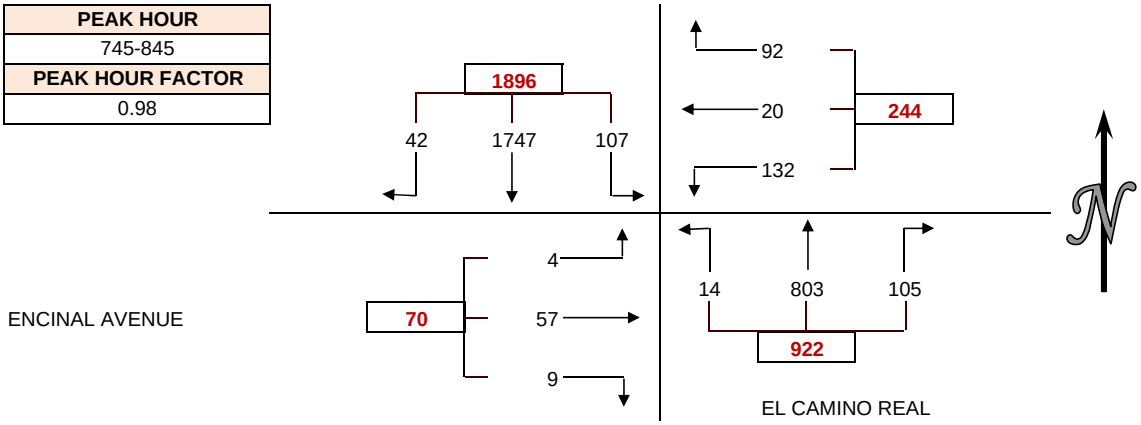
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		7:00 AM TO 9:00 AM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	ENCINAL AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	2	234	13	8	1	7	3	83	2	1	1	0	355
715-730	4	353	19	12	2	15	14	102	5	1	3	0	530
730-745	14	430	32	24	3	21	16	161	6	0	10	1	718
745-800	26	431	32	24	3	22	33	187	2	1	35	1	797
800-815	9	427	19	34	5	48	14	206	4	1	11	1	779
815-830	5	461	33	18	7	37	26	192	5	3	6	2	795
830-845	2	428	23	16	5	25	32	218	3	4	5	0	761
845-900	7	395	24	18	2	19	24	196	3	0	4	0	692
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	46	1448	96	68	9	65	66	533	15	3	49	2	2400
715-815	53	1641	102	94	13	106	77	656	17	3	59	3	2824
730-830	54	1749	116	100	18	128	89	746	17	5	62	5	3089
745-845	42	1747	107	92	20	132	105	803	14	9	57	4	3132
800-900	23	1711	99	86	19	129	96	812	15	8	26	3	3027

PEAK HOUR
745-845
PEAK HOUR FACTOR
0.98



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	1	1	0	4
715-730	0	0	0	0	0
730-745	0	0	1	0	1
745-800	1	2	0	0	3
800-815	2	0	0	0	2
815-830	0	0	0	0	0
830-845	1	0	0	0	1
845-900	0	1	0	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	3	3	2	0	8
715-815	3	2	1	0	6
730-830	3	2	1	0	6
745-845	4	2	0	0	6
800-900	3	1	0	0	4

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	1	0	0	2
715-730	0	3	0	0	3
730-745	0	2	1	1	4
745-800	1	3	1	1	6
800-815	0	3	2	2	7
815-830	1	0	3	1	5
830-845	0	0	4	0	4
845-900	2	0	0	2	4
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	2	9	2	2	15
715-815	1	11	4	4	20
730-830	2	8	7	5	22
745-845	2	6	10	4	22
800-900	3	3	9	5	20

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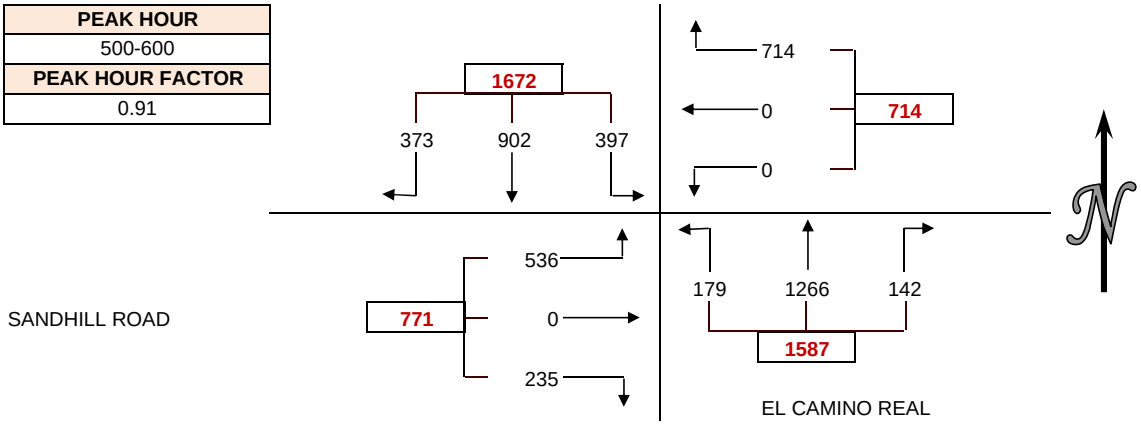
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK - EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	SANDHILL ROAD
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	87	181	70	138	0	0	4	182	34	55	0	141	892
415-430	80	159	87	147	0	0	20	249	47	41	0	129	959
430-445	92	198	82	174	0	0	27	267	47	50	0	108	1045
445-500	87	227	102	164	0	0	31	276	35	37	0	156	1115
500-515	110	288	132	164	0	0	37	285	46	80	0	167	1309
515-530	89	197	71	184	0	0	25	324	45	47	0	139	1121
530-545	85	233	111	193	0	0	43	310	42	49	0	118	1184
545-600	89	184	83	173	0	0	37	347	46	59	0	112	1130
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	346	765	341	623	0	0	82	974	163	183	0	534	4011
415-515	369	872	403	649	0	0	115	1077	175	208	0	560	4428
430-530	378	910	387	686	0	0	120	1152	173	214	0	570	4590
445-545	371	945	416	705	0	0	136	1195	168	213	0	580	4729
500-600	373	902	397	714	0	0	142	1266	179	235	0	536	4744

PEAK HOUR
500-600
PEAK HOUR FACTOR
0.91



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	1	1	1	3	6
415-430	13	0	3	5	21
430-445	3	0	1	4	8
445-500	0	0	0	3	3
500-515	4	0	1	4	9
515-530	4	2	1	2	9
530-545	4	4	0	2	10
545-600	4	1	7	0	12
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	17	1	5	15	38
415-515	20	0	5	16	41
430-530	11	2	3	13	29
445-545	12	6	2	11	31
500-600	16	7	9	8	40

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	8	1	2	2	13
415-430	5	0	3	2	10
430-445	5	3	3	0	11
445-500	4	1	4	1	10
500-515	9	0	8	0	17
515-530	6	1	5	1	13
530-545	8	0	7	0	15
545-600	1	1	8	0	10
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	22	5	12	5	44
415-515	23	4	18	3	48
430-530	24	5	20	2	51
445-545	27	2	24	2	55
500-600	24	2	28	1	55

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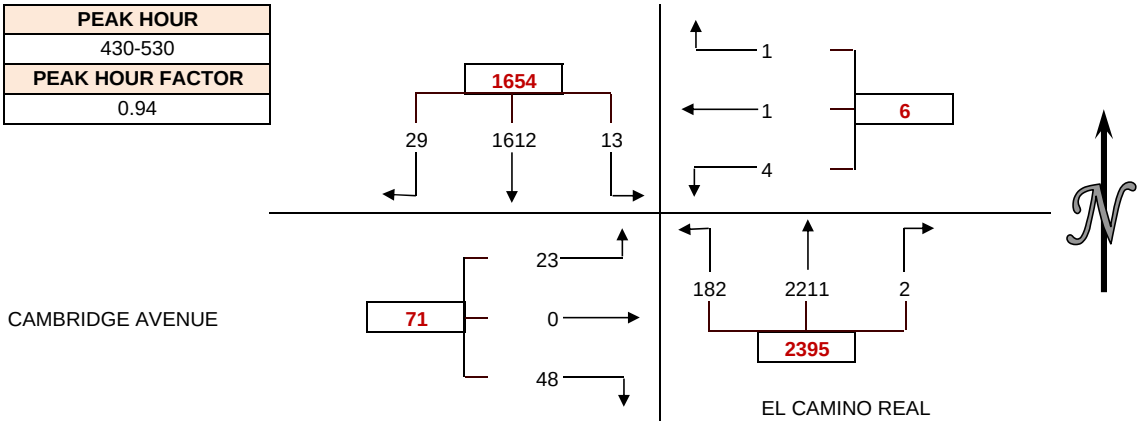
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK - EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	CAMBRIDGE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	5	385	10	1	0	0	0	449	32	8	0	6	896
415-430	7	347	7	1	0	0	0	525	44	11	0	4	946
430-445	6	367	3	1	0	3	0	519	65	9	0	6	979
445-500	13	458	6	0	0	1	2	555	49	9	0	4	1097
500-515	3	399	4	0	0	0	0	549	36	15	0	6	1012
515-530	7	388	0	0	1	0	0	588	32	15	0	7	1038
530-545	4	368	1	0	0	1	1	560	23	11	0	4	973
545-600	0	379	0	0	0	0	0	536	29	8	1	0	953
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	31	1557	26	3	0	4	2	2048	190	37	0	20	3918
415-515	29	1571	20	2	0	4	2	2148	194	44	0	20	4034
430-530	29	1612	13	1	1	4	2	2211	182	48	0	23	4126
445-545	27	1613	11	0	1	2	3	2252	140	50	0	21	4120
500-600	14	1534	5	0	1	1	1	2233	120	49	1	17	3976

PEAK HOUR
430-530
PEAK HOUR FACTOR
0.94



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	1	2	0	4	7
415-430	0	0	0	6	6
430-445	0	0	0	4	4
445-500	0	0	0	2	2
500-515	2	3	0	2	7
515-530	2	2	0	3	7
530-545	2	0	0	0	2
545-600	0	1	0	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	1	2	0	16	19
415-515	2	3	0	14	19
430-530	4	5	0	11	20
445-545	6	5	0	7	18
500-600	6	6	0	5	17

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	1	1	0	2
415-430	0	0	0	0	0
430-445	0	0	0	1	1
445-500	0	0	0	4	4
500-515	0	1	0	0	1
515-530	0	1	0	1	2
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	0	1	1	5	7
415-515	0	1	0	5	6
430-530	0	2	0	6	8
445-545	0	2	0	5	7
500-600	0	2	0	1	3

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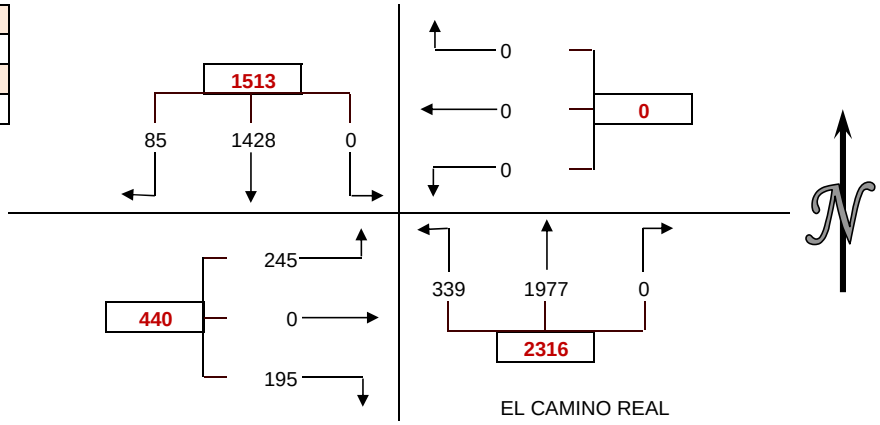
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	MIDDLE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	30	333	0	0	0	0	0	434	71	56	0	61	985
415-430	23	345	0	0	0	0	0	445	71	39	0	41	964
430-445	21	361	0	0	0	0	0	431	70	52	0	45	980
445-500	13	359	0	0	0	0	0	479	79	51	0	70	1051
500-515	18	362	0	0	0	0	0	504	83	63	0	57	1087
515-530	29	357	0	0	0	0	0	490	93	32	0	54	1055
530-545	25	350	0	0	0	0	0	504	84	49	0	64	1076
545-600	30	357	0	0	0	0	0	470	97	49	0	47	1050
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	87	1398	0	0	0	0	0	1789	291	198	0	217	3980
415-515	75	1427	0	0	0	0	0	1859	303	205	0	213	4082
430-530	81	1439	0	0	0	0	0	1904	325	198	0	226	4173
445-545	85	1428	0	0	0	0	0	1977	339	195	0	245	4269
500-600	102	1426	0	0	0	0	0	1968	357	193	0	222	4268

PEAK HOUR
445-545
PEAK HOUR FACTOR
0.98



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	1	0	5	6
415-430	5	0	0	5	10
430-445	1	0	0	7	8
445-500	1	3	0	0	4
500-515	0	2	0	3	5
515-530	1	1	0	0	2
530-545	1	0	0	6	7
545-600	1	0	0	5	6
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	7	4	0	17	28
415-515	7	5	0	15	27
430-530	3	6	0	10	19
445-545	3	6	0	9	18
500-600	3	3	0	14	20

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	2	0	0	0	2
415-430	2	1	0	1	4
430-445	1	0	0	2	3
445-500	2	0	0	4	6
500-515	2	1	0	1	4
515-530	2	0	0	1	3
530-545	0	0	0	0	0
545-600	0	0	0	1	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	7	1	0	7	15
415-515	7	2	0	8	17
430-530	7	1	0	8	16
445-545	6	1	0	6	13
500-600	4	1	0	3	8

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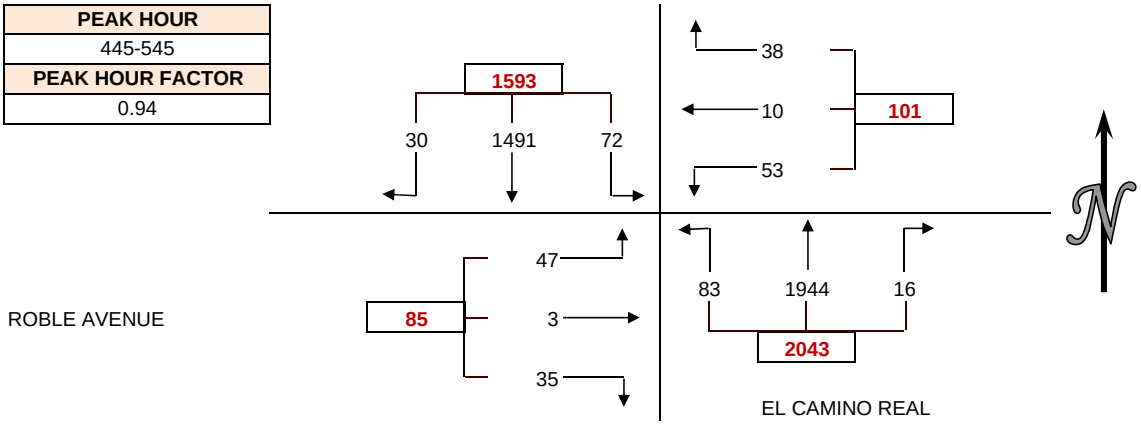
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	ROBLE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	11	367	18	11	2	16	8	399	14	2	1	12	861
415-430	4	345	12	5	6	7	5	449	19	9	2	12	875
430-445	10	320	8	10	6	11	7	509	11	8	0	14	914
445-500	7	368	14	14	4	11	9	512	19	7	1	6	972
500-515	4	372	20	10	1	9	2	525	27	12	1	9	992
515-530	10	361	19	3	2	15	3	484	-78	6	0	21	846
530-545	9	390	19	11	3	18	2	423	115	10	1	11	1012
545-600	10	389	19	12	3	17	6	448	19	10	0	12	945
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	32	1400	52	40	18	45	29	1869	63	26	4	44	3622
415-515	25	1405	54	39	17	38	23	1995	76	36	4	41	3753
430-530	31	1421	61	37	13	46	21	2030	-21	33	2	50	3724
445-545	30	1491	72	38	10	53	16	1944	83	35	3	47	3822
500-600	33	1512	77	36	9	59	13	1880	83	38	2	53	3795

PEAK HOUR
445-545
PEAK HOUR FACTOR
0.94



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	3	14	6	23
415-430	0	1	3	5	9
430-445	0	3	3	1	7
445-500	0	1	3	1	5
500-515	0	0	6	2	8
515-530	0	6	6	7	19
530-545	0	0	3	2	5
545-600	0	0	3	1	4
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	0	8	23	13	44
415-515	0	5	15	9	29
430-530	0	10	18	11	39
445-545	0	7	18	12	37
500-600	0	6	18	12	36

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	0	1	0	1
415-430	0	0	4	0	4
430-445	0	0	3	1	4
445-500	0	0	1	0	1
500-515	0	0	1	0	1
515-530	1	0	4	0	5
530-545	0	0	2	2	4
545-600	1	0	0	3	4
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	0	0	9	1	10
415-515	0	0	9	1	10
430-530	1	0	9	1	11
445-545	1	0	8	2	11
500-600	2	0	7	5	14

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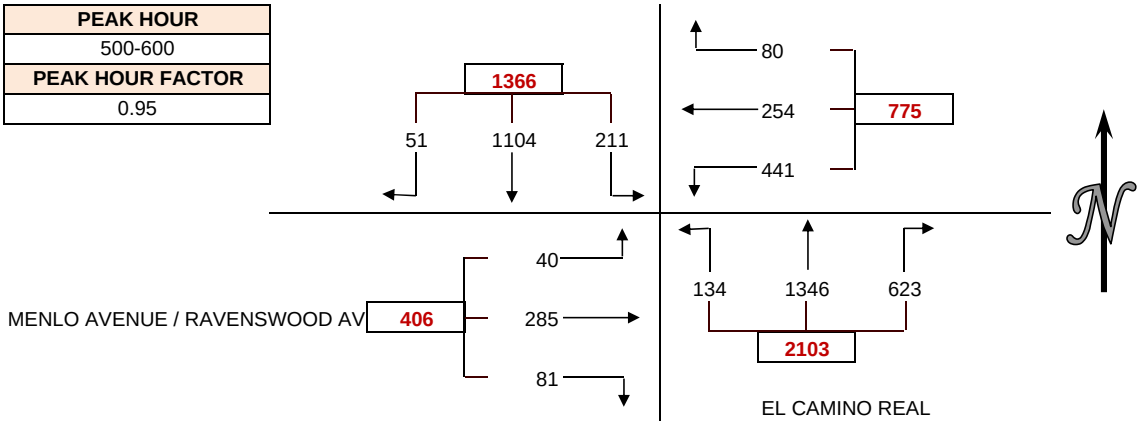
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		THURSDAY APRIL 3, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	MENLO AVENUE / RAVENSWOOD AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	9	251	49	15	55	102	150	301	39	23	72	13	1079
415-430	4	272	62	22	49	93	152	329	44	25	59	7	1118
430-445	7	258	38	23	76	114	134	322	29	15	64	10	1090
445-500	8	246	43	10	56	102	157	301	44	25	88	16	1096
500-515	10	256	65	23	66	101	173	385	39	26	78	8	1230
515-530	16	291	57	28	48	97	147	317	33	19	73	10	1136
530-545	13	282	52	20	80	122	152	322	31	18	67	11	1170
545-600	12	275	37	9	60	121	151	322	31	18	67	11	1114
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	28	1027	192	70	236	411	593	1253	156	88	283	46	4383
415-515	29	1032	208	78	247	410	616	1337	156	91	289	41	4534
430-530	41	1051	203	84	246	414	611	1325	145	85	303	44	4552
445-545	47	1075	217	81	250	422	629	1325	147	88	306	45	4632
500-600	51	1104	211	80	254	441	623	1346	134	81	285	40	4650

PEAK HOUR
500-600
PEAK HOUR FACTOR
0.95



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	2	3	0	9	14
415-430	7	3	0	2	12
430-445	1	0	0	2	3
445-500	2	5	0	6	13
500-515	5	5	0	3	13
515-530	0	10	0	2	12
530-545	1	2	1	4	8
545-600	0	1	0	4	5
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	12	11	0	19	42
415-515	15	13	0	13	41
430-530	8	20	0	13	41
445-545	8	22	1	15	46
500-600	6	18	1	13	38

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	1	0	1	2	4
415-430	0	3	0	0	3
430-445	1	0	1	0	2
445-500	3	4	0	2	9
500-515	1	0	1	3	5
515-530	1	0	3	0	4
530-545	5	1	1	0	7
545-600	3	3	2	0	8
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	5	7	2	4	18
415-515	5	7	2	5	19
430-530	6	4	5	5	20
445-545	10	5	5	5	25
500-600	10	4	7	3	24

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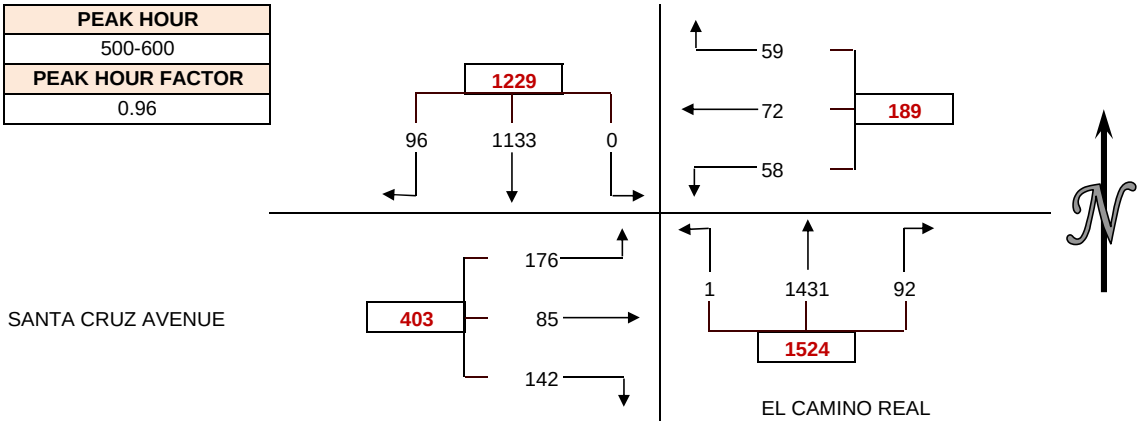
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK - EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	SANTA CRUZ AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	26	265	0	12	14	14	11	355	0	44	22	28	791
415-430	22	252	0	13	13	15	22	324	0	30	9	38	738
430-445	31	286	0	13	16	14	27	335	0	43	16	35	816
445-500	24	278	0	16	11	16	12	318	0	35	25	47	782
500-515	20	269	0	10	13	17	20	339	0	46	21	42	797
515-530	26	291	0	13	19	14	18	364	1	26	25	49	846
530-545	24	274	0	16	14	13	33	356	0	37	18	46	831
545-600	26	299	0	20	26	14	21	372	0	33	21	39	871
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	103	1081	0	54	54	59	72	1332	0	152	72	148	3127
415-515	97	1085	0	52	53	62	81	1316	0	154	71	162	3133
430-530	101	1124	0	52	59	61	77	1356	1	150	87	173	3241
445-545	94	1112	0	55	57	60	83	1377	1	144	89	184	3256
500-600	96	1133	0	59	72	58	92	1431	1	142	85	176	3345

PEAK HOUR
500-600
PEAK HOUR FACTOR
0.96



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	8	2	25	2	37
415-430	8	1	21	2	32
430-445	7	3	16	2	28
445-500	18	5	17	1	41
500-515	10	4	16	3	33
515-530	6	3	26	6	41
530-545	7	1	21	0	29
545-600	3	4	24	0	31
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	41	11	79	7	138
415-515	43	13	70	8	134
430-530	41	15	75	12	143
445-545	41	13	80	10	144
500-600	26	12	87	9	134

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	2	0	1	0	3
415-430	1	1	1	0	3
430-445	2	0	1	0	3
445-500	1	0	3	0	4
500-515	0	0	3	0	3
515-530	1	0	0	0	1
530-545	1	0	1	0	2
545-600	1	0	0	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	6	1	6	0	13
415-515	4	1	8	0	13
430-530	4	0	7	0	11
445-545	3	0	7	0	10
500-600	3	0	4	0	7

WILTEC

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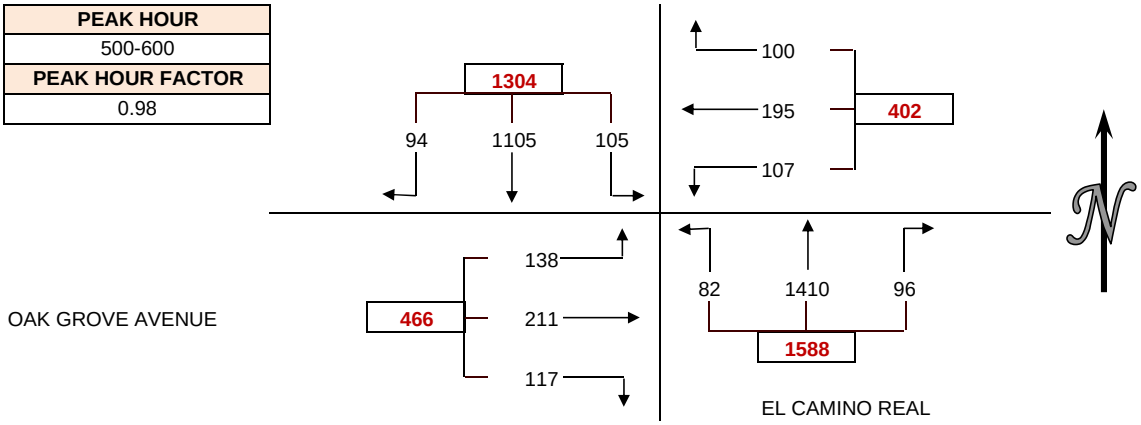
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	OAK GROVE AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	33	240	23	13	59	19	25	320	37	35	46	25	875
415-430	17	248	20	20	51	28	25	306	27	19	32	27	820
430-445	27	194	17	19	58	27	32	313	26	21	48	32	814
445-500	25	288	19	13	45	29	22	337	22	28	39	25	892
500-515	32	249	28	31	54	23	25	344	22	40	60	44	952
515-530	21	271	30	23	45	25	23	322	25	29	54	40	908
530-545	23	281	28	32	51	26	24	367	16	31	45	32	956
545-600	18	304	19	14	45	33	24	377	19	17	52	22	944
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	102	970	79	65	213	103	104	1276	112	103	165	109	3401
415-515	101	979	84	83	208	107	104	1300	97	108	179	128	3478
430-530	105	1002	94	86	202	104	102	1316	95	118	201	141	3566
445-545	101	1089	105	99	195	103	94	1370	85	128	198	141	3708
500-600	94	1105	105	100	195	107	96	1410	82	117	211	138	3760

PEAK HOUR
500-600
PEAK HOUR FACTOR
0.98



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	10	7	11	0	28
415-430	3	4	14	2	23
430-445	5	4	9	0	18
445-500	6	3	10	0	19
500-515	3	5	5	3	16
515-530	0	0	4	4	8
530-545	9	1	6	0	16
545-600	10	4	4	3	21
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	24	18	44	2	88
415-515	17	16	38	5	76
430-530	14	12	28	7	61
445-545	18	9	25	7	59
500-600	22	10	19	10	61

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	1	2	0	3
415-430	0	0	2	0	2
430-445	0	0	0	0	0
445-500	1	1	0	0	2
500-515	1	0	0	0	1
515-530	0	0	1	1	2
530-545	0	0	1	0	1
545-600	0	0	1	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	1	2	4	0	7
415-515	2	1	2	0	5
430-530	2	1	1	1	5
445-545	2	1	2	1	6
500-600	1	0	3	1	5

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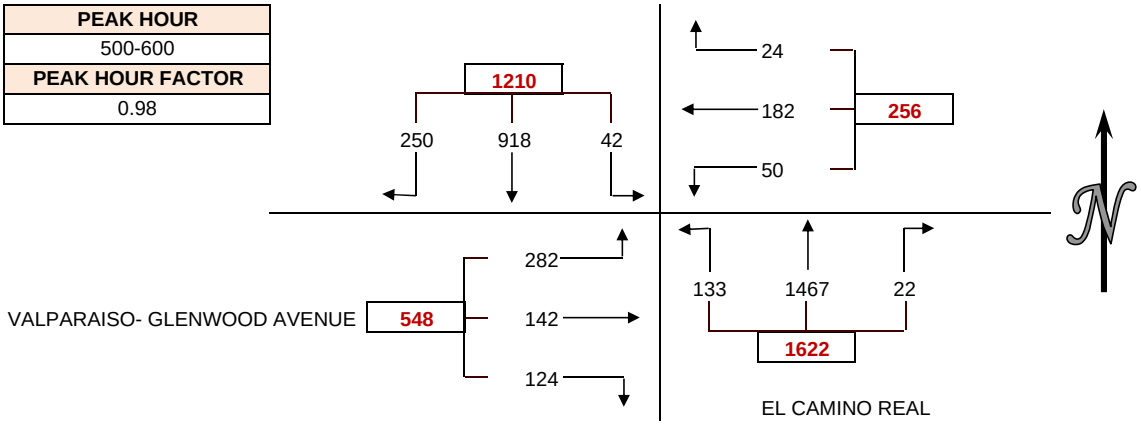
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	VALPARAISO- GLENWOOD AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	66	222	9	9	47	12	9	267	36	27	48	71	823
415-430	55	220	7	8	31	9	8	361	50	28	32	52	861
430-445	72	280	10	5	32	12	5	303	42	53	37	64	915
445-500	71	231	11	1	36	18	8	350	46	24	28	93	917
500-515	57	202	7	4	44	16	2	343	26	17	44	97	859
515-530	63	235	15	6	55	15	6	380	30	29	26	65	925
530-545	59	232	6	11	39	9	5	412	44	25	25	64	931
545-600	71	249	14	3	44	10	9	332	33	53	47	56	921
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	264	953	37	23	146	51	30	1281	174	132	145	280	3516
415-515	255	933	35	18	143	55	23	1357	164	122	141	306	3552
430-530	263	948	43	16	167	61	21	1376	144	123	135	319	3616
445-545	250	900	39	22	174	58	21	1485	146	95	123	319	3632
500-600	250	918	42	24	182	50	22	1467	133	124	142	282	3636

PEAK HOUR
500-600
PEAK HOUR FACTOR
0.98



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	1	3	1	0	5
415-430	0	1	0	0	1
430-445	0	0	0	0	0
445-500	0	1	3	0	4
500-515	0	1	1	0	2
515-530	0	0	0	0	0
530-545	0	1	1	1	3
545-600	0	3	3	0	6
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	1	5	4	0	10
415-515	0	3	4	0	7
430-530	0	2	4	0	6
445-545	0	3	5	1	9
500-600	0	5	5	1	11

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	2	1	1	4
415-430	2	0	2	0	4
430-445	2	0	2	1	5
445-500	1	1	2	0	4
500-515	1	2	0	1	4
515-530	1	0	0	0	1
530-545	1	2	1	0	4
545-600	1	4	0	2	7
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	5	3	7	2	17
415-515	6	3	6	2	17
430-530	5	3	4	2	14
445-545	4	5	3	1	13
500-600	4	8	1	3	16

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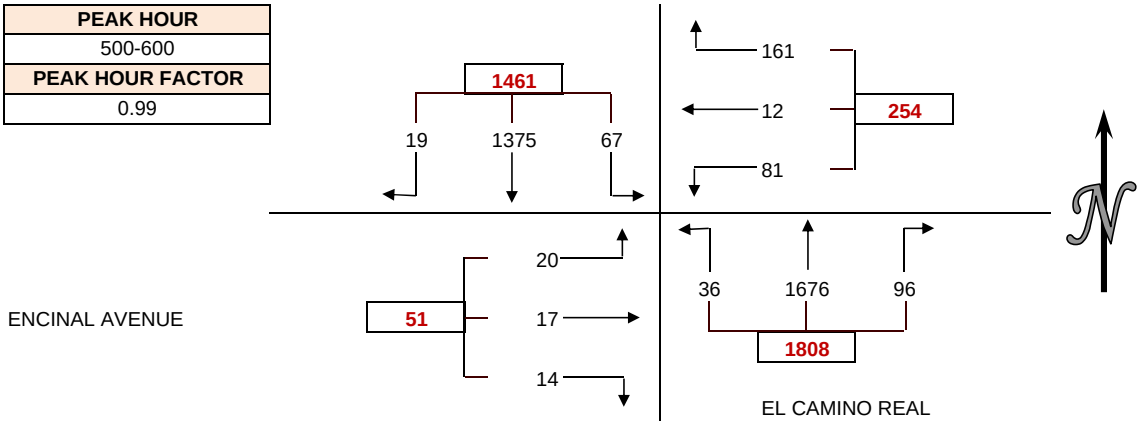
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		WHITLOCK & WEINBERGER TRANSPORTATION, INC. (W-TRANS)
PROJECT:		MENLO PARK- EL CAMINO REAL
DATE:		WEDNESDAY APRIL 2, 2014
PERIOD:		4:00 PM TO 6:00 PM
INTERSECTION:	N/S	EL CAMINO REAL
	E/W	ENCINAL AVENUE
CITY:		MENLO PARK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-415	5	327	17	39	2	31	27	354	7	1	1	3	814
415-430	5	347	17	34	1	27	22	332	7	3	3	3	801
430-445	3	361	11	37	0	22	25	391	10	2	6	4	872
445-500	7	370	15	42	2	28	17	380	5	0	7	4	877
500-515	5	337	17	47	2	18	25	420	5	4	5	8	893
515-530	6	338	16	47	6	19	18	432	12	1	4	5	904
530-545	2	326	15	38	2	26	31	430	12	5	5	5	897
545-600	6	374	19	29	2	18	22	394	7	4	3	2	880
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
400-500	20	1405	60	152	5	108	91	1457	29	6	17	14	3364
415-515	20	1415	60	160	5	95	89	1523	27	9	21	19	3443
430-530	21	1406	59	173	10	87	85	1623	32	7	22	21	3546
445-545	20	1371	63	174	12	91	91	1662	34	10	21	22	3571
500-600	19	1375	67	161	12	81	96	1676	36	14	17	20	3574

PEAK HOUR
500-600
PEAK HOUR FACTOR
0.99



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	2	0	0	0	2
415-430	1	0	0	0	1
430-445	0	0	0	0	0
445-500	2	0	0	0	2
500-515	2	0	0	0	2
515-530	2	0	0	0	2
530-545	1	1	0	0	2
545-600	0	0	0	0	0
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	5	0	0	0	5
415-515	5	0	0	0	5
430-530	6	0	0	0	6
445-545	7	1	0	0	8
500-600	5	1	0	0	6

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-415	0	0	0	0	0
415-430	0	1	0	1	2
430-445	0	0	1	0	1
445-500	0	2	0	0	2
500-515	0	1	0	0	1
515-530	0	1	0	0	1
530-545	0	1	1	0	2
545-600	0	4	1	0	5
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
400-500	0	3	1	1	5
415-515	0	4	1	1	6
430-530	0	4	1	0	5
445-545	0	5	1	0	6
500-600	0	7	2	0	9

Intersection Level of Service Calculations

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	0	235	0	0	439	145	505	22	359	1519	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			4.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1576			1561	1770	5085	1549	1770	5085	1550
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1576			1561	1770	5085	1549	1770	5085	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	0	247	0	0	462	153	532	23	378	1599	245
RTOR Reduction (vph)	0	0	174	0	0	282	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	73	0	0	180	153	532	23	378	1599	245
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						1			8
Turn Type	Prot		pm+ov			Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			8			2			6
Actuated Green, G (s)	11.4		35.4			24.8	24.0	25.5	25.5	39.8	41.3	52.7
Effective Green, g (s)	11.4		35.4			24.8	24.0	25.5	25.5	39.8	41.3	52.7
Actuated g/C Ratio	0.10		0.29			0.21	0.20	0.21	0.21	0.33	0.34	0.44
Clearance Time (s)	5.0		5.0			4.0	5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0			0.2	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	326		464			322	354	1080	329	587	1750	680
v/s Ratio Prot	c0.05		0.03				0.09	0.10		c0.21	c0.31	0.03
v/s Ratio Perm			0.01			c0.12			0.01			0.12
v/c Ratio	0.53		0.16			0.56	0.43	0.49	0.07	0.64	0.91	0.36
Uniform Delay, d1	51.8		31.3			42.7	42.0	41.6	37.8	34.1	37.6	22.4
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.88	0.55	0.70
Incremental Delay, d2	1.7		0.2			1.3	0.8	1.6	0.4	2.0	7.6	0.3
Delay (s)	53.4		31.4			44.0	42.9	43.2	38.2	32.1	28.4	16.1
Level of Service	D		C			D	D	D	D	C	C	B
Approach Delay (s)		40.5			44.0			42.9			27.7	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	54	0	0	0	32	1138	0	14	2085	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00				1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98				1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00				1.00	1.00		1.00	1.00	
Frt		1.00	0.85				1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765	1558				1770	5085		1770	5077	
Flt Permitted		0.76	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1407	1558				1770	5085		1770	5077	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	0	59	0	0	0	35	1251	0	15	2291	21
RTOR Reduction (vph)	0	0	53	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	22	6	0	0	0	35	1251	0	15	2312	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						3			6
Turn Type	Perm	NA	Perm				Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6				4.7	92.8		2.6	90.7	
Effective Green, g (s)		12.6	12.6				4.7	92.8		2.6	90.7	
Actuated g/C Ratio		0.10	0.10				0.04	0.77		0.02	0.76	
Clearance Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		147	163				69	3932		38	3837	
v/s Ratio Prot							c0.02	0.25		0.01	c0.46	
v/s Ratio Perm		c0.02	0.00									
v/c Ratio		0.15	0.04				0.51	0.32		0.39	0.60	
Uniform Delay, d1		48.8	48.3				56.5	4.1		57.9	6.6	
Progression Factor		1.00	1.00				0.97	1.25		1.11	0.20	
Incremental Delay, d2		0.5	0.1				5.2	0.2		5.4	0.6	
Delay (s)		49.3	48.4				59.8	5.3		69.4	1.9	
Level of Service		D	D				E	A		E	A	
Approach Delay (s)		48.6			0.0			6.8			2.3	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	200	309	164	970	1754	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	5046	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	5046	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	222	343	182	1078	1949	78
RTOR Reduction (vph)	0	237	0	0	3	0
Lane Group Flow (vph)	222	106	182	1078	2024	0
Confl. Peds. (#/hr)	3					8
Confl. Bikes (#/hr)						8
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	20.6	20.6	17.0	92.4	72.4	
Effective Green, g (s)	20.6	20.6	17.0	92.4	72.4	
Actuated g/C Ratio	0.17	0.17	0.14	0.77	0.60	
Clearance Time (s)	3.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	303	271	250	3915	3044	
v/s Ratio Prot	c0.13		c0.10	0.21	c0.40	
v/s Ratio Perm		0.07				
v/c Ratio	0.73	0.39	0.73	0.28	0.66	
Uniform Delay, d1	47.1	44.1	49.3	4.0	15.8	
Progression Factor	1.00	1.00	1.16	0.62	0.38	
Incremental Delay, d2	8.8	0.9	9.9	0.2	0.8	
Delay (s)	55.9	45.1	67.2	2.7	6.8	
Level of Service	E	D	E	A	A	
Approach Delay (s)	49.3			12.0	6.8	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	5	50	4	4	8	41	1082	23	35	1756	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1817	1545	1770	5067		1770	3530	
Flt Permitted		0.83			0.91	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1458			1702	1545	1770	5067		1770	3530	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	5	54	4	4	9	45	1176	25	38	1909	34
RTOR Reduction (vph)	0	28	0	0	0	8	0	1	0	0	1	0
Lane Group Flow (vph)	0	96	0	0	8	1	45	1200	0	38	1942	0
Confl. Bikes (#/hr)						6			6			
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		13.2			13.2	13.2	7.8	88.7		5.6	86.5	
Effective Green, g (s)		13.2			13.2	13.2	7.8	88.7		5.6	86.5	
Actuated g/C Ratio		0.11			0.11	0.11	0.06	0.74		0.05	0.72	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		160			187	169	115	3745		82	2544	
v/s Ratio Prot							c0.03	0.24		0.02	c0.55	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.60			0.04	0.01	0.39	0.32		0.46	0.76	
Uniform Delay, d1		50.9			47.8	47.6	53.8	5.3		55.7	10.4	
Progression Factor		1.00			1.00	1.00	0.81	1.58		0.99	0.46	
Incremental Delay, d2		5.9			0.1	0.0	2.1	0.2		2.5	1.4	
Delay (s)		56.7			47.8	47.6	45.8	8.7		57.5	6.2	
Level of Service		E			D	D	D	A		E	A	
Approach Delay (s)		56.7			47.7			10.0			7.1	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	334	46	451	243	46	94	604	385	170	1296	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.93
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3455		3433	1863	1541	1534	3539	1554	1770	3539	1475
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3455		3433	1863	1541	1534	3539	1554	1770	3539	1475
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	355	49	480	259	49	100	643	410	181	1379	13
RTOR Reduction (vph)	0	9	0	0	0	39	0	0	255	0	0	8
Lane Group Flow (vph)	0	414	0	480	259	10	100	643	155	181	1379	5
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			5			6
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		16.0		24.3	24.3	24.3	11.5	45.3	45.3	16.9	50.7	50.7
Effective Green, g (s)		16.0		24.3	24.3	24.3	11.5	45.3	45.3	16.9	50.7	50.7
Actuated g/C Ratio		0.13		0.20	0.20	0.20	0.10	0.38	0.38	0.14	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		460		695	377	312	147	1335	586	249	1495	623
v/s Ratio Prot		c0.12		c0.14	0.14		0.07	0.18		c0.10	c0.39	
v/s Ratio Perm						0.01			0.10			0.00
v/c Ratio		0.90		0.69	0.69	0.03	0.68	0.48	0.26	0.73	0.92	0.01
Uniform Delay, d1		51.2		44.4	44.3	38.4	52.5	28.4	25.8	49.3	32.8	20.1
Progression Factor		1.00		1.00	1.00	1.00	1.28	0.78	2.71	1.51	0.19	1.00
Incremental Delay, d2		20.5		3.0	5.1	0.0	11.8	1.2	1.1	4.9	5.8	0.0
Delay (s)		71.7		47.3	49.5	38.4	78.9	23.4	71.2	79.4	11.9	20.1
Level of Service		E		D	D	D	E	C	E	E	B	C
Approach Delay (s)		71.7			47.5			45.2			19.7	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	67	81	65	59	30	0	681	49	0	1433	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.92	1.00	0.97			1.00	0.94		1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1455	1770	1716			3539	1485		3539	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1455	1770	1716			3539	1485		3539	1537
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	109	72	87	70	63	32	0	732	53	0	1541	67
RTOR Reduction (vph)	0	0	71	0	15	0	0	0	28	0	0	24
Lane Group Flow (vph)	109	72	16	70	80	0	0	732	25	0	1541	43
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			4			1
Turn Type	Split	NA	Perm	Split	NA			NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	21.7	21.7	21.7	30.0	30.0			55.8	55.8		55.8	55.8
Effective Green, g (s)	21.7	21.7	21.7	30.0	30.0			55.8	55.8		55.8	55.8
Actuated g/C Ratio	0.18	0.18	0.18	0.25	0.25			0.46	0.46		0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	320	336	263	442	429			1645	690		1645	714
v/s Ratio Prot	c0.06	0.04		0.04	c0.05			0.21			c0.44	
v/s Ratio Perm			0.01						0.02			0.03
v/c Ratio	0.34	0.21	0.06	0.16	0.19			0.44	0.04		0.94	0.06
Uniform Delay, d1	42.9	41.9	40.7	35.1	35.4			21.7	17.5		30.4	17.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.56	0.81		0.46	0.72
Incremental Delay, d2	0.6	0.3	0.1	0.2	0.2			0.8	0.1		9.0	0.1
Delay (s)	43.5	42.2	40.8	35.3	35.6			12.9	14.2		23.0	12.8
Level of Service	D	D	D	D	D			B	B		C	B
Approach Delay (s)		42.3			35.5			13.0			22.6	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	139	47	86	229	45	81	658	62	88	1303	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1492	1770	1863	1522	1770	3539	1532	1770	3539	1546
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1492	1770	1863	1522	1770	3539	1532	1770	3539	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	59	149	51	92	246	48	87	708	67	95	1401	92
RTOR Reduction (vph)	0	0	42	0	0	38	0	0	30	0	0	29
Lane Group Flow (vph)	59	149	9	92	246	10	87	708	37	95	1401	63
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	21.4	21.4	9.4	23.8	23.8	9.6	63.7	63.7	11.0	65.1	65.1
Effective Green, g (s)	7.0	21.4	21.4	9.4	23.8	23.8	9.6	63.7	63.7	11.0	65.1	65.1
Actuated g/C Ratio	0.06	0.18	0.18	0.08	0.20	0.20	0.08	0.53	0.53	0.09	0.54	0.54
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	103	332	266	138	369	301	141	1878	813	162	1919	838
v/s Ratio Prot	0.03	0.08		c0.05	c0.13		0.05	0.20		c0.05	c0.40	
v/s Ratio Perm			0.01			0.01			0.02			0.04
v/c Ratio	0.57	0.45	0.03	0.67	0.67	0.03	0.62	0.38	0.05	0.59	0.73	0.07
Uniform Delay, d1	55.0	44.0	40.8	53.8	44.4	38.8	53.4	16.5	13.5	52.3	20.8	13.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.22	0.46	0.16	1.57	0.32	0.02
Incremental Delay, d2	7.5	1.0	0.1	11.5	4.5	0.0	7.3	0.5	0.1	2.8	1.3	0.1
Delay (s)	62.5	45.0	40.8	65.3	48.9	38.8	72.6	8.1	2.2	85.0	8.0	0.3
Level of Service	E	D	D	E	D	D	E	A	A	F	A	A
Approach Delay (s)		48.2			51.6			14.1			12.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	167	85	47	169	10	110	684	35	64	1369	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1756	1550	1770	1845		1770	3539	1529	1770	3539	1525
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1756	1550	1770	1845		1770	3539	1529	1770	3539	1525
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	221	169	86	47	171	10	111	691	35	65	1383	452
RTOR Reduction (vph)	0	0	71	0	2	0	0	0	18	0	0	173
Lane Group Flow (vph)	190	200	15	47	179	0	111	691	17	65	1383	279
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			4			12
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	20.4	20.4	20.4	18.6	18.6		16.3	57.2	57.2	8.3	49.2	49.2
Effective Green, g (s)	20.4	20.4	20.4	18.6	18.6		16.3	57.2	57.2	8.3	49.2	49.2
Actuated g/C Ratio	0.17	0.17	0.17	0.16	0.16		0.14	0.48	0.48	0.07	0.41	0.41
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	298	263	274	285		240	1686	728	122	1450	625
v/s Ratio Prot	0.11	c0.11		0.03	c0.10		c0.06	0.20		0.04	c0.39	
v/s Ratio Perm			0.01						0.01			0.18
v/c Ratio	0.67	0.67	0.06	0.17	0.63		0.46	0.41	0.02	0.53	0.95	0.45
Uniform Delay, d1	46.6	46.7	41.7	44.0	47.5		47.8	20.4	16.6	54.0	34.3	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.64	1.51	1.00	1.26	0.85	0.57
Incremental Delay, d2	5.8	5.8	0.1	0.3	4.3		1.3	0.7	0.1	3.9	13.8	2.1
Delay (s)	52.4	52.5	41.8	44.3	51.8		31.9	31.6	16.7	72.2	42.8	16.7
Level of Service	D	D	D	D	D		C	C	B	E	D	B
Approach Delay (s)		50.5			50.2			31.0			37.6	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	57	9	132	20	92	14	803	105	107	1747	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1856	1556		1785	1549	1770	3539	1534	1770	5064	
Flt Permitted		0.99	1.00		0.69	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1836	1556		1285	1549	1770	3539	1534	1770	5064	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4	58	9	135	20	94	14	819	107	109	1783	43
RTOR Reduction (vph)	0	0	7	0	0	78	0	0	35	0	1	0
Lane Group Flow (vph)	0	62	2	0	155	16	14	819	72	109	1825	0
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			7			11
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		20.1	20.1		20.1	20.1	3.0	77.2	77.2	12.7	86.9	
Effective Green, g (s)		20.1	20.1		20.1	20.1	3.0	77.2	77.2	12.7	86.9	
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.02	0.64	0.64	0.11	0.72	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		307	260		215	259	44	2276	986	187	3667	
v/s Ratio Prot							0.01	0.23		c0.06	c0.36	
v/s Ratio Perm		0.03	0.00		c0.12	0.01			0.05			
v/c Ratio		0.20	0.01		0.72	0.06	0.32	0.36	0.07	0.58	0.50	
Uniform Delay, d1		43.0	41.6		47.3	42.0	57.5	9.9	8.0	51.1	7.1	
Progression Factor		1.00	1.00		1.00	1.00	0.97	0.76	0.86	1.00	1.00	
Incremental Delay, d2		0.3	0.0		11.3	0.1	3.9	0.4	0.1	4.6	0.5	
Delay (s)		43.4	41.6		58.6	42.1	59.5	8.0	7.1	55.7	7.6	
Level of Service		D	D		E	D	E	A	A	E	A	
Approach Delay (s)		43.1			52.4			8.6			10.3	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	536	0	235	0	0	714	179	1266	142	397	902	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1566			1583	1770	5085	1583	1770	5085	1539
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1566			1583	1770	5085	1583	1770	5085	1539
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	589	0	258	0	0	785	197	1391	156	436	991	410
RTOR Reduction (vph)	0	0	186	0	0	5	0	0	0	0	0	0
Lane Group Flow (vph)	589	0	72	0	0	780	197	1391	156	436	991	410
Confl. Peds. (#/hr)			9									8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	18.0		35.2			85.0	17.2	31.5	31.5	31.6	45.9	63.9
Effective Green, g (s)	18.0		35.2			81.0	17.2	31.5	31.5	31.6	45.9	63.9
Actuated g/C Ratio	0.14		0.28			0.64	0.14	0.25	0.25	0.25	0.36	0.51
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490		437			1017	241	1271	395	443	1852	780
v/s Ratio Prot	c0.17		0.02				0.11	c0.27		c0.25	0.19	0.08
v/s Ratio Perm			0.02			c0.49			0.10			0.19
v/c Ratio	1.20		0.16			0.77	0.82	1.09	0.39	0.98	0.54	0.53
Uniform Delay, d1	54.0		34.3			15.9	52.9	47.2	39.3	47.0	31.6	20.9
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.08	0.44	0.82
Incremental Delay, d2	109.1		0.2			3.5	18.9	55.1	2.9	36.0	1.0	0.6
Delay (s)	163.1		34.5			19.4	71.8	102.4	42.3	86.9	15.0	17.6
Level of Service	F		C			B	E	F	D	F	B	B
Approach Delay (s)		123.9			19.4			93.6			32.6	
Approach LOS		F			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	65.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	0	48	4	1	1	182	2211	2	13	1612	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1761	1583		1755		1770	5085		1770	5066	
Flt Permitted		0.75	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1397	1583		1604		1770	5085		1770	5066	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	0	51	4	1	1	194	2352	2	14	1715	31
RTOR Reduction (vph)	0	0	46	0	1	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	24	5	0	5	0	194	2354	0	14	1745	0
Confl. Peds. (#/hr)	4					4			5			11
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		19.0	99.0		2.4	82.4	
Effective Green, g (s)		12.6	12.6		12.6		19.0	99.0		2.4	82.4	
Actuated g/C Ratio		0.10	0.10		0.10		0.15	0.79		0.02	0.65	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		139	158		160		266	3995		33	3313	
v/s Ratio Prot							c0.11	c0.46		0.01	0.34	
v/s Ratio Perm		c0.02	0.00		0.00							
v/c Ratio		0.17	0.03		0.03		0.73	0.59		0.42	0.53	
Uniform Delay, d1		51.9	51.2		51.2		51.0	5.4		61.1	11.5	
Progression Factor		1.00	1.00		1.00		1.04	1.30		0.76	0.89	
Incremental Delay, d2		0.6	0.1		0.1		0.9	0.1		7.5	0.5	
Delay (s)		52.5	51.3		51.3		54.2	7.1		53.9	10.8	
Level of Service		D	D		D		D	A		D	B	
Approach Delay (s)		51.7			51.3			10.6			11.1	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	245	195	339	1977	1428	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	5028	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	5028	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	250	199	346	2017	1457	87
RTOR Reduction (vph)	0	121	0	0	4	0
Lane Group Flow (vph)	250	78	346	2017	1540	0
Confl. Peds. (#/hr)	3					9
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	22.7	22.7	29.5	96.3	63.8	
Effective Green, g (s)	22.7	22.7	29.5	96.3	63.8	
Actuated g/C Ratio	0.18	0.18	0.23	0.76	0.51	
Clearance Time (s)	3.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	318	285	414	3886	2545	
v/s Ratio Prot	c0.14		c0.20	0.40	c0.31	
v/s Ratio Perm		0.05				
v/c Ratio	0.79	0.27	0.84	0.52	0.60	
Uniform Delay, d1	49.3	44.5	45.9	5.8	22.1	
Progression Factor	1.00	1.00	1.46	0.42	0.31	
Incremental Delay, d2	12.1	0.5	11.8	0.4	1.0	
Delay (s)	61.4	45.1	78.9	2.9	7.7	
Level of Service	E	D	E	A	A	
Approach Delay (s)	54.1			14.0	7.7	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	3	35	53	10	38	83	1944	16	72	1491	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1762	1583	1770	5077		1770	5064	
Flt Permitted		0.81			0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1412			1345	1583	1770	5077		1770	5064	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	50	3	37	56	11	40	88	2068	17	77	1586	32
RTOR Reduction (vph)	0	22	0	0	0	33	0	0	0	0	1	0
Lane Group Flow (vph)	0	68	0	0	67	7	88	2085	0	77	1617	0
Confl. Peds. (#/hr)			18	18					7			12
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		21.8			21.8	21.8	10.5	82.6		9.1	81.2	
Effective Green, g (s)		21.8			21.8	21.8	10.5	82.6		9.1	81.2	
Actuated g/C Ratio		0.17			0.17	0.17	0.08	0.66		0.07	0.64	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		244			232	273	147	3328		127	3263	
v/s Ratio Prot							c0.05	c0.41		0.04	0.32	
v/s Ratio Perm		0.05			c0.05	0.00						
v/c Ratio		0.28			0.29	0.03	0.60	0.63		0.61	0.50	
Uniform Delay, d1		45.3			45.4	43.3	55.7	12.7		56.7	11.7	
Progression Factor		1.00			1.00	1.00	1.01	0.77		1.00	0.70	
Incremental Delay, d2		0.6			0.7	0.0	5.6	0.8		5.7	0.4	
Delay (s)		45.9			46.0	43.3	61.8	10.5		62.6	8.6	
Level of Service		D			D	D	E	B		E	A	
Approach Delay (s)		45.9			45.0			12.6			11.0	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	285	81	441	254	80	134	1346	623	211	1104	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3417		3433	1863	1553	1534	3539	1505	1770	3539	1485
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3417		3433	1863	1553	1534	3539	1505	1770	3539	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	300	85	464	267	84	141	1417	656	222	1162	54
RTOR Reduction (vph)	0	17	0	0	0	67	0	0	258	0	0	31
Lane Group Flow (vph)	0	410	0	464	267	17	141	1417	398	222	1162	23
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									29			
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		16.0		25.0	25.0	25.0	14.9	48.5	48.5	19.0	52.6	52.6
Effective Green, g (s)		16.0		25.0	25.0	25.0	14.9	48.5	48.5	19.0	52.6	52.6
Actuated g/C Ratio		0.13		0.20	0.20	0.20	0.12	0.38	0.38	0.15	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		433		681	369	308	181	1362	579	266	1477	619
v/s Ratio Prot		c0.12		0.14	c0.14		0.09	c0.40		c0.13	c0.33	
v/s Ratio Perm						0.01			0.26			0.02
v/c Ratio		0.95		0.68	0.72	0.05	0.78	1.04	0.69	0.83	0.79	0.04
Uniform Delay, d1		54.6		46.8	47.3	40.9	54.0	38.8	32.4	52.0	31.8	21.7
Progression Factor		1.00		1.00	1.00	1.00	1.19	1.01	1.15	1.40	0.53	1.18
Incremental Delay, d2		29.6		2.8	6.9	0.1	15.7	33.3	5.3	15.8	3.3	0.1
Delay (s)		84.2		49.6	54.1	41.0	79.8	72.5	42.6	88.6	20.3	25.8
Level of Service		F		D	D	D	E	E	D	F	C	C
Approach Delay (s)		84.2			50.2			64.1			31.0	
Approach LOS		F			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	85	142	58	72	59	0	1431	92	0	1133	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.88	1.00	0.98			1.00	0.94		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1394	1770	1703			3539	1496		3539	1510
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1394	1770	1703			3539	1496		3539	1510
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	183	89	148	60	75	61	0	1491	96	0	1180	100
RTOR Reduction (vph)	0	0	113	0	24	0	0	0	36	0	0	23
Lane Group Flow (vph)	183	89	35	60	112	0	0	1491	60	0	1180	77
Confl. Peds. (#/hr)			87			26			12			9
Turn Type	Split	NA	Perm	Split	NA			NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	30.0	30.0	30.0	25.5	25.5			58.0	58.0		58.0	58.0
Effective Green, g (s)	30.0	30.0	30.0	25.5	25.5			58.0	58.0		58.0	58.0
Actuated g/C Ratio	0.24	0.24	0.24	0.20	0.20			0.46	0.46		0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	421	443	331	358	344			1629	688		1629	695
v/s Ratio Prot	c0.10	0.05		0.03	c0.07			c0.42			0.33	
v/s Ratio Perm			0.03						0.04			0.05
v/c Ratio	0.43	0.20	0.11	0.17	0.33			0.92	0.09		0.72	0.11
Uniform Delay, d1	40.8	38.4	37.5	41.5	42.9			31.7	19.1		27.5	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.33	0.00		0.49	0.43
Incremental Delay, d2	0.7	0.2	0.1	0.2	0.6			3.2	0.1		2.4	0.3
Delay (s)	41.5	38.6	37.7	41.7	43.5			13.7	0.2		15.8	8.6
Level of Service	D	D	D	D	D			B	A		B	A
Approach Delay (s)		39.5			42.9			12.9			15.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	211	117	107	195	100	82	1410	96	105	1105	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1526	1770	1863	1520	1770	3539	1503	1770	3539	1503
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1526	1770	1863	1520	1770	3539	1503	1770	3539	1503
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	141	215	119	109	199	102	84	1439	98	107	1128	96
RTOR Reduction (vph)	0	0	97	0	0	85	0	0	29	0	0	28
Lane Group Flow (vph)	141	215	22	109	199	17	84	1439	69	107	1128	68
Confl. Peds. (#/hr)			19			22			10			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.5	22.6	22.6	10.5	20.6	20.6	10.8	66.9	66.9	11.5	67.6	67.6
Effective Green, g (s)	12.5	22.6	22.6	10.5	20.6	20.6	10.8	66.9	66.9	11.5	67.6	67.6
Actuated g/C Ratio	0.10	0.18	0.18	0.08	0.16	0.16	0.09	0.53	0.53	0.09	0.54	0.54
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	175	334	273	147	304	248	151	1879	798	161	1898	806
v/s Ratio Prot	c0.08	c0.12		0.06	0.11		0.05	c0.41		c0.06	0.32	
v/s Ratio Perm			0.01			0.01			0.05			0.05
v/c Ratio	0.81	0.64	0.08	0.74	0.65	0.07	0.56	0.77	0.09	0.66	0.59	0.08
Uniform Delay, d1	55.6	48.0	43.1	56.4	49.4	44.6	55.3	23.4	14.5	55.4	19.9	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.28	0.07	0.63	1.74	2.49
Incremental Delay, d2	23.0	4.2	0.1	18.1	5.0	0.1	2.3	1.6	0.1	8.9	1.2	0.2
Delay (s)	78.5	52.2	43.2	74.5	54.4	44.7	75.2	8.1	1.1	44.0	35.8	35.5
Level of Service	E	D	D	E	D	D	E	A	A	D	D	D
Approach Delay (s)		57.7			57.3			11.1			36.5	
Approach LOS		E			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	282	142	124	50	182	24	133	1467	22	42	918	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1740	1555	1770	1831		1770	3539	1533	1770	3539	1547
Flt Permitted	0.95	0.98	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1740	1555	1770	1831		1770	3539	1533	1770	3539	1547
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	288	145	127	51	186	24	136	1497	22	43	937	255
RTOR Reduction (vph)	0	0	105	0	4	0	0	0	11	0	0	135
Lane Group Flow (vph)	213	220	22	51	206	0	136	1497	11	43	937	120
Confl. Peds. (#/hr)			5						3			1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	22.2	22.2	22.2	19.4	19.4		16.3	61.4	61.4	7.5	52.6	52.6
Effective Green, g (s)	22.2	22.2	22.2	19.4	19.4		16.3	61.4	61.4	7.5	52.6	52.6
Actuated g/C Ratio	0.18	0.18	0.18	0.15	0.15		0.13	0.49	0.49	0.06	0.42	0.42
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	296	306	273	272	281		228	1724	747	105	1477	645
v/s Ratio Prot	c0.13	0.13		0.03	c0.11		c0.08	c0.42		0.02	0.26	
v/s Ratio Perm			0.01						0.01			0.08
v/c Ratio	0.72	0.72	0.08	0.19	0.73		0.60	0.87	0.01	0.41	0.63	0.19
Uniform Delay, d1	49.0	49.0	43.4	46.4	50.8		51.7	28.7	16.7	57.1	29.1	23.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.11	0.46	1.00	1.01	0.91	1.14
Incremental Delay, d2	8.1	7.8	0.1	0.3	9.5		2.8	4.3	0.0	2.5	2.0	0.6
Delay (s)	57.1	56.8	43.5	46.8	60.3		60.3	17.6	16.7	60.3	28.5	27.1
Level of Service	E	E	D	D	E		E	B	B	E	C	C
Approach Delay (s)		53.9			57.6			21.1			29.3	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	81	12	161	36	1676	96	67	1375	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1809	1583		1785	1555	1770	3539	1546	1770	5075	
Flt Permitted		0.85	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1579	1583		1355	1555	1770	3539	1546	1770	5075	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	82	12	163	36	1693	97	68	1389	19
RTOR Reduction (vph)	0	0	12	0	0	99	0	0	14	0	1	0
Lane Group Flow (vph)	0	37	2	0	94	64	36	1693	83	68	1407	0
Confl. Peds. (#/hr)	5					5			1			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		16.1	16.1		16.1	16.1	4.8	91.6	91.6	8.3	95.1	
Effective Green, g (s)		16.1	16.1		16.1	16.1	4.8	91.6	91.6	8.3	95.1	
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.04	0.73	0.73	0.07	0.75	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		201	202		173	198	67	2572	1123	116	3830	
v/s Ratio Prot							0.02	c0.48		c0.04	0.28	
v/s Ratio Perm		0.02	0.00		c0.07	0.04			0.05			
v/c Ratio		0.18	0.01		0.54	0.32	0.54	0.66	0.07	0.59	0.37	
Uniform Delay, d1		49.1	48.0		51.5	50.0	59.5	9.0	5.0	57.2	5.2	
Progression Factor		1.00	1.00		1.00	1.00	1.23	0.29	0.04	1.00	1.00	
Incremental Delay, d2		0.4	0.0		3.5	0.9	4.8	0.8	0.1	7.4	0.3	
Delay (s)		49.5	48.0		55.0	50.9	77.9	3.4	0.3	64.5	5.5	
Level of Service		D	D		D	D	E	A	A	E	A	
Approach Delay (s)		49.1			52.4			4.7			8.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

El Camino Real Queuing Calculations

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	R	R	L	T	T	T	L	T	T	T
Maximum Queue (ft)	87	134	118	86	200	236	192	88	326	286	291	344
Average Queue (ft)	34	79	66	27	124	150	112	28	236	134	160	181
95th Queue (ft)	88	141	122	89	202	253	206	93	351	322	342	381
Link Distance (ft)		349		329		525	525	525		746	746	746
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	235		235		190				535			
Storage Blk Time (%)					2	5		0				5
Queuing Penalty (veh)					3	7		0				12

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB
Directions Served	R
Maximum Queue (ft)	236
Average Queue (ft)	80
95th Queue (ft)	230
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	240
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	58	48	78	112	107	110	40	109	154	170
Average Queue (ft)	17	23	36	40	38	42	13	40	49	76
95th Queue (ft)	54	49	82	116	117	121	41	110	139	167
Link Distance (ft)	284			269	269	269		284	284	284
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		100	200				100			
Storage Blk Time (%)	0							2		
Queuing Penalty (veh)	0							0		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	222	196	164	105	94	78	203	184	232
Average Queue (ft)	151	127	112	38	47	34	105	103	128
95th Queue (ft)	239	212	172	102	101	76	211	198	240
Link Distance (ft)	251			310	310	310	382	382	382
Upstream Blk Time (%)	1								
Queuing Penalty (veh)	0								
Storage Bay Dist (ft)		100	270						
Storage Blk Time (%)	27	15							
Queuing Penalty (veh)	83	31							

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	TR
Maximum Queue (ft)	151	31	24	86	137	166	214	97	208	248
Average Queue (ft)	88	10	7	44	73	78	91	40	102	122
95th Queue (ft)	156	31	28	89	150	167	198	103	219	244
Link Distance (ft)	238	182	182		432	432	432		196	196
Upstream Blk Time (%)	0								1	2
Queuing Penalty (veh)	0								8	20
Storage Bay Dist (ft)				200				119		
Storage Blk Time (%)					0				4	
Queuing Penalty (veh)					0				1	

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	298	235	281	333	229	118	159	210	232	156	194	281
Average Queue (ft)	227	161	182	235	156	44	88	140	155	82	122	133
95th Queue (ft)	312	244	282	332	234	121	158	224	245	155	225	281
Link Distance (ft)	315			397	397			332	332	332		359
Upstream Blk Time (%)	1			1								0
Queuing Penalty (veh)	0			0								0
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	6	0	0	2	17							2
Queuing Penalty (veh)	12	0	0	6	8							3

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	292	2
Average Queue (ft)	134	0
95th Queue (ft)	285	3
Link Distance (ft)	359	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	2	
Storage Bay Dist (ft)		75
Storage Blk Time (%)	34	
Queuing Penalty (veh)	4	

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	R	T	T	R
Maximum Queue (ft)	110	73	85	74	106	166	146	49	398	392	124
Average Queue (ft)	60	34	41	36	51	91	79	17	334	338	51
95th Queue (ft)	119	80	91	69	113	166	144	47	490	484	155
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)									4	3	
Queuing Penalty (veh)									31	24	
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	1				0					59	
Queuing Penalty (veh)	1				0					36	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	98	129	48	162	226	139	101	104	97	26	173	320
Average Queue (ft)	55	88	24	91	143	35	73	53	57	10	116	136
95th Queue (ft)	102	138	52	169	239	124	123	103	110	30	222	358
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)					1							
Queuing Penalty (veh)					0							
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	3	12		5	13				0			7
Queuing Penalty (veh)	5	13		15	16				0			6

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	325	103
Average Queue (ft)	143	38
95th Queue (ft)	351	140
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	16	
Queuing Penalty (veh)	14	

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	260	381	260	129	312	250	522	451	329	149	352	154
Average Queue (ft)	246	348	202	9	209	209	384	315	212	39	245	63
95th Queue (ft)	292	432	362	97	374	297	584	508	369	160	403	146
Link Distance (ft)		349		329	329		525	525	525			746
Upstream Blk Time (%)		46		1	5		5	1				
Queuing Penalty (veh)		0		0	0		0	0				
Storage Bay Dist (ft)	235		235			190				100	535	
Storage Blk Time (%)	15	53	0			5	39		17	3	0	
Queuing Penalty (veh)	75	265	2			23	71		23	14	0	

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	174	182	218
Average Queue (ft)	81	86	94
95th Queue (ft)	182	193	212
Link Distance (ft)	746	746	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)			1
Queuing Penalty (veh)			2

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	58	55	35	227	297	279	250	34	199	209	245
Average Queue (ft)	23	31	7	138	156	147	142	12	140	149	200
95th Queue (ft)	63	55	31	238	325	299	285	35	203	229	270
Link Distance (ft)	284		139		269	269	269		284	284	284
Upstream Blk Time (%)				0	1	1	1				0
Queuing Penalty (veh)				0	11	8	4				1
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	0			1	3				17		
Queuing Penalty (veh)	0			8	5				2		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	266	192	299	352	241	179	230	242	278
Average Queue (ft)	181	116	241	170	110	74	124	137	176
95th Queue (ft)	292	223	321	353	226	158	233	239	288
Link Distance (ft)	251			310	310	310	382	382	382
Upstream Blk Time (%)	5		2	3	0				0
Queuing Penalty (veh)	0		0	25	0				0
Storage Bay Dist (ft)		100	270						
Storage Blk Time (%)	34	6	10	5					
Queuing Penalty (veh)	67	14	68	16					

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	115	103	47	188	379	388	378	128	165	181	188
Average Queue (ft)	65	50	30	92	265	288	247	71	101	111	122
95th Queue (ft)	121	102	58	220	494	499	461	131	178	198	210
Link Distance (ft)	241	182	182		432	432	432		197	197	197
Upstream Blk Time (%)					14	16	8		0	1	1
Queuing Penalty (veh)					95	113	55		1	3	5
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)					25			2	3		
Queuing Penalty (veh)					20			10	2		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	267	216	224	284	311	170	296	420	415	332	239	266
Average Queue (ft)	217	162	147	206	186	69	146	352	360	206	163	190
95th Queue (ft)	318	266	263	298	330	171	348	479	482	364	258	274
Link Distance (ft)	315			397	397			332	332	332		359
Upstream Blk Time (%)	3			0	1		0	37	41	3		
Queuing Penalty (veh)	0			0	0		0	252	283	17		
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	11	3		1	22		0	38			4	0
Queuing Penalty (veh)	24	6		2	17		1	51			22	1

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	268	82
Average Queue (ft)	211	25
95th Queue (ft)	299	92
Link Distance (ft)	359	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		75
Storage Blk Time (%)	49	0
Queuing Penalty (veh)	25	0

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	R	T	T	R
Maximum Queue (ft)	177	171	123	80	135	215	177	39	229	257	133
Average Queue (ft)	114	59	52	34	76	124	121	16	136	151	39
95th Queue (ft)	188	160	121	93	172	220	187	41	244	266	117
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)		0			0						
Queuing Penalty (veh)		0			0						
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	7		0		4					21	
Queuing Penalty (veh)	15		1		2					20	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	139	264	165	149	219	149	118	163	167	110	219	537
Average Queue (ft)	110	181	90	110	137	66	63	112	119	35	157	388
95th Queue (ft)	161	304	197	177	267	157	127	173	179	112	287	533
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)		10			5							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	37	32	0	25	9	1			13			25
Queuing Penalty (veh)	123	83	0	75	19	2			12			27

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	546	185
Average Queue (ft)	408	99
95th Queue (ft)	537	235
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	29	
Queuing Penalty (veh)	27	

El Camino Real Curb Ramp Data

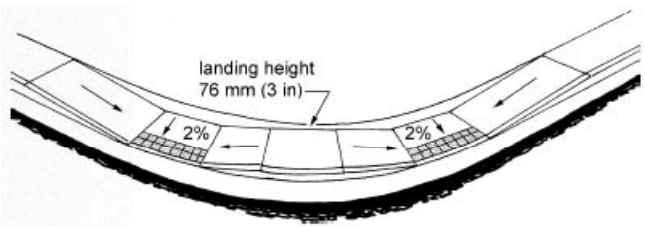
Menlo Park - El Camino Real Pedestrian Curb Ramps

Date: _____

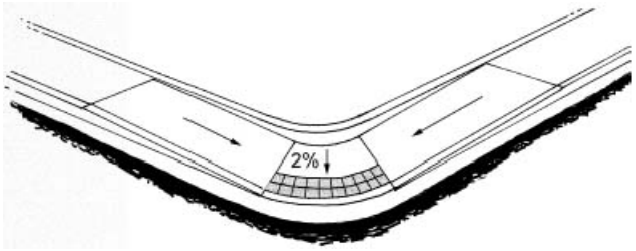
Intersection		Southern Limit	Number of Pedestrian Curb Ramps			
			Northeast corner	Southeast corner	Southwest corner	Northwest corner
El Camino Real at	Encinal Avenue	Glenwood Avenue-Valparaiso Avenue	2	1	1	1
El Camino Real	Glenwood Avenue-Valparaiso Avenue	Oak Grove Avenue	2	2	2	1
El Camino Real	Oak Grove Avenue	Santa Cruz Avenue	1	1	1	1
El Camino Real	Santa Cruz Avenue	Menlo Avenue-Ravenswood Avenue	1	1	1	1
El Camino Real	Menlo Avenue-Ravenswood Avenue	Live Oak Avenue	2	1	1	1
El Camino Real	Live Oak Avenue	Roble Avenue			1	1
El Camino Real	Roble Avenue	Middle Avenue	0	1	1	1
El Camino Real	Middle Avenue	College Avenue	1	0	1	1
El Camino Real	College Avenue	Partridge Avenue			1	1
El Camino Real	Partridge Avenue	Cambridge Avenue			1	1
El Camino Real	Cambridge Avenue	Harvard Avenue	1	0	1	1
El Camino Real	Harvard Avenue	Creek Drive			1	1
El Camino Real	Creek Drive	Sand Hill Road			2	2

Example - Number of Pedestrian Curb Ramps on each corner

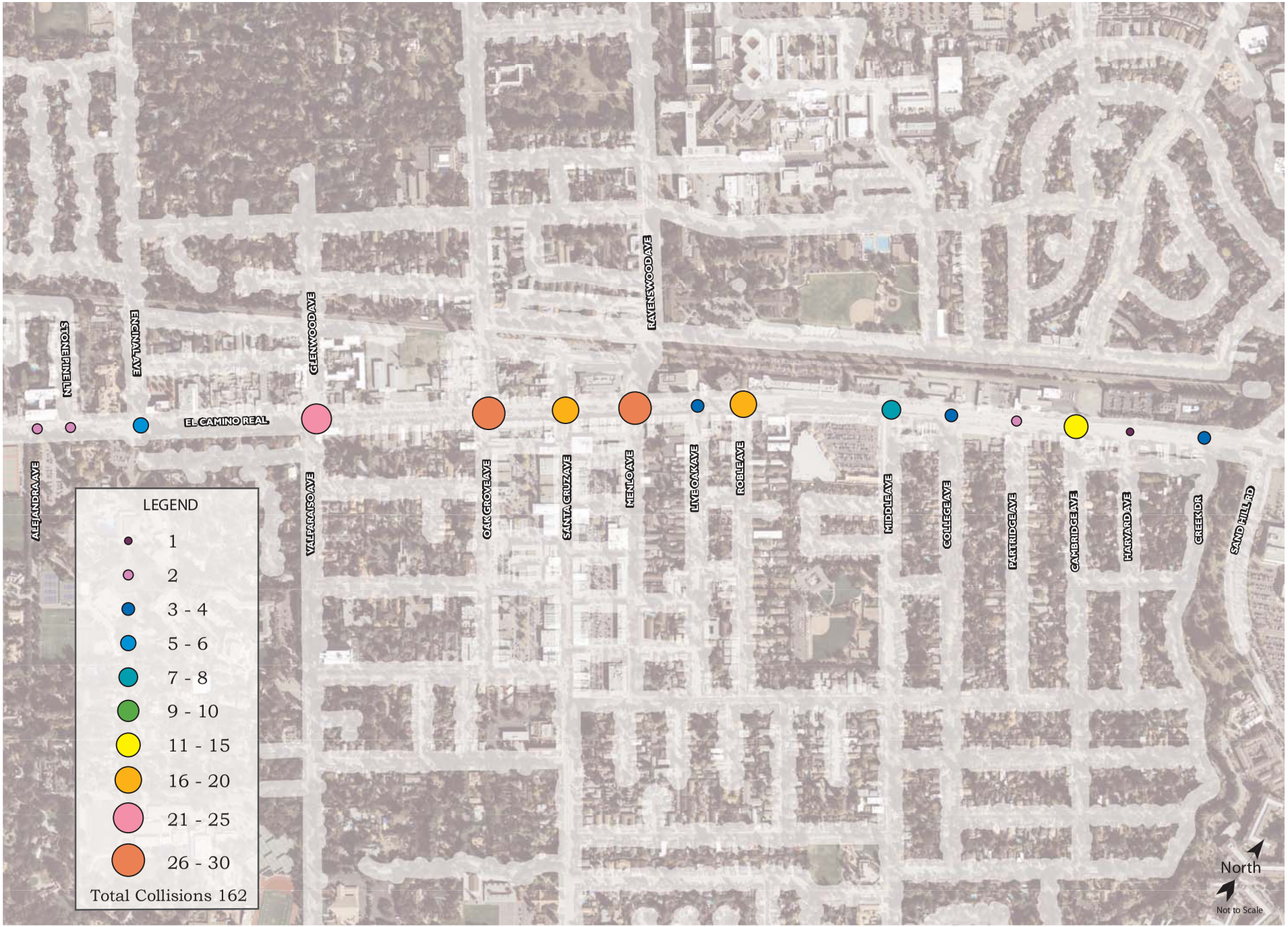
This corner would be counted as having two curb ramps



This corner would be counted as having one curb ramp



El Camino Real Collision Records



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El Camino Real Corridor Study – Existing Conditions Report

Figure 10 – All Collisions at Intersections (5-year period)

w-trans

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El Camino Real Corridor Study – Existing Conditions Report

Figure 11 – All Collisions between Intersections (5-year period)

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El Camino Real Corridor Study – Existing Conditions Report

Figure 12 – Pedestrian Collisions (10-year period)

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El Camino Real Corridor Study – Existing Conditions Report

Figure 13 – Bicycle Collisions (10-year period)

w-trans

Intersection Collision Rate Calculaions

City of Menlo Park - El Camino Real Corridor Study

Intersection # 1: El Camino Real & Sand Hill Road

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 8
Number of Injuries: 3
Number of Fatalities: 0
ADT: 47400
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{8 \times 1{,}000{,}000}{47{,}400 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.09 c/mve**	**0.0%**	**37.5%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection # 2: El Camino Real & Cambridge Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 18
Number of Injuries: 8
Number of Fatalities: 0
ADT: 41300
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{18 \times 1{,}000{,}000}{41{,}300 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.24 c/mve**	**0.0%**	**44.4%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculaions

City of Menlo Park - El Camino Real Corridor Study

Intersection # 3: El Camino Real & Middle Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 16
Number of Injuries: 7
Number of Fatalities: 0
ADT: 42700
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Tee
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{16 \times 1{,}000{,}000}{42{,}700 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.21 c/mve**	**0.0%**	**43.8%**
Statewide Average*	**0.21 c/mve**	**0.3%**	**42.4%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection # 4: El Camino Real & Roble Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 22
Number of Injuries: 9
Number of Fatalities: 0
ADT: 38200
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{22 \times 1{,}000{,}000}{38{,}200 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.32 c/mve**	**0.0%**	**40.9%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculaions

City of Menlo Park - El Camino Real Corridor Study

Intersection # 5: El Camino Real & Ravenswood Avenue-Menlo Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 34
Number of Injuries: 15
Number of Fatalities: 0
ADT: 46500
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{34 \times 1{,}000{,}000}{46{,}500 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.40 c/mve**	**0.0%**	**44.1%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection # 6: El Camino Real & Santa Cruz Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 23
Number of Injuries: 11
Number of Fatalities: 0
ADT: 33500
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{23 \times 1{,}000{,}000}{33{,}500 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.38 c/mve**	**0.0%**	**47.8%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculaions

City of Menlo Park - El Camino Real Corridor Study

Intersection # 7: El Camino Real & Oak Grove Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 36
Number of Injuries: 16
Number of Fatalities: 0
ADT: 37600
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{36 \times 1{,}000{,}000}{37{,}600 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.52 c/mve**	**0.0%**	**44.4%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection # 8: El Camino Real & Glenwood Avenue-Valparaiso Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 24
Number of Injuries: 9
Number of Fatalities: 0
ADT: 36400
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{24 \times 1{,}000{,}000}{36{,}400 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.36 c/mve**	**0.0%**	**37.5%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Intersection Collision Rate Calculaions

City of Menlo Park - El Camino Real Corridor Study

Intersection # 9: El Camino Real & Encinal Avenue

Date of Count: Wednesday, April 02, 2014

Number of Collisions: 6
Number of Injuries: 5
Number of Fatalities: 0
ADT: 35700
Start Date: January 1, 2009
End Date: December 31, 2013
Number of Years: 5

Intersection Type: Four-Legged
Control Type: Signals
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{6 \times 1{,}000{,}000}{35{,}700 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.09 c/mve**	**0.0%**	**83.3%**
Statewide Average*	**0.27 c/mve**	**0.4%**	**41.9%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2010 Collision Data on California State Highways, Caltrans

Menlo Park: El Camino Real 5-year Collision Records (2009-2013)

Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
1/3/2009	0	EL CAMINO REAL/COLLEGE AV	35	0	0	0	22107	Unknown	Interesection	Unknown	College	Car and Light Pole
2/9/2009	656	RAVENSWOOD AV/EL CAMINO REAL	25	0	0	0	22350 VC	W/B Ravenswood	Stop Light at Location	Rearend	ECR	2 Cars
2/9/2009	748	EL CAMINO REAL/ROBLE AV	35	0	0	0	21658(a) VC	S/B ECR	100 ft N/O Roble	Sideswipe- Changing Lanes	Roble	3 Cars
2/12/2009	1831	525 EL CAMINO REAL	35	1	0	0	22107 VC	N/B ECR-Turning into Parking Lot	525 ECR	Broadside	Middle	2 Cars
2/15/2009	2340	MENLO AV/EL CAMINO REAL	35	0	0	0	23152 VC	S/B ECR	Intersection	Sideswipe	Ravenswood	2 Cars
2/18/2009	2100	OAK GROVE AV/EL CAMINO REAL	35	2	0	0	22350 VC	N/B ECR	Stop Light at Location	Rearend- Hit and Run	Oak Grove	2 Cars
2/19/2009	2042	EL CAMINO REAL/COLLEGE AV	35	0	0	0	22350 VC	S/B ECR	Intersection	Rearend	College	2 Cars
3/12/2009	750	EL CAMINO REAL/VALPARAISO AV	35	1	0	0	21453 VC	Bike E/B ECR Against Red Light	Crosswalk	Car vs Bike	Car S/B ECR	Car vs Bike
3/12/2009	2133	OAK GROVE AV/EL CAMINO REAL	25	0	0	0	22350 VC	E/B Oak Grove	Stop Light at Location	Rearend	ECR	2 Cars
3/17/2009	1816	EL CAMINO REAL/ROBLE AV	35	1	0	0	22350 VC	N/B ECR	100 ft N/O Roble	Rearend	Roble	2 Cars
4/20/2009	820	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	22107 VC	S/B ECR	Making U Turn at Cambridge	Sideswipe	Cambridge	Car and Pedestrian Signal Pole
5/6/2009	1138	EL CAMINO REAL/MENLO AV	35	0	0	0	21750 VC	S/B ECR	Stop Light at Location	Sideswipe- Moving for Ambulance	Menlo	2 Cars
5/10/2009	1342	EL CAMINO REAL/CAMBRIDGE AV	35	2	0	0	21453(a) VC	S/B ECR	Stop Light at Location	Broadside- Ran Red Light	Cambridge	2 Cars
5/14/2009	1712	65 EL CAMINO REAL	35	1	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Sand Hill	3 Cars
5/21/2009	1340	EL CAMINO REAL/RAVENSWOOD AV	30	1	0	0	22350 VC	N/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
5/29/2009	1700	OAK GROVE AV/EL CAMINO REAL	25	0	0	0	21755 CVC	W/B Oak Grove	100 E/O ECR	Sideswipe	ECR	2 Cars
6/4/2009	1230	1422 EL CAMINO REAL	35	1	0	0	22350 VC	N/B ECR	100 ft N/O Glennwood	Rearend	Glenwood	3 Cars
6/4/2009	1410	888 EL CAMINO REAL	35	0	0	0	22350 VC	N/B ECR	Stop Light at Location	Rearend	Ravenswood	4 Cars
6/12/2009	1325	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	22107 VC	N/B ECR turning E/B Glenwood	Intersection	Sideswipe	Glenwood	Car and Traffic Signal
6/18/2009	1620	EL CAMINO REAL/STONEPINE LN	35	1	0	0	Other	N/B ECR	100 ft S/O Stonepine	Sideswipe	Stonepine	2 Cars- Medical Issue
6/19/2009	1415	301 EL CAMINO REAL	35	2	0	0	21703 VC	N/B ECR	300 Blk ECR	Rearend	Partridge	3 Cars

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
7/9/2009	738	EL CAMINO REAL/MENLO AV	35	0	0	0	22350(a) VC	N/B ECR	Stop Light at Location	Rearend	Menlo	2 Cars
7/10/2009	1700	EL CAMINO REAL/GLENWOOD AV	35	1	0	0	22350 VC	N/B ECR	Stop Light at Location	Rearend	Glenwood	2 Cars
7/16/2009	1830	1460 EL CAMINO REAL	35	0	0	0	22107 VC	N/B ECR	1460 ECR	Sideswipe- Hit and Run	1460 ECR	2 Cars
8/5/2009	1635	751 EL CAMINO REAL	35	0	0	0	22107 VC	S/B ECR	751 ECR	Head On	751 ECR	Car and Wall
8/9/2009	1100	EL CAMINO REAL/MIDDLE AV	35	0	0	0	22107 VC	S/B ECR	100 ft N/O Santa Cruz	Sideswipe- Changing Lanes	Santa Cruz	2 Cars
8/26/2009	730	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	22350 VC	N/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
8/27/2009	918	SANTA CRUZ AV/EL CAMINO REAL	35	1	0	0	22517 VC	Car Parked S/B ECR- Bike Hit Open Car Door	1081 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
9/10/2009	1326	MENLO AV/EL CAMINO REAL	35	1	0	0	11.56.120 CO	Ped E/B Menlo	Intersection	Ped vs Bike	Bike S/B ECR	Ped vs Bike
9/11/2009	2200	EL CAMINO REAL/MENLO AV	25	0	0	0	22106 CVC	E/B Menlo	Stop Light at Location	Rearend	ECR	2 Cars
9/13/2009	1134	OAK GROVE AV/EL CAMINO REAL	35	0	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
9/13/2009	1740	MIDDLE AV/EL CAMINO REAL	25	0	0	0	21804(a) VC	E/B Middle	100 ft W/O ECR	Rearend	ECR	2 Cars
9/13/2009	1845	EL CAMINO REAL/MIDDLE AV	35	1	0	0	22350 VC	N/B ECR	Intersection	Rearend	Middle	2 Cars
10/9/2009	1819	EL CAMINO REAL/GLENWOOD AVE	25	0	0	0	21804(a) VC	W/B exiting Private Parking Lot	495 ECR-Driveway on Glenwood	Broadside	ECR	2 Cars
10/22/2009	1600	OAK GROVE AV/EL CAMINO REAL	30	2	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
10/29/2009	849	EL CAMINO REAL/RAVENSWOOD AV	35	0	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
11/4/2009	1242	EL CAMINO REAL/ROBLE AV	35	0	0	0	22350 VC	N/B ECR	Stop Light at Location	Rearend	Roble	3 Cars
11/29/2009	705	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	21453A VC	S/B ECR	Turning from Cambridge to ECR	Boradside	Cambridge	2 Cars
12/8/2009	1800	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	21658A VC	N/B ECR	100 ft S/O Intersection	Sideswipe- Changing Lanes	Cambridge	2 Cars
12/9/2009	840	ENCINAL AV/EL CAMINO REAL	30	0	0	0	21453 VC	N/B ECR	Ran Red Light	Broadside	Encinal	2 Cars
12/12/2009	1900	EL CAMINO REAL/ENCINAL AV	35	2	0	0	23152(a) VC	N/B ECR	150 ft S/O Encinal	Head On	Encinal	Car and a Tree

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
12/22/2009	1205	EL CAMINO REAL/MENLO AV	35	0	0	0	22107 VC	S/B ECR	100 ft N/O Santa Cruz	Sideswipe- Changing Lanes	Menlo	2 Cars
12/22/2009	1645	EL CAMINO REAL/MIDDLE AV	30	0	0	0	22350 CVC	N/B ECR	Turn Lane for W/B Middle	Rearend	Santa Cruz	3 Cars
12/28/2009	1243	CREEK DR/EL CAMINO REAL	35	1	0	0	21802(a) VC	Car E/B Creek to S/B ECR	Intersection	Car vs Bike	Bike N/B ECR	Car vs Bike
1/3/2010	1530	EL CAMINO REAL/CREEK DR	35	0	0	0	22350 VC	S/B ECR	Intersetion	Broadside- Changing Lanes	Creek Dr	2 Cars
1/6/2010	726	100 EL CAMINO REAL	35	1	0	0	21804 VC	Car Exiting Driveway	Driveway to 100 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
1/14/2010	1445	EL CAMINO REAL/ROBLE AV	35	2	0	0	22350 VC	N/B ECR	Intersection	Rearend	Roble	2 Cars
1/14/2010	1446	EL CAMINO REAL/ROBLE AV	35	0	0	0	21806(a)(1) VC	S/B ECR	Stop Light at Location	Sideswipe-Moving for Fire Engine	Roble	2 Cars
1/15/2010	227	100 EL CAMINO REAL	35	0	0	0	22107 VC	N/B ECR	300 ft N/O Sand Hill	Sideswipe- Hit and Run	Sand Hill	Car and Cement Curb
1/15/2010	2302	RAVENSWOOD AV/EL CAMINO REAL	30	0	0	0	22107 VC	W/B Ravenswood	150 ft E/O ECR	Sideswipe	ECR	2 Cars
1/30/2010	920	RAVENSWOOD AV/EL CAMINO REAL	35	1	0	0	21658a VC	N/B ECR	100 ft S/O Ravenswood	Rearend	Ravenswood	3 Cars
2/19/2010	1915	EL CAMINO REAL/OAK GROVE AV	25	0	0	0	21453a	W/B Oak Grove	Stop Light at Location	Broadside- Ran Red Light	ECR	2 Cars
3/1/2010	1631	RAVENSWOOD AV/EL CAMINO REAL	35	0	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
3/10/2010	1241	1285 EL CAMINO REAL	35	0	0	0	22107 cvc	S/B ECR- Parked Car	1285 ECR	Sideswipe- Hit and Run	1285 ECR	2 Cars
3/23/2010	1658	EL CAMINO REAL/MIDDLE AV	30	0	0	0	22107 CVC	S/B ECR- Parked Car	425 ECR	Sideswipe- Hit and Run	425 ECR	2 Cars
4/7/2010	1719	VALPARAISO AV/EL CAMINO REAL	30	3	0	0	22350 VC	E/B Valparaiso	Stop Light at Location	Rearend	ECR	2 Cars
4/12/2010	1655	EL CAMINO REAL/ROBLE AV	35	3	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Roble	3 Cars
6/7/2010	1735	1170 EL CAMINO REAL	35	0	0	0	21755 CVC	N/B ECR	Turning into Private Driveway	Sideswipe	1170 ECR	2 Cars
6/8/2010	1000	444 EL CAMINO REAL	35	0	0	0	22106 CVC	N/B ECR	Leaving Private Driveway	Sideswipe	444 ECR	2 Cars
6/12/2010	1246	EL CAMINO REAL/VALPARAISO AV	35	2	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Valparaiso	2 Cars
6/16/2010	1241	EL CAMINO REAL/VALPARAISO AV	35	0	0	0	22107 CVC	E/B Valparaiso	Stop Light at Location	Sideswipe	ECR	2 Cars and Light Pole

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
6/17/2010	1828	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	21461(a) CVC	N/B ECR	Intersetion	Broadside- Made Turn Against Sign	Santa Cruz	2 Cars
6/28/2010	1015	MIDDLE AV/EL CAMINO REAL	25	0	0	0	21804 (a) CVC	E/B Middle	Safeway Driveway-525 ECR-Middle	Broadside	ECR	2 Cars
7/1/2010	1208	EL CAMINO REAL/ROBLE AV	35	1	0	0	21703 CVC	N/B ECR	150 ft N/O Roble	Rearend	Roble	2 Cars
7/1/2010	1623	MENLO AV/EL CAMINO REAL	25	0	0	0	24002(a) CVC	E/B Menlo	150 ft W/O ECR	Sideswipe- Utility Door Opened	ECR	Car and Utility Pole
7/6/2010	1928	CAMBRIDGE AV/EL CAMINO REAL	35	0	0	0	22350 VC	S/B ECR	200 ft N/O Cambridge	Rearend- Child Ran in Roadway	Cambridge	2 Cars
7/16/2010	1137	EL CAMINO REAL/HARVARD AV	35	1	0	0	21950(a) CVC	Car E/B Harvard to S/B ECR	Intersection	Car vs Bike	Bike N/B ECR	Car vs Bike
7/29/2010	517	EL CAMINO REAL/OAK GROVE AV	35	1	0	0	21453(b) VC	Car E/B Oak Grove to S/B ECR	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
8/2/2010	851	MIDDLE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	Car S/B ECR Turning into 495 ECR	495 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike- Hit and Run
8/10/2010	1120	1265 EL CAMINO REAL	35	2	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
8/20/2010	1605	SANTA CRUZ AV/EL CAMINO REAL	35	1	0	0	22650 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
8/26/2010	1516	EL CAMINO REAL/ROBLE AV	35	1	0	0	22350	S/B ECR	200 ft N/O Roble	Rearend	Roble	3 Cars
8/27/2010	1331	EL CAMINO REAL/MIDDLE AV	35	0	0	0	22107 CVC	Car Exiting Driveway	525 ECR	Broadside	ECR	2 Cars
9/2/2010	1220	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	22350	S/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
9/10/2010	1739	CAMBRIDGE AV/EL CAMINO REAL	35	0	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Cambridge	2 Cars
9/21/2010	1544	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
10/1/2010	1545	EL CAMINO REAL/OAK GROVE AV	35	1	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
10/29/2010	1830	EL CAMINO REAL/ROBLE AV	35	0	0	0	21804(A) CVC	S/B ECR	Intersectio- Turning onto ECR	Broadside	Roble	2 Cars
11/4/2010	1853	115 EL CAMINO REAL	35	0	0	0	22350 CVC	S/B ECR	75 ft S/O Cambridge	Rearend	115 ECR	2 Cars
11/21/2010	1031	EL CAMINO REAL/MIDDLE AV	35	1	0	0	22107 VC	S/B ECR	Driveway 525 ECR	Rearend	525 ECR	2 Cars
11/29/2010	1158	EL CAMINO REAL/GLENWOOD AV	35	0	0	0	22106 CVC	N/B ECR	Stop Light at Location	Rearend	Glenwood	2 Cars

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
12/25/2010	2008	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	22107 cvc	S/B ECR	Interesection	Head On	Cambridge	Car and Sign
12/25/2010	1800	1029 EL CAMINO REAL	15	0	0	0	unknown	ECR	Parked at 1029 ECR	Sideswipe- Hit and Run	1029 ECR	2 Cars
12/30/2010	714	EL CAMINO REAL/ROBLE AV	35	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Roble	2 Cars
1/9/2011	1915	EL CAMINO REAL/ENCINAL AV	35	3	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Encinal	3 Cars
1/20/2011	735	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	22350 cvc	S/B ECR	Stop Light at Location	Rearend	Cambridge	2 Cars
1/29/2011	345	ROBLE AV/EL CAMINO REAL	35	0	0	0	23152 (a)&(b)	S/B ECR	Stop Light at Location	Rearend	Roble	2 Cars
2/4/2011	930	EL CAMINO REAL/MIDDLE AV	5	1	0	0	21202(a) CVC	Car Exiting Driveway	200 ft W/O ECR	Car vs Bike	Bike E/B Middle	Car vs Bike
2/4/2011	1444	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	OTHER	S/B ECR	200 ft N/O Santa Cruz	Rearend	Santa Cruz	2 Cars
2/9/2011	1150	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
2/16/2011	816	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
3/11/2011	1535	EL CAMINO REAL/RAVENSWOOD AV	35	0	0	0	22107 cvc	N/B ECR	Stop Light at Location	Sideswipe- Hit and Run	Ravenswood	2 Cars
3/14/2011	1517	525 EL CAMINO REAL	35	2	0	0	21801(a) CVC	N/B ECR	Driveway 525 ECR	Broadside	525 ECR	2 Cars
4/6/2011	1145	EL CAMINO REAL/MIDDLE AV	35	0	1	0	21950 cvc	Car W/B Middle to N/B ECR	Crosswalk	Car vs Ped	Ped N/B ECR	Car vs Ped
4/7/2011	1344	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
4/7/2011	1759	EL CAMINO REAL/CAMBRIDGE AV	35	3	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Cambridge	2 Cars
5/10/2011	1807	401 EL CAMINO REAL	35	2	0	0	22107 CVC	S/B ECR	401 ECR	Sideswipe- Changing Lanes	401 ECR	2 Cars
5/19/2011	1200	ROBLE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	S/B ECR	Intersetion- Making U Turn	Broadside	Roble	Car and Pedestrian Signal Pole
6/1/2011	836	1137 EL CAMINO REAL	35	1	0	0	22350	S/B ECR	1137 ECR	Rearend	1137 ECR	2 Cars
6/4/2011	1131	OAK GROVE AV/EL CAMINO REAL	30	1	0	0	22350	S/B ECR	200 ft N/O Oak Grove	Rearend	Oak Grove	2 Cars
6/10/2011	1105	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	22107 CVC	S/B ECR- Parked Car	100 ft N/O Santa Cruz	Sideswipe- Hit and Run	Santa Cruz	2 Cars
6/15/2011	1042	EL CAMINO REAL/MIDDLE AV	30	0	0	0	23152(a) CVC	E/B Middle	75 FT W/O ECR	Head On	ECR	2 Cars

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
6/16/2011	1202	EL CAMINO REAL/VALPARAISO AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Valparaiso	2 Cars
6/23/2011	1030	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22517 CVC	Car Parked S/B ECR-Bike Hit Open Car Door	100 ft S/O Oak Grove	Car vs Bike	Bike S/B ECR	Car vs Bike
7/1/2011	1455	ROBLE AV/EL CAMINO REAL	35	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Roble	3 Cars
7/13/2011	1928	1000 EL CAMINO REAL	30	0	0	0	22107 CVC	E/B Ravenswood	100 ft E/O ECR	None	1000 ECR	Car and Lawn of Business
7/20/2011	1700	1436 EL CAMINO REAL	25	0	0	0	22107 CVC	Private Driveway at 1436 ECR	Driveway of 1436 ECR	Sideswipe	1436 ECR	2 Cars
7/21/2011	1805	EL CAMINO REAL/ROBLE AV	35	0	0	0	21453(a) CVC	E/B Roble	Intersection	Sideswipe	ECR	2 Cars
7/23/2011	230	CAMBRIDGE AV/EL CAMINO REAL	25	1	0	0	22107 CVC	W/B Cambridge	100 ft W/O ECR	Sideswipe	ECR	Car and Light Pole
7/26/2011	824	EL CAMINO REAL/ALEJANDRA AV	35	0	1	0	21950(b) CVC	Car N/B ECR	Crosswalk	Car vs Ped	W/B ECR in Crosswalk	Car vs Ped
7/26/2011	1832	PARTRIDGE AV/EL CAMINO REAL	35	0	0	0	23152(a) CVC	S/B ECR	Intersection	Rearend	Partridge	2 Cars
8/5/2011	1631	EL CAMINO REAL/ROBLE AV	35	0	0	0	21703 CVC	N/B ECR	200 ft S/O Roblen	Rearend- Hit and Run	Roble	2 Cars
8/13/2011	1812	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	22107 CVC	N/B ECR	Intersection- Making U Turn	Sideswipe	Cambridge	Car and a Tree
8/15/2011	1845	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
8/21/2011	1648	EL CAMINO REAL/RAVENSWOOD AV	35	0	0	0	21658(a) CVC	S/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
8/22/2011	1242	EL CAMINO REAL/ROBLE AV	35	2	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Roble	2 Cars
8/24/2011	1600	EL CAMINO REAL/VALPARAISO AV	25	0	0	0	22107 CVC	Private Driveway at 1279 ECR	Turning S/B ECR	Sideswipe	Valparaiso	2 Cars
8/24/2011	1700	EL CAMINO REAL/GLENWOOD AV	30	0	0	0	22107 CVC	S/B ECR	1380 ECR	Sideswipe- Turning into Driveway	1380 ECR	2 Cars
8/29/2011	1158	EL CAMINO REAL/ROBLE AV	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Roble	3 Cars
9/1/2011	143	EL CAMINO REAL/MIDDLE AV	35	0	0	0	22107 CVC	N/B ECR	200 ft S/O Middle	Head On	Middle	Car and a Tree
9/20/2011	1427	ENCINAL AV/EL CAMINO REAL	25	1	0	0	21804(a) VC	W/B Encinal	Driveway 1550 Encinal	Sideswipe- Exiting Driveway	Encinal	2 Cars
9/20/2011	1554	525 EL CAMINO REAL	35	1	0	0	22350 CVC	S/B ECR	Intersection	Rearend	Middle	2 Cars
9/21/2011	900	MIDDLE AV/EL CAMINO REAL	30	1	0	0	21950 CVC	Car E/B Middle to S/B ECR	Crosswalk	Car vs Ped	N/B ECR in Crosswalk	Car vs Ped

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
9/21/2011	1550	EL CAMINO REAL/OAK GROVE AV	35	1	0	0	22350 CVC	N/B ECR	Intersection	Rearend	Oak Grove	2 Cars
9/23/2011	1728	EL CAMINO REAL/OAK GROVE AV	25	0	0	0	Unknown	E/B Oak Grove	300 ft W/O ECR	Sideswipe- Hit and Run	ECR	2 Cars
9/24/2011	1515	EL CAMINO REAL/HARVARD AV	35	0	0	0	21703 CVC	S/B ECR	300 ft N/O Havard	Rearend- Hit and Run	Harvard	2 Cars
9/27/2011	804	VALPARAISO AV/EL CAMINO REAL	35	0	0	0	22350 CVC	E/B Valparaiso	Stop Light at Location	Rearend	ECR	2 Cars
10/6/2011	845	SANTA CRUZ AV/EL CAMINO REAL	30	0	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
10/6/2011	1217	EL CAMINO REAL/MIDDLE AV	35	1	0	0	22100 CVC	S/B ECR	Private Driveway at 525 ECR	Rearend	525 ECR	2 Cars
10/8/2011	2008	PARTRIDGE AV/EL CAMINO REAL	25	0	0	0	21650 CVC	E/B Partridge	300 ft W/O ECR	Sideswipe	ECR	2 Cars
10/11/2011	905	OAK GROVE AV/EL CAMINO REAL	25	0	0	0	22102 CVC	E/B Oak Grove	300 ft W/O ECR	Broadside- Making U Turn	ECR	2 Cars
11/3/2011	1415	EL CAMINO REAL/RAVENSWOOD AV	35	0	0	0	21658a CVC	S/B ECR	Intersection	Sideswipe- Changing Lanes	Ravenswood	2 Cars
11/19/2011	1144	EL CAMINO REAL/VALPARAISO AV	35	0	0	0	22106 CVC	S/B ECR	Stop Light at Location	Rearend- Hit and Run	Valparaiso	2 Cars
11/23/2011	1219	EL CAMINO REAL/VALPARAISO AV	35	0	0	0	21658(a) CVC	S/B ECR	Intersection	Sideswipe- Hit and Run	Valparaiso	2 Cars
11/26/2011	1705	EL CAMINO REAL/MIDDLE AV	35	0	0	0	CVC 21658(a)	S/B ECR	100 ft N/O Middle	Sideswipe- Hit and Run	Middle	2 Cars
11/30/2011	950	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	21658(a) CVC	N/B ECR	300 ft N/O Sand Hill	Sideswipe- Hit and Run	Sand Hill	2 Cars
12/6/2011	1218	EL CAMINO REAL/SANTA CRUZ AV	25	0	0	0	CVC 22350	S/B ECR	Intersection	Rearend	Santa Cruz	2 Cars
12/6/2011	1751	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	22107 CVC	N/B ECR	Stop Light at Location	Sideswipe	Cambridge	Car and Motorcycle
12/12/2011	1209	1000 EL CAMINO REAL	35	1	0	0	22350 cvc	N/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
12/22/2011	1530	EL CAMINO REAL/SANTA CRUZ AV	30	0	0	0	21950 CVC	Car W/B Santa Cruz To N/B ECR	Crosswalk	Car vs Ped	S/B ECR in Crosswalk	Car vs Ped
12/23/2011	54	MIDDLE AV/EL CAMINO REAL	35	0	0	0	23152AB	S/B ECR	Stop Light at Location	Rearend	Middle	2 Cars
12/28/2011	1400	VALPARAISO AV/EL CAMINO REAL	30	0	0	0	22350 cvc	E/B Valparaiso	Turning into Driveway	Rearend	ECR	2 Cars
1/5/2012	740	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	22350 CVC	S/B ECR	90 ft S/O Valparaiso	Rearend- Hit and Run	Valparaiso	2 Cars
1/6/2012	1423	EL CAMINO REAL/VALPARAISO AV	35	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Valparaiso	2 Cars

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Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
1/20/2012	1443	ROBLE AV/EL CAMINO REAL	35	2	0	0	21453(a) CVC	W/B Roble	Intersection	Rearend that Broadsided Car	ECR	3 Cars
1/20/2012	1954	EL CAMINO REAL/ENCINAL AV	35	1	0	0	21453(a) CVC	N/B ECR	Intersection	Broadside- Ran Red Light	Encinal	2 Cars
2/1/2012	1645	EL CAMINO REAL/ENCINAL AV	25	1	0	0	22350 CVC	N/B ECR	Intersection- Ped Crossing	Rearend	Encinal	2 Cars
2/2/2012	1404	EL CAMINO REAL/LIVE OAK AV	35	1	0	0	21658a cvc	N/B ECR	Intersection- Turn Lane	Rearend	Live Oak	3 Cars
2/14/2012	1230	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	22107 CVC	Car S/B ECR to W/B Cambridge	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
2/23/2012	2130	100 EL CAMINO REAL	35	0	0	0	22106 cvc	N/B ECR	100 ECR	Head On	100 ECR	Car and a Tree
2/28/2012	2012	1200 EL CAMINO REAL	35	0	0	0	22350 CVC	N/B ECR	Leaving Driveway of 1200ECR	Rearend	1200 ECR	2 Cars
3/6/2012	1405	EL CAMINO REAL/ROBLE AV	35	0	0	0	UNKNOWN	N/B ECR	50 ft N/O Roble	Sideswipe- Changing Lanes	Roble	2 Cars
3/9/2012	1750	EL CAMINO REAL/RAVENSWOOD AV	35	0	0	0	22107 CVC	S/B ECR	Stop Light at Location	Sideswipe- Hit and Run	Ravenswood	2 Cars
3/13/2012	1717	RAVENSWOOD AV/EL CAMINO REAL	35	0	0	0	22107 CVC	W/B Ravenswood	Intersection	Sideswipe- Hit and Run	ECR	2 Cars
3/21/2012	1729	EL CAMINO REAL/MENLO AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend- Hit and Run	Menlo	2 Cars
3/23/2012	1542	444 EL CAMINO REAL	35	1	0	0	22350 CVC	N/B ECR	Intersetion	Rearend	Partridge	3 Cars
3/23/2012	1635	EL CAMINO REAL/CREEK DR	30	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Creek Dr	2 Cars
3/27/2012	1356	ROBLE AV/EL CAMINO REAL	35	0	0	0	21453(a) CVC	N/B ECR	Intersection	Broadside- Ran Red Light	Roble	2 Cars
3/28/2012	2040	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	22530 CVC	N/B ECR	Stop Light at Location	Rearend- Hit and Run	Ravenswood	2 Cars
4/9/2012	1424	525 EL CAMINO REAL	35	0	0	0	22107 CVC	S/B ECR turning into Driveway 525 ECR	Driveway of 525 ECR	Rearend	525 ECR	2 Cars
4/19/2012	0	1295 EL CAMINO REAL	35	0	0	0	22350 CVC	S/B ECR	Parking at 1295 ECR	Sideswipe- Hit and Run	1295 ECR	Car and Light Pole
4/20/2012	1600	MENLO AV/EL CAMINO REAL	25	1	0	0	22350 CVC	E/B Menlo	Stop Light at Location	Rearend	ECR	2 Cars
4/20/2012	1743	EL CAMINO REAL/STONEPINE LN	35	0	0	1	OTHER	N/B ECR	Intersection-Shoulder	Sideswipe- Medical Issue	Stonepine	2 Cars
5/11/2012	1825	401 EL CAMINO REAL	35	1	0	0	CVC 22350	N/B ECR	Stop Light at Location	Rearend	401 ECR	2 Cars and a Tree
5/22/2012	1630	EL CAMINO REAL/OAK GROVE AV	30	0	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars

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5/25/2012	1515	1200 EL CAMINO REAL	35	1	0	0	11.56.120 CO	Bike N/B ECR-on Sidewalk	Driveway to 1200 ECR	Bike vs Car	Car N/B ECR into Driveway	Bike vs Car
6/3/2012	0	EL CAMINO REAL/OAK GROVE AV	35	1	0	0	22350 cvc	S/B ECR	200 ft N/O Oak Grove	Rearend	Oak Grove	2 Cars
6/8/2012	1421	OAK GROVE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	E/B Oak Grove Turning onto ECR	Intersection	Sideswipe	ECR	Car and Light Pole
6/13/2012	2130	500 EL CAMINO REAL	35	0	0	0	22107 CVC	S/B ECR into Driveway at 525 ECR	Driveway of 525 ECR	Sideswipe	525 ECR	Car and Light Pole
6/14/2012	1156	EL CAMINO REAL/GLENWOOD AV	35	0	0	0	22350 cvc	S/B ECR	Stop Light at Location	Rearend	Glenwood	2 Cars
6/18/2012	1228	EL CAMINO REAL/VALPARAISO AV	35	0	0	0	22350 cvc	S/B ECR	Stop Light at Location	Rearend	Valparaiso	3 Cars
6/20/2012	1136	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
6/28/2012	1401	EL CAMINO REAL/COLLEGE AV	35	1	0	0	22350 CVC	S/B ECR	Intersection-Crosswalk	Rearend	College	2 Cars
7/2/2012	1032	400 EL CAMINO REAL	35	2	0	0	22107 cvc	S/B ECT	400 ECR-Parked on Roadside	Sideswipe	400 ECR	2 Cars
7/3/2012	1507	1259 EL CAMINO REAL	35	4	0	0	22350 cvc	N/B ECR	200 ft N/O Oak Grove	Rearend	Oak Grove	2 Cars
7/3/2012	1554	EL CAMINO REAL/OAK GROVE AV	30	1	0	0	21650.1 CVC	Car W/B Oak Grove to N/B ECR	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
7/6/2012	1034	GLENWOOD AV/EL CAMINO REAL	25	0	0	0	22350 CVC	S/B ECR	300 ft N/O Glenwood	Rearend	Glenwood	3 Cars
7/13/2012	1347	EL CAMINO REAL/MIDDLE AV	35	0	0	0	22350 CVC	S/B ECR	150 ft S/O Middle	Rearend	Middle	2 Cars
7/14/2012	2235	EL CAMINO REAL/OAK GROVE AV		0	0	0	22107 CVC	N/B ECR	200 ft N/O Oak Grove	Sideswipe- Hit and Run	Oak Grove	Car and a Tree
7/19/2012	916	EL CAMINO REAL/RAVENSWOOD AV	30	0	0	0	22107 CVC	N/B ECR	Intersection	Sideswipe	Ravenswood	Car and Light Pole
7/23/2012	900	EL CAMINO REAL/MIDDLE AV	35	0	0	0	22350 CVC	S/B ECR	300 ft N/O Middle	Sideswipe- Hit and Run	Middle	2 Cars
7/24/2012	1430	EL CAMINO REAL/OAK GROVE AV	35	2	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
7/24/2012	1805	MIDDLE AV/EL CAMINO REAL	30	0	0	0	22100(3)(b) VC	W/B Middle	Driveway for 495 ECR off Middle	Rearend	ECR	2 Cars
7/26/2012	1705	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	22350 VC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	3 Cars
7/28/2012	1910	MENLO AV/EL CAMINO REAL	35	1	0	0	21453(a) CVC	E/B Menlo	Intersection	Broadside- Ran Red Light	ECR	2 Cars
8/1/2012	1745	VALPARAISO AV/EL CAMINO REAL	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Valparaiso	2 Cars
8/1/2012	1745	VALPARAISO AV/EL CAMINO REAL	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Valparaiso	2 Cars

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8/2/2012	1729	EL CAMINO REAL/ROBLE AV	35	0	0	0	21453(a) CVC	N/B ECR	Intersection	Broadside- Ran Red Light/Hit and Run	Roble	2 Cars
8/3/2012	1726	MIDDLE AV/EL CAMINO REAL	35	0	0	0	21801 (a) CVC	N/B ECR	Driveway for 525 ECR	Broadside	525 ECR	2 Cars
8/13/2012	1431	EL CAMINO REAL/ENCINAL AV	35	2	0	0	21453(c)VC	N/B ECR	Stop Light at Location	Broadside- Ran Red Light	Encinal	2 Cars
8/13/2012	1600	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
8/16/2012	1042	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	22107 CVC	S/B ECR	Intersection	Head On	243 ECR	Car and a Building and a Tree
8/22/2012	0	EL CAMINO REAL/GLENWOOD AV	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Glenwood	2 Cars
8/22/2012	1314	OAK GROVE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	S/B ECR	100 ft N/O Oak Grove	Rearend	Oak Grove	2 Cars
8/31/2012	745	EL CAMINO REAL/OAK GROVE AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend- Hit and Run	Oak Grove	2 Cars
9/2/2012	1218	EL CAMINO REAL/VALPARAISO AV	35	2	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Valparaiso	2 Cars
9/2/2012	1417	1540 EL CAMINO REAL	35	1	0	0	22350 CVC	N/B ECR	1540 ECR	Rearend	1540 ECR	2 Cars
9/4/2012	1130	SANTA CRUZ AV/EL CAMINO REAL	35	1	0	0	21955 CVC	Car N/B ECR	Crosswalk	Car vs Ped	W/B ECR in Crosswalk	Car vs Ped
9/13/2012	1036	301 EL CAMINO REAL	25	0	0	0	22107 CVC	E/B Partridge	Driveway 275 ECR off Partridge	Broadside- Parked Car	ECR	2 Cars
9/13/2012	1327	500 EL CAMINO REAL	35	0	0	0	22107 CVC	N/B ECR	Driveway for 525 ECR	Broadside	525 ECR	2 Cars
9/28/2012	2113	EL CAMINO REAL/RAVENSWOOD AV	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
9/30/2012	2	EL CAMINO REAL/CREEK DR	35	1	1	0	21954(a) CVC	Car S/B ECR	Running across ECR	Car vs Ped	Running E/B across ECR	Car vs Ped- Hit and Run
10/4/2012	1433	EL CAMINO REAL/COLLEGE AV	35	0	0	0	22517 CVC	S/B ECR	Parked Car at 300 ECR	Sideswipe- Open Car Door	300 ECR	2 Cars
10/5/2012	1244	700 EL CAMINO REAL	35	1	0	0	22530 CVC	N/B ECR	700 ECR	Rearend	700 ECR	2 Cars
10/6/2012	1602	CAMBRIDGE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	E/B Cambridge	Intersection	Head On	ECR	Car and Pedestrian Sign
10/8/2012	101	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	23153 (a) (b)CVC	N/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
10/10/2012	650	EL CAMINO REAL/LIVE OAK AV	35	1	0	0	21804 CVC	S/B ECR	Intersection	Sideswipe	Live Oak	2 Cars
10/14/2012	404	EL CAMINO REAL/ENCINAL AV	45	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Encinal	2 Cars

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10/17/2012	915	EL CAMINO REAL/GLENWOOD AV	30	0	0	0	22107 CVC	S/B ECR	Intersection	Sideswipe-Hit and Run	Glenwood	2 Cars
10/19/2012	1100	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend- Hit and Run	Santa Cruz	2 Cars
10/19/2012	1400	1200 EL CAMINO REAL	35	0	0	0	22107 CVC	N/B ECR	1200 ECR	Sideswipe	1200 ECR	2 Cars
11/2/2012	1823	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	Car N/B ECR-Rearended Bike	50 ft S/O Santa Cruz	Car vs Bike	Bike N/B ECR	Car vs Bike
11/5/2012	2022	100 EL CAMINO REAL	35	0	1	0	23152 CVC	Bike N/B ECR	100 ECR	Bike vs Unknown	None	Bike vs Unknown
11/5/2012	1630	ENCINAL AV/EL CAMINO REAL	35	1	0	0	22350 CVC	Bike W/B Menlo	300 ft W/O ECR	Solo Bike, Gravel	None	Solo Bike, Gravel
11/6/2012	600	RAVENSWOOD AV/EL CAMINO REAL	25	1	0	0	22350 CVC	W/B Menlo	100 ft E/O ECR	Solo Bike, Gravel	None	Solo Bike, Gravel
11/6/2012	1437	EL CAMINO REAL/MIDDLE AV	35	0	0	0	21658(a) CVC	S/B ECR	Driveway for 495 ECR-Parked Car	Sideswipe	495 ECR	2 Cars
11/6/2012	1650	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	22350 CVC	N/B ECR	Intersection	Rearend	Santa Cruz	5 Cars
11/8/2012	1116	525 EL CAMINO REAL	15	1	0	0	22106 CVC	S/B ECR	Driveway to 525 ECR	Rearend	525 ECR	2 Cars
11/17/2012	1940	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	22107 VC	S/B ECR	300 ft S/O Middle	Sideswipe- Hit and Run	Middle	2 Cars
11/26/2012	2125	EL CAMINO REAL/MENLO AV	35	1	0	0	21453 CVC	N/B ECR	50 ft N/O Menlo	Broadside	Menlo	2 Cars
12/1/2012	750	EL CAMINO REAL/GLENWOOD AV	25	1	0	0	21453(a) CVC	W/B Glenwood	Stop Light at Location	Rearend	ECR	2 Cars
12/6/2012	1836	500 EL CAMINO REAL	35	1	0	0	21202(a) CVC	Car N/B ECR Turn Lane	Driveway to 525 ECR	Car vs Bike	Bike N/B ECR	Car vs Bike
12/7/2012	1446	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	21658(a) VC	N/B ECR	250 ft S/O Cambridge	Sideswipe	Cambridge	2 Cars
12/10/2012	815	OAK GROVE AV/EL CAMINO REAL	25	0	0	0	22107 CVC	W/B Oak Grove	100 ft W/O ECR	Sideswipe- Medical Issue	ECR	Car and Telephone Pole
12/27/2012	825	EL CAMINO REAL/MIDDLE AV	35	0	0	0	22107 CVC	S/B ECR	200 ft S/O Middle	Sideswipe	Middle	Car and 2 Parked Cars
12/27/2012	2324	EL CAMINO REAL/STONEPINE LN	35	1	0	0	23152(a) CVC	N/B ECR	150 ft N/O Stonepine	Sideswipe- Parked Car	Stonepine	2 Cars
1/7/2013	1757	EL CAMINO REAL/COLLEGE AV	35	0	0	0	22350 CVC	N/B ECR	Intersection	Rearend- Hit and Run	College	2 Cars
1/15/2013	710	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	22100(A) CVC	S/B ECR	Intersection	Sideswipe	Partridge	2 Cars
1/21/2013	1745	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	22350 CVC	S/B ECR	100 ft N/O Ravenswood	Rearend	Ravenswood	2 Cars and Center Median

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1/24/2013	1052	EL CAMINO REAL/RAVENSWOOD AV	35	1	0	0	21703 CVC	S/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
1/24/2013	1825	EL CAMINO REAL/COLLEGE AV	32	0	0	0	22106 CVC	S/B ECR	300 ft N/O College	Sideswipe- Hit and Run	College	2 Cars
1/28/2013	1021	EL CAMINO REAL/MIDDLE AV	35	2	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Middle	4 Cars
2/25/2013	2056	ROBLE AV/EL CAMINO REAL	35	0	0	0	x	N/B ECR	Intersection	Broadside	Roble	2 Cars
3/2/2013	1443	EL CAMINO REAL/ALEJANDRA AV	35	2	0	0	22350 CVC	N/B ECR	Intersection-Crosswalk	Rearend	Alejandra	2 Cars
3/13/2013	1330	EL CAMINO REAL/OAK GROVE AV	30	0	0	0	21658(a) CVC	S/B ECR	Intersection	Sideswipe- Changing Lanes	Oak Grove	2 Cars
3/20/2013	1400	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	21703 CVC	S/B ECR	Intersection	Rearend	Oak Grove	2 Cars
4/15/2013	800	EL CAMINO REAL/VALPARAISO AV	25	0	0	0	21658(A) CVC	N/B ECR	200 ft S/O Valparaiso	Sideswipe- Hit and Run	Valparaiso	2 Cars
4/15/2013	1550	OAK GROVE AV/EL CAMINO REAL	25	0	0	0	21658(a) VC	W/B Oak Grove	50 ft E/O ECR	Sideswipe- Changing Lanes	Oak Grove	2 Cars
4/20/2013	2201	CAMBRIDGE AV/EL CAMINO REAL	30	0	0	0	21658(A) CVC	N/B ECR	Intersection	Sideswipe- Hit and Run	Cambridge	2 Cars
5/20/2013	1018	MIDDLE AV/EL CAMINO REAL	25	2	0	0	21755 CVC	E/B Middle	Driveway 495 ECR-Middle Side	Broadside	ECR	2 Cars
5/21/2013	1903	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	OTHER THAN DRIVER	Bike N/B ECR	100 ft N/O Cambridge	Solo Bike, Bag Caught	None	Solo Bike, Bag Caught
5/26/2013	1533	OAK GROVE AV/EL CAMINO REAL	40	0	0	0	other	S/B ECR	Stop Light at Location	Rearend- Medical Issue	Oak Grove	2 Cars
5/31/2013	1545	EL CAMINO REAL/ROBLE AV	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Roble	2 Cars
6/7/2013	0	1261 EL CAMINO REAL	30	1	0	0	22350 CVC	S/B ECR	1261 ECR	Rearend	1261 ECR	2 Cars
6/12/2013	1747	1246 EL CAMINO REAL	40	1	0	0	22350 CVC	N/B ECR	1246 ECR	Rearend	1246 ECR	3 Cars
6/13/2013	1506	PARTRIDGE AV/EL CAMINO REAL	35	0	0	0	21703 CVC	N/B ECR	Intersection	Rearend	Partridge	2 Cars
6/20/2013	1747	EL CAMINO REAL/OAK GROVE AV	40	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
6/24/2013	1016	OAK GROVE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	S/B ECR	Intersection	Sideswipe	Oak Grove	Car and Light Pole
6/28/2013	941	EL CAMINO REAL/MIDDLE AV	40	1	0	0	22107CVC	N/B ECR	250 ft N/O Middle	Sideswipe and Head On	Middle	3 Cars
7/2/2013	1850	STONEPINE LN/EL CAMINO REAL	25	0	0	0	22350 CVC	E/B Stonepine	100 ft E/O ECR	Sideswipe- Parked Car	ECR	2 Cars

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7/12/2013	1753	SANTA CRUZ AV/EL CAMINO REAL	35	1	0	0	23153 CVC	S/B ECR	Stop Light at Location	Sideswipe- Hit and Run	Santa Cruz	3 Cars
7/12/2013	1753	SANTA CRUZ AV/EL CAMINO REAL	40	0	0	0	23152(a) CVC	S/B ECR	Stop Light at Location	Sideswipe- Hit and Run	Santa Cruz	2 Cars
7/14/2013	1410	EL CAMINO REAL/OAK GROVE AV	40	0	0	0	22350(a) CVC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
7/30/2013	1515	ENCINAL AV/EL CAMINO REAL	35	0	0	0	22350 CVC	N/B ECR	200 ft N/O Encinal	Rearend	Encinal	2 Cars
8/1/2013	1415	EL CAMINO REAL/CAMBRIDGE AV	35	0	0	0	22107 CVC	S/B ECR	200 Blk ECR	Sideswipe- Parked Car	Cambridge	2 Cars
8/20/2013	2219	EL CAMINO REAL/RAVENSWOOD AV	35	2	0	0	21453(c) CVC	S/B ECR	Stop Light at Location	Rearend	Ravenswood	2 Cars
8/21/2013	848	EL CAMINO REAL/MIDDLE AV	35	1	0	0	unknown	Bike N/B ECR	700 Blk of ECR	Solo Bike, Unknown	None	Solo Bike, Unknown
8/23/2013	1320	OAK GROVE AV/EL CAMINO REAL	35	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
9/18/2013	628	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	22106 CVC	S/B ECR	Driveway of 1265 ECR	Braodside	1265 ECR	2 Cars
9/24/2013	1524	EL CAMINO REAL/OAK GROVE AV	40	1	0	0	22350(a) CVC	S/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars
10/10/2013	1036	EL CAMINO REAL/MIDDLE AV	30	0	0	0	22350 CVC	S/B ECR	Driveway for 525 ECR	Rearend	525 ECR	2 Cars
10/11/2013	1410	100 EL CAMINO REAL	35	0	0	0	22107 CVC	N/B ECR	Driveway for 100 ECR	Sideswipe- Hit and Run	100 ECR	2 Cars
10/15/2013	1544	CAMBRIDGE AV/EL CAMINO REAL	35	2	0	0	22350(a) CVC	S/B ECR	200 ft N/O Cambridge	Rearend	Cambridge	2 Cars
10/18/2013	1108	EL CAMINO REAL/GLENWOOD AV	35	0	0	0	21804 CVC	N/B ECR	Driveway for 1380 ECR	Broadside	1380 ECR	2 Cars
10/19/2013	1419	MIDDLE AV/EL CAMINO REAL	35	1	0	0	22107 CVC	Bike N/B ECR	Intersection	Solo Bike, Unknown	None	Solo Bike, Unknown
10/22/2013	1630	EL CAMINO REAL/STONEPINE LN	35	0	0	0	22350(a) CVC	N/B ECR	Intersection	Rearend	Stonepine	2 Cars
10/25/2013	2200	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	23152(B) CVC	N/B ECR	425 ft N/O Oak Grove	Sideswipe	Oak Grove	2 Cars
11/4/2013	1900	MIDDLE AV/EL CAMINO REAL	25	0	0	0	22107 CVC	E/B Middle	Driveway for 525 ECR- Middle Side	Rearend	525 ECR- Middle Side	2 Cars
11/8/2013	730	EL CAMINO REAL/LIVE OAK AV	25	0	0	0	21950 CVC	Bike E/B ECR in Crosswalk	Crosswalk	Bike vs Car	Car N/B ECR	Bike vs Car
11/12/2013	1802	VALPARAISO AV/EL CAMINO REAL	25	0	0	0	21751 CVC	E/B Valparaiso	100 ft W/O ECR	Sideswipe- Changing Lanes	ECR	2 Cars
11/22/2013	830	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend	Oak Grove	2 Cars

Menlo Park: El Camino Real 5-year Collision Records (2009-2013)

Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Direction of Travel	Relative Location	Collision Type	Adjacent or Street Address	Parties Involved
11/22/2013	1754	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	22107 CVC	S/B ECR	50 ft S/O 1279 ECR	Sideswipe- Hit and Run	Oak Grove	2 Cars
11/24/2013	1324	EL CAMINO REAL/MENLO AV	35	0	0	0	22107 CVC	S/B ECR- Parked Car	949 ECR	Sideswipe- Hit and Run	949 ECR	2 Cars
11/29/2013	1510	EL CAMINO REAL/GLENWOOD AV	35	1	0	0	22350(a) CVC	N/B ECR	Driveway for 1540 ECR	Rearend	1540 ECR	2 Cars
11/30/2013	657	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	S/B ECR	Stop Light at Location	Rearend	Santa Cruz	2 Cars
12/2/2013	1630	EL CAMINO REAL/ROBLE AV	35	1	0	0	22350 CVC	N/B ECR	Stop Light at Location	Rearend- Hit and Run	Roble	2 Cars
12/7/2013	739	EL CAMINO REAL/SANTA CRUZ AV	35	0	0	0	21453(a) CVC	E/B Santa Cruz	Intersection	Broadside- Ran Red Light	ECR	2 Cars
12/12/2013	1620	EL CAMINO REAL/OAK GROVE AV	35	0	0	0	22107 CVC	S/B ECR	150 ft N/O Oak Grove	Rearend	Oak Grove	2 Cars
12/13/2013	1000	OAK GROVE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	S/B ECR	Stop Light at Location	Rearend- Hit and Run	Oak Grove	2 Cars
12/19/2013	1330	RAVENSWOOD AV/EL CAMINO REAL	30	0	0	0	22350 CVC	W/B Ravenswood	500 ft E/O ECR	Rearend	ECR	2 Cars
12/26/2013	1430	VALPARAISO AV/EL CAMINO REAL	35	0	0	0	22107 CVC	E/B Valparaiso	Intersection- Turned Too Wide	Braodside	ECR	2 Cars
12/29/2013	1732	EL CAMINO REAL/GLENWOOD AV	35	1	0	0	21453(a) CVC	Car N/B ECR	Crosswalk	Car vs Bike	Bike E/B ECR in Crosswalk	Car vs Bike

Menlo Park: El Camino Real 10-year Pedestrian and Bicycle Collision Records (2004-2013)

Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Ped or Bicycle	Direction of Travel	Relative Location	Collsion Type	Adjacent or Street Address	Parties Involved
1/5/2004	1202	OAK GROVE AV/EL CAMINO R	25	1	0	0	21650.1VC	Bike	Car E/B Oak Grove to N/B ECR	Crosswalk	Car vs Bike	Bike S/B ECR	Car vs Bike
6/14/2004	1353	CAMBRIDGE AV/EL CAMINO R	35	1	0	0	21950 (b)	Ped	Car S/B ECR	Intersection	Car vs Bike	Ped S/B ECR in Roadway	Car vs Ped
8/17/2004	1420	LIVE OAK AV/EL CAMINO RE	25	1	0	0	21950(A)	Ped	Car E/B Live Oak to S/B ECR	10 ft W/O ECR	Car vs Ped	Bike S/B ECR	Car vs Ped
9/17/2004	2339	EL CAMINO REAL/ROBLE AV	35	0	1	0	21950(b)CVC	Ped	Car N/B ECR	Crosswalk	Car vs Ped	Ped W/B in Crosswalk	Car vs Ped
10/19/2004	1505	525 EL CAMINO REAL	35	1	0	0	21650.1 CVC	Bike	Car Exiting Driveway	Driveway to 525 ECR	Car vs Bike	Bike N/B ECR	Car vs Bike
10/31/2004	2007	241 EL CAMINO REAL	35	1	0	0	21804b VC	Ped	Car Backing out of Driveway	Driveway to 241 ECR	Car vs Bike	Bike N/B ECR	Car vs Bike
11/16/2004	635	CREEK DR/EL CAMINO REAL	25	1	0	0	21802(a) VC	Bike	Car E/B Creek to S/B ECR	10 ft W/O ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
1/16/2005	1410	MENLO AV/EL CAMINO REAL	30	0	0	0	21453(b) VC	Bike	Car N/B ECR to E/B Menlo	Intersection	Car vs Bike	Bike E/B Menlo Av	Car vs Bike
3/3/2005	1700	1150 EL CAMINO REAL	35	1	0	0	21202(a) VC	Bike	Car W/B from Driveway to N/B ECR	200 ft N/O Santa Cruz	Car vs Bike	Bike S/B ECR	Car vs Bike
3/10/2005	1100	1150 EL CAMINO REAL	25	1	0	0	21202(a) VC	Ped	Car W/B from Driveway to N/B ECR	Driveway of 1150 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
6/16/2005	1416	MIDDLE AV/EL CAMINO REAL	35	1	0	0	21650.1 VC	Ped	Car from Driveway to S/B ECR	Driveway of 1150 ECR	Bike vs Car	Bike S/B ECR	Bike vs Car
7/23/2005	915	EL CAMINO REAL/SANTA CRUZ AV	25	1	0	0	22107 VC	Ped	Car E/B Santa Cruz to S/B ECR	Crosswalk	Car vs Ped	E/B across ECR	Car vs Ped
8/23/2005	1813	EL CAMINO REAL/ENCINAL AVE	35	1	0	0	21950 VC	Ped	Car E/B Encinal to N/B ECR	Menlo College Entrance	Car vs Ped	S/B ECR in Crosswalk	Car vs Ped
3/13/2006	1536	495 EL CAMINO REAL	0	1	0	0	Other	Ped	Parking Lot- Veh Not in Gear and Rolled	495 ECR	Car vs Ped	Parking Lot 495 ECR	Car vs Ped
8/4/2006	1646	935 EL CAMINO REAL	35	1	0	0	21950 VC	Bike	Car from E/B Driveway to N/B ECR	935 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
11/24/2006	1602	EL CAMINO REAL/ROBLE AV	35	1	0	0	21952 VC	Ped	Car from E/B Driveway to S/B ECR	Driveway to 721 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
11/28/2006	1420	EL CAMINO REAL/HARVARD AV	35	0	1	0	21200 VC	Bike	Car E/B Harvard to S/B ECR	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
2/21/2007	838	CAMBRIDGE AV/EL CAMINO REAL	35	1	0	0	21950(a) VC	Ped	Car E/B Cambridge to N/B ECR	Crosswalk	Car vs Ped	W/B ECR in Crosswalk	Car vs Ped
3/24/2007	1708	EL CAMINO REAL/MIDDLE AV	35	1	0	0	22107 CVC	Bike	Car S/B ECR to W/B into Private Parking Lot	400 ft N/O Middle on ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
5/24/2007	1545	700 EL CAMINO REAL	25	1	0	0	21456(b) VC	Ped	Car N/B ECR to E/B Roble	Crosswalk	Car vs Ped	N/B ECR in Crosswalk	Car vs Ped

Menlo Park: El Camino Real 10-year Pedestrian and Bicycle Collision Records (2004-2013)

Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Ped or Bicycle	Direction of Travel	Relative Location	Collsion Type	Adjacent or Street Address	Parties Involved
8/17/2007	745	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	21453(a) CVC	Bike	Car S/B ECR to W/B Cambridge	Intersection	Car vs Bike	Bike E/B Cambridge	Car vs Bike
9/5/2007	2316	EL CAMINO REAL/SANTA CRUZ AV	25	1	0	0	22107 CVC	Ped	Car E/B Santa Cruz to S/B ECR	Crosswalk	Car vs Ped	E/B ECR in Crosswalk	Car vs Ped
1/6/2008	1039	EL CAMINO REAL/PARTRIDGE AV	0	1	0	0	22350 VC	Bike	Car E/B from Driveway to S/B ECR	Driveway to 275 ECR	Bike vs Car	Bike N/B ECR	Bike vs Car
1/17/2008	1746	751 EL CAMINO REAL	5	1	0	0	Other	Ped	Car Backing Up	Private Parking Lot 751 ECR	Car vs Ped	Ped in Parking Lot	Car vs Ped
4/2/2008	1841	MIDDLE AV/EL CAMINO REAL	35	1	0	0	unknown	Bike	Car E/B Middle to S/B ECR	Crosswalk	Car vs Bike	N/B ECR in Crosswalk	Car vs Bike
4/19/2008	338	EL CAMINO REAL/ENCINAL AV	25	0	0	0	22106 VC	Bike	Car W/B Encinal to N/B ECR	Intersection	Car vs Bike	Bike N/B ECR	Car vs Bike
6/12/2008	1519	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22517 VC	Bike	Car S/B ECR- Bike Hit Open Car Door	50 ft S/O Santa Cruz	Car vs Bike	Bike S/B ECR	Car vs Bike
9/23/2008	1547	301 EL CAMINO REAL	5	0	0	0	Unknown	Bike	Bike S/B ECR	301 ECR	Bike vs Lightpole	None	Bike vs Lightpole
11/12/2008	1629	SANTA CRUZ AV/EL CAMINO REAL	25	1	0	0	Other	Bike	Car Exiting Driveway to W/B Santa Cruz	1010 ECR Driveway	Car vs Bike	Bike E/B Santa Cruz	Car vs Bike
3/12/2009	750	EL CAMINO REAL/VALPARAISO AV	35	1	0	0	21453 VC	Ped	Bike E/B ECR Against Red Light	Crosswalk	Car vs Bike	Car S/B ECR	Car vs Bike
8/27/2009	918	SANTA CRUZ AV/EL CAMINO REAL	35	1	0	0	22517 VC	Bike	Car Parked S/B ECR- Bike Hit Open Car Door	1081 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
9/10/2009	1326	MENLO AV/EL CAMINO REAL	35	1	0	0	11.56.120 CO	Ped	Ped E/B Menlo	Intersection	Ped vs Bike	Bike S/B ECR	Ped vs Bike
12/28/2009	1243	CREEK DR/EL CAMINO REAL	35	1	0	0	21802(a) VC	Bike	Car E/B Creek to S/B ECR	Intersection	Car vs Bike	Bike N/B ECR	Car vs Bike
1/6/2010	726	100 EL CAMINO REAL	35	1	0	0	21804 VC	Bike	Car Exiting Driveway	Driveway to 100 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike
7/16/2010	1137	EL CAMINO REAL/HARVARD AV	35	1	0	0	21950(a) CVC	Ped	Car E/B Harvard to S/B ECR	Intersection	Car vs Bike	Bike N/B ECR	Car vs Bike
7/29/2010	517	EL CAMINO REAL/OAK GROVE AV	35	1	0	0	21453(b) VC	Bike	Car E/B Oak Grove to S/B ECR	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
8/2/2010	851	MIDDLE AV/EL CAMINO REAL	35	0	0	0	22107 CVC	Bike	Car S/B ECR Turning into 495 ECR	495 ECR	Car vs Bike	Bike S/B ECR	Car vs Bike-Hit and Run
2/4/2011	930	EL CAMINO REAL/MIDDLE AV	5	1	0	0	21202(a) CVC	Bike	Car Exiting Driveway	200 ft W/O ECR	Car vs Bike	Bike E/B Middle	Car vs Bike
4/6/2011	1145	EL CAMINO REAL/MIDDLE AV	35	0	1	0	21950 cvc	Ped	Car W/B Middle to N/B ECR	Crosswalk	Car vs Ped	Ped N/B ECR	Car vs Ped
6/23/2011	1030	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22517 CVC	Bike	Car Parked S/B ECR-Bike Hit Open Car Door	100 ft S/O Oak Grove	Car vs Bike	Bike S/B ECR	Car vs Bike
7/26/2011	824	EL CAMINO REAL/ALEJANDRA AV	35	0	1	0	21950(b) CVC	Ped	Car N/B ECR	Crosswalk	Car vs Ped	W/B ECR in Crosswalk	Car vs Ped

Menlo Park: El Camino Real 10-year Pedestrian and Bicycle Collision Records (2004-2013)

Date	Time	Location	Speed Limit	Minor Injuries	Major Injuries	Fatal Injuries	Primary Collision Factor	Ped or Bicycle	Direction of Travel	Relative Location	Collsion Type	Adjacent or Street Address	Parties Involved
9/21/2011	900	MIDDLE AV/EL CAMINO REAL	30	1	0	0	21950 CVC	Ped	Car E/B Middle to S/B ECR	Crosswalk	Car vs Ped	N/B ECR in Crosswalk	Car vs Ped
12/22/2011	1530	EL CAMINO REAL/SANTA CRUZ AV	30	0	0	0	21950 CVC	Ped	Car W/B Santa Cruz To N/B ECR	Crosswalk	Car vs Ped	S/B ECR in Crosswalk	Car vs Ped
2/14/2012	1230	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	22107 CVC	Bike	Car S/B ECR to W/B Cambridge	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
5/25/2012	1515	1200 EL CAMINO REAL	35	1	0	0	11.56.120 CO	Bike	Bike N/B ECR-on Sidewalk	Driveway to 1200 ECR	Bike vs Car	Car N/B ECR into Driveway	Bike vs Car
7/3/2012	1554	EL CAMINO REAL/OAK GROVE AV	30	1	0	0	21650.1 CVC	Bike	Car W/B Oak Grove to N/B ECR	Intersection	Car vs Bike	Bike S/B ECR	Car vs Bike
9/4/2012	1130	SANTA CRUZ AV/EL CAMINO REAL	35	1	0	0	21955 CVC	Ped	Car N/B ECR	Crosswalk	Car vs Ped	W/B ECR in Crosswalk	Car vs Ped
9/30/2012	2	EL CAMINO REAL/CREEK DR	35	1	1	0	21954(a) CVC	Ped	Car S/B ECR	Running across ECR	Car vs Ped	Running E/B across ECR	Car vs Ped-Hit and Run
11/2/2012	1823	EL CAMINO REAL/SANTA CRUZ AV	35	1	0	0	22350 CVC	Bike	Car N/B ECR-Rearended Bike	50 ft S/O Santa Cruz	Car vs Bike	Bike N/B ECR	Car vs Bike
11/5/2012	2022	100 EL CAMINO REAL	35	0	1	0	23152 CVC	Bike	Bike N/B ECR	100 ECR	Bike vs Unknown	None	Bike vs Unknown
11/6/2012	600	MENLO AV/EL CAMINO REAL	25	1	0	0	22350 CVC	Bike	Bike W/B Menlo	300 ft W/O ECR	Solo Bike, Gravel	None	Solo Bike, Gravel
12/6/2012	1836	500 EL CAMINO REAL	35	1	0	0	21202(a) CVC	Bike	Car N/B ECR Turn Lane	Driveway to 525 ECR	Car vs Bike	Bike N/B ECR	Car vs Bike
5/21/2013	1903	EL CAMINO REAL/CAMBRIDGE AV	35	1	0	0	OTHER THAN DRIVER	Bike	Bike N/B ECR	100 ft N/O Cambridge	Solo Bike, Bag Caught	None	Solo Bike, Bag Caught
8/21/2013	848	EL CAMINO REAL/MIDDLE AV	35	1	0	0	unknown	Bike	Bike N/B ECR	700 Blk of ECR	Solo Bike, Unknown	None	Solo Bike, Unknown
10/19/2013	1419	MIDDLE AV/EL CAMINO REAL	35	1	0	0	22107 CVC	Bike	Bike N/B ECR	Intersection	Solo Bike, Unknown	None	Solo Bike, Unknown
11/8/2013	730	EL CAMINO REAL/LIVE OAK AV	25	0	0	0	21950 CVC	Ped	Bike E/B ECR in Crosswalk	Crosswalk	Bike vs Car	Car N/B ECR	Bike vs Car
12/29/2013	1732	EL CAMINO REAL/GLENWOOD AV	35	1	0	0	21453(a) CVC	Bike	Car N/B ECR	Crosswalk	Car vs Bike	Bike E/B ECR in Crosswalk	Car vs Bike

El Camino Real On-Street Parking Inventory

Menlo Park - El Camino Real Weekday Parking Survey

Date: 6-Jun-14

El Camino Real Block	Location	Northern Limit	Southern Limit	Number of Spaces		Current Parking Regulations & Price	
				East side	West side	East Side	West Side
A	El Camino Real	Encinal Avenue	Glenwood Avenue-Valparaiso Avenue	0	14	N/A	Unmarked: 14
B	El Camino Real	Glenwood Avenue-Valparaiso Avenue	Oak Grove Avenue	16	15	2 hr [7-6]: 2 spots, 1 hr [7-6]: 4 spots, 15 min: 4 spots, Unmarked: 6 spots	1 hr [9-6]: 14 spots, 15 min: 1 spot
C	El Camino Real	Oak Grove Avenue	Santa Cruz Avenue	0	4	N/A	2 hr[9-6]: 1 spot, 1 hr [9-6]: 3 spots
D	El Camino Real	Santa Cruz Avenue	Menlo Avenue-Ravenswood Avenue	0	8	N/A	2 hr[9-6]: 8 spots
E	El Camino Real	Menlo Avenue-Ravenswood Avenue	Live Oak Avenue	0	10	N/A	1 hr [9-6]: 2 spots, 3 min: 3 spots, Loading: 2 spots, Unmarked: 3 spots
F	El Camino Real	Live Oak Avenue	Roble Avenue	20	0	1 hr [7-6]: 7 spots, Drop off/Pick up: 2 spots, Unmarked: 11 spots	N/A
G	El Camino Real	Roble Avenue	Middle Avenue	0	0	N/A	N/A
H	El Camino Real	Middle Avenue	College Avenue	0	8	N/A	1 hr [7-6]: 8 spots
I	El Camino Real	College Avenue	Partridge Avenue	12	6	2 hr [7-6]: 5 spots, Unmarked: 7	Unmarked: 6 spots
J	El Camino Real	Partridge Avenue	Cambridge Avenue	11	0	2 hr [7-6]: 2 spots, Unmarked: 9	N/A
K	El Camino Real	Cambridge Avenue	Harvard Avenue	8	0	N/A	N/A
L	El Camino Real	Harvard Avenue	Creek Drive	18	6	Unmarked: 18 spots	1 hr]7-6]: 4 spots, Loading: 2 spots
M	El Camino Real	Creek Drive	Sand Hill Road	0	0	N/A	N/A
			El Camino Real Total	*85*	*71*		

Side Street #	Street Name	Eastern Limit	Western Limit	Number of Spaces		Current Parking Regulations & Price	
				North side	South side	North Side	South Side
1	Encinal Avenue (east of ECR)	San Antonio Avenue	El Camino Real	8	5	Unmarked: 8 Spots	Unmarked: 5 spots
2	Valparaiso Avenue (west of ECR)	El Camino Real	Hoover Street	0	3	N/A	Unmarked: 3 spots
3	Glenwood Avenue (east of ECR)	San Antonio Avenue	El Camino Real	10	2	Unmarked: 10 spots	Loading: 2 spots
4	Oak Grove Avenue (west of ECR)	El Camino Real	Hoover Street	5	9	2 hr [9-6]: 5 spots	2 hr [9-6]: 5 spots, 15 min [9-6]: 3 spots, Unmarked: 1 spot
5	Oak Grove Avenue (east of ECR)	Merrill Street	El Camino Real	7	9	2 hr [9-6]: 7 spots	2 hr [9-6]: 8 spots, Loading: 1 spot
6	Santa Cruz Avenue (west of ECR)	El Camino Real	Doyle Street	5	4	1 hr [9-6]: 4 spots, 15 min: 1 spot	1 hr [9-6]: 4 spots
7	Santa Cruz Avenue (east of ECR)	Merrill Street	El Camino Real	8	4	1 hr [7-6]: 7 spots, 15 min: 1 spot	Loading: 4 spots
8	Menlo Avenue (west of ECR)	El Camino Real	Doyle Street	0	0	N/A	N/A
9	Ravenswood Avenue (east of ECR)	Merrill Street	El Camino Real	0	0	N/A	N/A
10	Live Oak Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	2	2	1 hr [7-6]: 2 spots	1 hr: 2 spots
11	Roble Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	0	0	N/A	N/A
12	Middle Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	0	0	N/A	N/A
13	College Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	2	3	1 hr [7-6]: 2 spots	Unmarked: 3 spots
14	Partridge Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	3	3	1 hr [7-6]: 3 spots	Unmarked: 3 spots
15	Cambridge Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	0	0	N/A	N/A
16	Harvard Avenue (west of ECR)	El Camino Real	100 feet west of El Camino Real	3	4	2 hr [7-6]: 3 spots	2 hr [7-6]: 4 spots
17	Creek Drive (west of ECR)	El Camino Real	100 feet west of El Camino Real	0	4	N/A	Unmarked: 4 spots
18	Palo Alto Avenue (east of ECR)	100 feet east of El Camino Real	El Camino Real	0	0	N/A	N/A
19	Sand Creek Road (west of ECR)	El Camino Real	100 feet west of El Camino Real	0	0	N/A	N/A

**All restrictions excempt on holidays and weekends

APPENDIX D

Best Practices Toolbox

Summary of Best Practices

Introduction

The *Menlo Park El Camino Real Downtown Specific Plan*, adopted in June 2012, emphasizes the character and extent of enhanced public spaces, the character and intensity of private infill development, and circulation and connectivity improvements to preserve and enhance community life. The plan focuses on improvements along the El Camino Read corridor in the City of Menlo Park, as well as downtown Menlo Park and the Menlo Park Caltrain Station area. For transportation circulation, the Specific Plan envisions the following:

- *A vehicular circulation system that accommodates both local traffic and north/south through traffic on El Camino Real.*
- *An integrated pedestrian network of expansive sidewalks, promenades and paseos along El Camino Real and within downtown. The network provides opportunities for safe crossing of El Camino Real and the railroad tracks and connects the east and west sides of town, including the City's civic center with downtown.*
- *A bicycle network that builds upon existing plans and integrates more fully with downtown and proposed public space improvements in the area.*
- *An integrated circulation plan that supports transit use.*
- *A public parking strategy and management plan that efficiently accommodates downtown visitors and supports downtown businesses.*
- *Modified parking rates for private development based on current industry standards.*

Through the completion of these visions, the Specific Plan accommodates all travel modes, with an emphasis on pedestrians, bicyclists, transit users and parking for downtown. The Specific Plan focuses development in areas well served by transit with a mix of uses in close proximity in order to reduce the reliance on private motor vehicles. The Specific Plan outlines specific pedestrian, bicycle, and transit policies which support each mode's individual goals while fulfilling the overall goals of the Specific Plan.

Based on these goals from the Downtown Specific Plan, following is a "toolbox" of potential improvement measures for the El Camino Real corridor which would support the goals of each mode. This toolbox focuses on curb to curb improvements within the public right-of-way to create Complete Streets. The details of additional circulation improvements outside of the roadway are summarized in the Specific Plan. Images and specific examples of these measures which have been implemented in the Bay Area are shown.

Pedestrian Improvements

Through new development and redevelopment, the Specific Plan anticipates an increase in the number of pedestrians along El Camino Real and in the station area and downtown, the Specific Plan focuses on pedestrian east-west connectivity across El Camino Real, north-south connectivity along El Camino Real, and circulation through the downtown area supported by the following modifications:

- *Improved pedestrian comfort and accommodation*
- *Addition of track-separated pedestrian/bicycle access across the railroad tracks*
- *Reduced pedestrian crossing distances across El Camino Real*

The following improvement measures, and accompanying examples, would aid in the improvement of the pedestrian environment along the El Camino Real Corridor as outlined by the Specific Plan:

1. High Visibility Crosswalks – Clearly delineated pedestrian crossing areas to enhance visibility and the pedestrian environment.

Figure 1 Ladder Crosswalk (Main Street/Harrison Street, San Francisco)

Figure 2 Brick Crosswalk (El Camino Real/Stanford Avenue, Palo Alto)

2. Curb Extensions – Increase the visibility of pedestrians while reducing intersection crossing distance by aligning pedestrians with the edge of the parking lane.

Figure 3 Curb Extensions and High Visibility Elements (Mission Street at Alp Avenue, Daly City)

3. Pedestrian Refuge Median – Reduce the exposure time experienced by pedestrians in the intersection and provide the ability to cross in two separate legs. In Menlo Park, there would be a desire to ensure that the existing median trees are not impacted by these refuge areas.

Figure 4 Pedestrian Refuge Island (Van Ness Avenue/McAllister Street, San Francisco)

4. Enhanced Pedestrian Signal Functions – Leading Pedestrian Intervals provide pedestrians a head start when entering the intersection in order to increase the visibility of pedestrians in the intersection. Countdown signal heads will inform pedestrians of the available time to cross.

Figure 5 Leading Pedestrian Interval (Mission Street/6th Street, San Francisco)

Figure 6 Pedestrian Countdown Signal

5. Enhanced Crossing Signage – Intended to increase pedestrian visibility, but should not replace geometric design strategies. Provides motorists more warning of approaching pedestrian crossing

Figure 7 Enhanced Active when Present Signage (San Pablo Avenue/Madison Avenue, El Cerrito)

6. Turn Limitations – Prohibiting and/or limiting motorists turning movements to reduce conflicts with pedestrians.

Figure 8 No Right Turn on Red (Winchester Boulevard/Daves Street, Los Gatos)

7. Enhanced Pedestrian Railroad Crossings – Provide pedestrians a direct crossing of the tracks in order to increase safety and reduce exposure time.

Figure 9 Pedestrian Gates at Railroad Crossings

Note: All of the pedestrian crossings of El Camino Real are at signalized intersections, so additional enhancements which apply to uncontrolled intersection crossings are not included in this discussion.

Bicycle Improvements

The Specific Plan highlights bicycling as an important mode of transportation for the City. Many Menlo Park residents commute to work by bicycle taking advantage of a mild climate and relatively flat terrain to access many destinations within close proximity to their home or place of employment. In accordance with the Menlo Park Comprehensive Bicycle Development Plan (CBDP), the Specific Plan establishes a comprehensive bicycle network for the El Camino Real corridor, downtown area, and Caltrain station area. This network recommends a combination of bicycle paths, bicycle lanes, and bicycle routes. The Specific Plan includes recommended facilities included in the DBDP, upgraded recommendations from the DBDP, and new recommendations to improve east-west connectivity and north-south facilities. The concept of El Camino Real in the Specific Plan embraces providing a continuous bike route along the length of the corridor, with the potential for a dedicated bike lane in the future.

The following improvement measures, and accompanying examples, would aid in the implementation of bicycle network improvements along El Camino Real as outlined in the Specific Plan:

1. Conventional Bike Lanes – Designate an exclusive space for bicyclists through pavement markings and signage. Located adjacent to travel lanes and flows in the same direction as traffic.

Figure 10 Conventional Bike Lane (Folsom Street, San Francisco)

2. Buffered Bike Lanes – Conventional bike lanes paired with a designated buffer space to separate the bicycle lane from the adjacent travel lane or parking lane.

Figure 11 Buffered Bike Lane (Fourth Street, San Jose)

3. Cycle Tracks – Exclusive bicycle facilities physically separated and sometimes elevated from vehicle traffic and distinct from the sidewalk. These can be configured as either one-way or two-way depending on the available width.

Figure 12 Two Way Cycle Track (Fernside Boulevard, Alameda)

4. Shared Lane Markings – Also known as Sharrows, these are road markings used to indicate a shared lane environment for bicycles and vehicles which recommend proper bicycle positioning and offer directional guidance. These markings are generally used on both local and arterial streets where there is not adequate width for full bike lanes.

Figure 13 Shared Lane Markings (Scott Street, San Francisco)

5. Parallel Bicycle Boulevard – Parallel streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority.

Figure 14 Bicycle Boulevard (Milvia Street which is parallel to Shattuck Avenue, Berkeley)

6. Colored Bike Facilities – Increases the visibility of the bicycle facility, identifies potential conflict areas, and reinforces bicycle priority in conflict areas.

Figure 15 Green Conflict Zone Markings at driveways (Fell Street, San Francisco)

7. Bicycle Through Lanes at Intersections – Enable bicyclists to correctly position themselves to travel through the intersection, minimizing conflict and creating predictability

Figure 16 Through Bike Lane (Oak Street/Lake Merritt Boulevard, Oakland)

8. Intersection/Bicycle Crossing Markings – Increase bicycle visibility and reduce exposure in the intersection.

Figure 17 Intersection Bicycle Crossing Markings (Market Street/Octavia Blvd, San Francisco)

9. Bike Boxes – A designated area ahead of the travel lane that provides bicyclists with a safe and visible way to get ahead of queuing traffic.

Figure 18 Green Bike Box (Scott Street/Oak Street, San Francisco)

10. Two-Stage Turn Queue Boxes – Orient bicyclists properly for turning movements, provide a better way to make left turns at multi-lane signalized intersections.

Figure 19 Two-State Turn Queue Boxes (Eighth Street/Folsom Street (top) and 11th Street/ Howard Street (bottom), San Francisco)

11. Bicycle Turn Signal Heads – Provide for specific bicycle turn movement at signalized intersections.

Example Pending

12. Full Bicycle Signal – Standard three lens signal specifically for bicycles provide priority to bicycle movements at intersections and accommodates bicycle-only movements.

Figure 20 Bicycle Signal (Panhandle Park along Fell Street, San Francisco)

13. Increased Bicycle Parking and Storage – Safe and convenient bicycle parking racks and storage would encourage bicycle trips to the Downtown and Caltrain.

Figure 21 Bicycle Parking (Embarcadero BART Station, San Francisco)

Transit Improvements

The land use intensification as part of the Specific Plan will result in increased travel along El Camino Real and around downtown Menlo Park. Transit must play an important role in accommodating the increases travel to reduce the reliance on private vehicles and relieve pressure from the roadway network. The Specific Plan supports transit improvements by recommending the following:

- *Increase shuttle service to serve added travel demand;*
- *Improve east-west connectivity and reduce demand for parking in the plan area; and*
- *Continue employer-sponsored programs that support and increase transit use.*

The following improvement measures, and accompanying examples, would aid in the improvement of transit services in the El Camino Real corridor and connectivity to the Caltrain Station as outlined by the Specific Plan:

1. Bus Bulbs – Curb extensions that align the bus stop with the parking lane, allowing busses to stop and board passengers without ever leaving the travel lane.

Figure 22 Bus Bulb (San Francisco)

2. Far-Side Bus Stops – Located at the far side of an intersection, these allow for passengers to cross behind the bus improving visibility of crossing pedestrians for drivers waiting at the intersection.

Figure 23 Far-Side Bus Stop (San Pablo Avenue/Stanford Avenue, Oakland)

3. Midblock Bus Stops – Recommended for important destinations or locations where multiple buses may queue.

Figure 24 Midbock Bus Stop (Broadway at the 12th Street BART Station, Oakland)

4. Transit Signal Priority – Modifications to normal signal operation process to better accommodate transit vehicles through preferential treatment.

5. Bus Stop Facilities – All bus stops should have improved shelters, bike racks, and expanded sidewalks to separate the waiting area from the walking area of the sidewalk.

Figure 25 Real Time Arrival Display (VTA Bus Stop)

Figure 26 Bus Shelter (Muni Bus Stop, San Francisco)

Streetscape Improvements

The Specific Plan proposes streetscape improvements on El Camino Real that unify the street experience by using a common language of trees, paving materials, and lighting elements. The intent of these improvements is to encourage walking and pedestrian activity along El Camino Real with improved walkability and comfort. These streetscape improvements should incorporate the green street standards of the *San Mateo County Sustainable Green Streets and Parking Lots Design Guidebook*. This guidebook recommends sustainable stormwater facilities to minimize pollution, stream degradation, and localized flooding. The following improvement measures, and accompanying examples, would aid in streetscape improvements as outlined by the Specific Plan:

1. Street Trees – Provide tree cover to create substantial shaded pathways to encourage walking and completing tree canopy or shade where possible. Mitigate heat island effects.

Figure 27 Street Trees (Shattuck Avenue, Berkeley)

2. Median Enhancements – Additional trees and landscaping to complete tree canopy or shade where possible.

Figure 28 Medians (Octavia Boulevard, San Francisco)

3. Parklet – Public seating platforms that convert curbside parking spaces into community spaces along narrow or congested sidewalk to increase public space and seating.

Figure 29 Parklet (Clement Street, San Francisco)

Figure 29 Streetview of Parklet (Clement Street, San Francisco)

4. Temporary Street Closures – Allow cities to take better advantage of roadways and call attention to neighborhood businesses and increase foot traffic on designated corridors.

Figure 30 Art & Soul Festival (Downtown Oakland)

Figure 31 Farmers Market (Center Street, Berkeley)

5. Interim Public Plazas – Transforms underutilized areas of roadway into public spaces for surrounding residents and businesses.

Figure 323 Temporary Plaza (Telegraph Avenue at Broadway, Oakland)

Figure 33 Jane Warner Plaza (17th Street/Castro Street, San Francisco)

6. Vegetated Swales – Shallow landscaped areas designed to capture, convey, and potentially infiltrate stormwater runoff as it moves downstream.

Figure 34 Vegetated Swale (Freedom Park Road, Sacramento County)

7. Infiltration/Flow-Through Planters – Contained landscaping areas designed to capture and retain stormwater runoff.

Figure 35 Flow-Through Planters (San Pablo Avenue, El Cerrito)

8. Pervious Pavement – Allows rainwater to either pass through the paving system itself or through joint openings between the pavers.

Figure 36 Porous Asphalt (Bay Street Demonstration Parking Lot, Fremont)

9. Rain Gardens – Shallow landscaped areas that can collect, slow, filter, and absorb large volumes of water delaying discharge into the watershed system.

Figure 37 Rain Garden (Cesar Chavez Street, San Francisco)

10. Stormwater Curb Extensions – Landscaped areas within the parking zone of a street that capture stormwater and allow it to interact with plants and soil.

Figure 29 Green Curb Extension (Donnelly Avenue, Burlingame)

11. Pavement Reallocation - The available pavement should be delineated to serve all needs, including travel lanes, safety islands, bike lanes, and landscaping. Therefore, it is necessary under certain circumstances to reallocate the pavement space to better serve all users. The reallocation of pavement could reduce travel speeds, improve safety and operations, enhance neighborhood character, improve access, and reduce imperious pavement area to decrease water run-off. Pavement reallocation could include the narrowing of travel lanes, the removal of supplemental turn lanes, or the removal of on-street parking. The additional space could be used to add buffers to bike lanes, construct green infrastructure elements, or extend the width of sidewalks.

Parking

The proposed improvements of the Specific Plan to create additional public space, such as widened sidewalks, will affect the amount and availability of on-street parking supplies. In order to mitigate these affects, the Specific Plan recommends the construction of up to two new parking garages and the creation of a Parking Management Plan to improve the utilization of parking in downtown Menlo Park. Focusing on the Parking Management Plan, as it affects part of the curb-to-curb focus of this summary of best practices, it is recommended that it could encompass varied time limits for parking, parking pricing, and the accommodation of car-share program. Additionally, changing the design of on-street parking could have a positive effect on the available parking supply. The following management strategies and design standards, and accompanying examples, would aid in parking improvements as outlined by the Specific Plan:

1. Short On-Street Parking Time Limits – Used to encourage turnover in areas where high turnover is expected or warranted.

Figure 38 Short-Term Parking Restrictions (Berkeley)

2. Long Off-Street Parking Time Limits – Encourage employees and multi-purpose trips to park off-street to free up available spaces to improve convenience.

Figure 39 Early Bird Off-Street Parking Rates (Oakland)

3. Parking Pricing Strategies – Price convenient/desirable spaces at a higher rate. Set parking prices so that 85 percent of curbside spaces are occupied during peak periods.

Figure 40 Variable Parking Rates (Berkeley)

Figure 41 Single Point of Payment Parking Meter (Oakland)

4. Vegetated Parking Lanes – Utilize street trees or planters to separate parking spaces.

Figure 42 Trees used as buffers in parking lane (Grant Avenue, Novato)

5. Parking Lanes as Buffers – Place the parking lane between the bicycle lane and the travel lane to increase bicycle protection.

Figure 43 Parking used as buffers for bike lane (JF Kenndy Drive, San Francisco)

APPENDIX E

Traffic Forecasting Procedure

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MEMORANDUM

Date: January 27, 2015

Project #: 18016

To: Steve Weinberger
W-Trans
490 Mendocino Avenue, Suite 201
Santa Rosa. CA 95401

CC: Sam Lam

From: Damian Stefanakis, Kittelson & Associates

Project: Menlo Park El Camino Real Corridor Study
Subject: Documentation of Travel Forecasting Procedure

This memo summarizes the approach, methodology and results from the travel demand forecasting for the Menlo Park El Camino Real Corridor study conducted by Kittelson and Associates (KAI).

KAI utilized the C/CAG-VTA Bi-County Travel Demand Model with 2010 and 2035 ABAG Draft SCS (Sustainable Communities Strategy) socio-demographic assumptions. This version of the model represented the most current model at the commencement of the study (in June 2014).

KAI obtained permission from CCAG to use the model, and requested the latest modeling files from CCAG and VTA staff. KAI reviewed the model input assumptions, including networks and land uses for all Traffic Analysis Zones (TAZ) within Menlo Park. KAI also reviewed the model validation for 2010 and compared these to the study intersection counts supplied by W-Trans. KAI transmitted network plots and land use assumptions to W-Trans and City staff for review and comment. Comments on both were provided and KAI incorporated these into the model.

Network

The Countywide Model has a coarse network representation within the study area. Therefore not all the cross streets of interest to this study are represented. So the network modifications primarily involved the addition of missing cross streets to better represent all legs of the identified study

intersections. The plots in the Appendix describe the model network, before and after the additional street network was coded in to better represent the 9 study intersections within the model.

Land Use

The Countywide model land uses primarily reflect ABAG assumptions at the census tract level, and are not necessarily accurate at the individual TAZ level, especially with representing future projects for 2035 conditions (CCAG and VTA are in the process of updating the model to Plan Bay Area Projections and requesting input from San Mateo County jurisdictions on future general plans to better allocate the land uses to individual TAZs. This version of the model will be released in mid-2015). KAI provided City of Menlo Park staff the 2010 and 2035 socio-demographic input data. City staff reviewed these and made appropriate adjustments to the growth and location of key future projects in the corridor, primarily to reflect the approved El Camino Real Downtown Specific Plan. The tables below represent the land uses before and after changes were made. Changes were reflected primarily to the 2035 inputs.

BASELINE MODEL RUNS

KAI then ran the CCAG model with the corrected 2010 No-Project and 2035 No-Project scenarios. The results were reviewed using model difference plots and finetuned based on a review of the traffic counts until the model reasonably matched the mainline and cross street volumes. Model plots were transmitted to W-Trans for review and approval. Following the approval of the baseline forecasts, KAI then extracted intersection turning volumes at the 9 study intersections for 2010 and 2035 no-project conditions. The turning volumes were processed using KAI's TURNS program that uses an industry standard NCHRP-255 incremental adjustment method with Furness balancing. The process essentially compares the base year model to the counts (i.e.: describes the model versus count turning volume error at the 9 study intersections) and incrementally removes, or adjusts, the model error out of the 2035 forecasts. KAI then made further appropriate manual adjustments to the 2035 forecasts to be consistent with turn volumes from the El Camino Real Downtown Specific Plan primarily at the intersections at Middle Road and Cambridge Avenue where model TAZs were too large (and in some cases the boundary crossed El Camino Real) to produce accurate turn volumes.

ALTERNATIVES

The three project alternatives consisted of a roadway capacity increase, and two bicycle alternatives. The road capacity increase was straight forward as it represents a lane addition from 2 lanes to 3 lanes in each direction on El Camino Real within the Menlo Park City Limits. The bicycle alternatives consisted of a buffered bike lane and a separate cycle track, and were more complex to code into the model as they required an understanding of the model's non-motorized mode forecasting procedures. KAI identified the procedures used in the model and coded the bike lanes per the alternatives definition. KAI then conducted a sensitivity run to see how the model's mode split and

trip assignment would respond to the new bicycle alternatives. The sensitivity runs indicated the mode split is reasonably sensitive to addition of new bicycle infrastructure. However, the trip assignment was very sensitive to improved bicycle facility speeds as it uses an all-or-nothing travel time algorithm and diverted more bike trips than expected onto El Camino Real. This led to an improved understanding of how the model would react and what the results mean. As a result, the team decided that the large increase in bicycle trips in the corridor evident in the trip assignment was more optimistic as it did not represent net new bicycle trips but more related to redistribution of existing bicycle trips using the improved speeds in the corridor and therefore the team had less confidence on the trip assignment results. The team decided the mode split was a better indicator of the bicycle alternatives performance. These results were used to scale any reduction in peak hour vehicle trips for the bicycle alternatives.

2035 Alternative 1 – Increase El Camino Real to 6-lanes

KAI then ran the model for 2035 Alternative 1 which assumed a lane increase from 2-lanes to 3-lanes in each direction in the El Camino Real corridor throughout the Menlo Park City Limits. The results were reviewed using model difference plots and intersection turn volumes were extracted and adjusted using the same methods described above for NCHRP-255 and further manual adjustments to reflect the Specific Plan.

2035 Alternative 2 – Add Buffered Bike Lane on El Camino Real

The model has a non-motorized mode choice and trip assignment procedure. Using the model's built-in bicycle parameters, KAI coded the model to represent a buffered bike lane per Alternative 2.

KAI then ran the model for 2035 Alternative 2 and reviewed the mode split results and trip assignment results. As mentioned above, the mode split results were deemed a more reliable indicator of the change in bicycle and vehicle trips in the corridor and therefore they were used to compute the peak hour vehicle trips reduction for Alternative 2. The resulting vehicle trip reduction in the corridor under Alternative 2 was very minimal (0-1 vehicle trips per peak hour).

2035 Alternative 3 – Add Buffered Cycle Track on El Camino Real

KAI then ran the model for 2035 Alternative 3 and reviewed the mode split results and trip assignment results. As mentioned above, the mode split results were deemed a more reliable indicator of the change in bicycle and vehicle trips in the corridor and therefore they were used to compute the peak hour vehicle trips reduction for Alternative 3. The resulting vehicle trip reduction in the corridor under Alternative 2 was more significant (from 62-94 vehicle trips per peak hour and split for both northbound and southbound directions).

ADDITIONAL ADJUSTMENTS

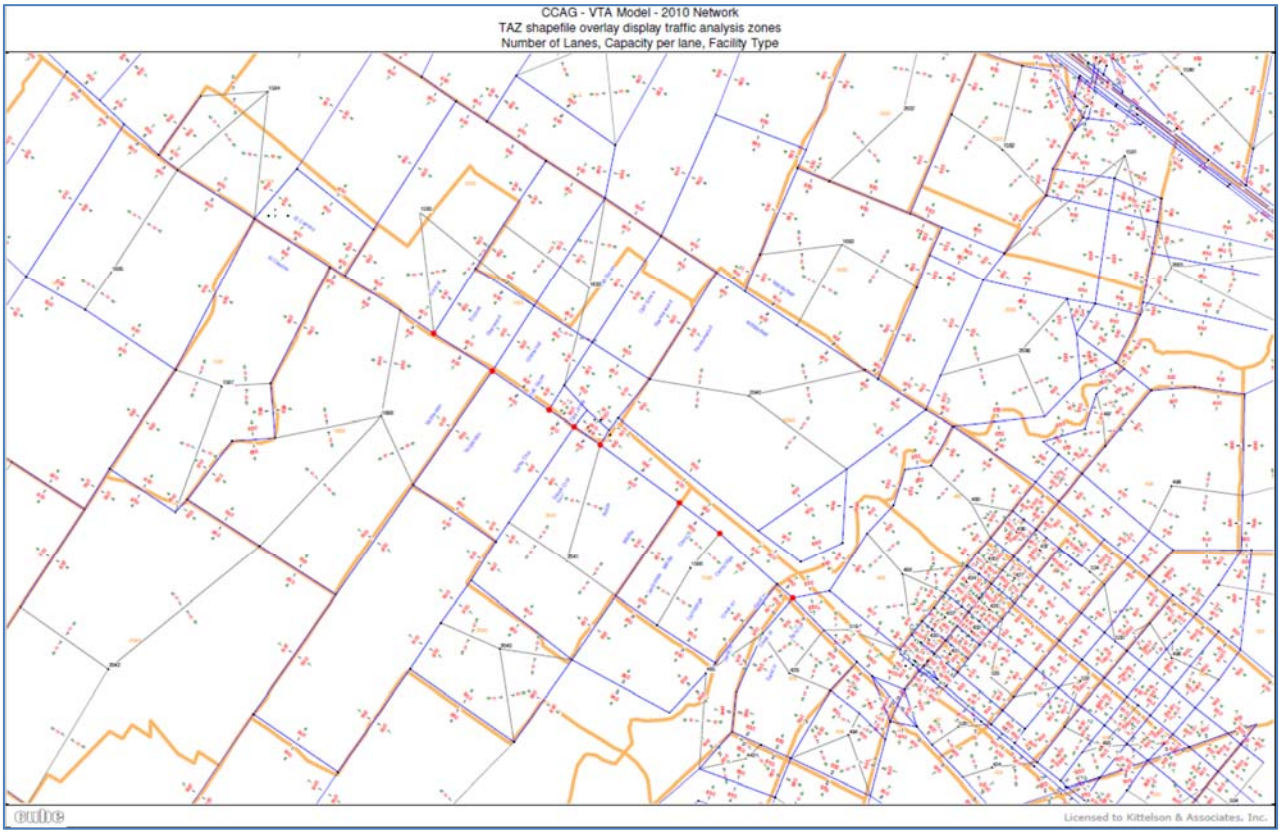
W-Trans provided KAI with the forecasts from the El Camino Real Downtown Specific Plan at the intersections common to both studies. KAI used these forecasts to make appropriate adjustments to the El Camino Real forecasts, primarily at two intersections of El Camino Real at Middle Road and Cambridge Avenue. The adjustments consisted of modifying inbound and outbound trips accessing the Specific Plan developments on the east side of El Camino Real to match the results from the Specific Plan and reduce any double counting of trips by the model (associated with the coarse TAZ boundary crossing El Camino Real). Adjustments on individual movements ranged from -24 to +64 vehicles per hour.

RESULTS

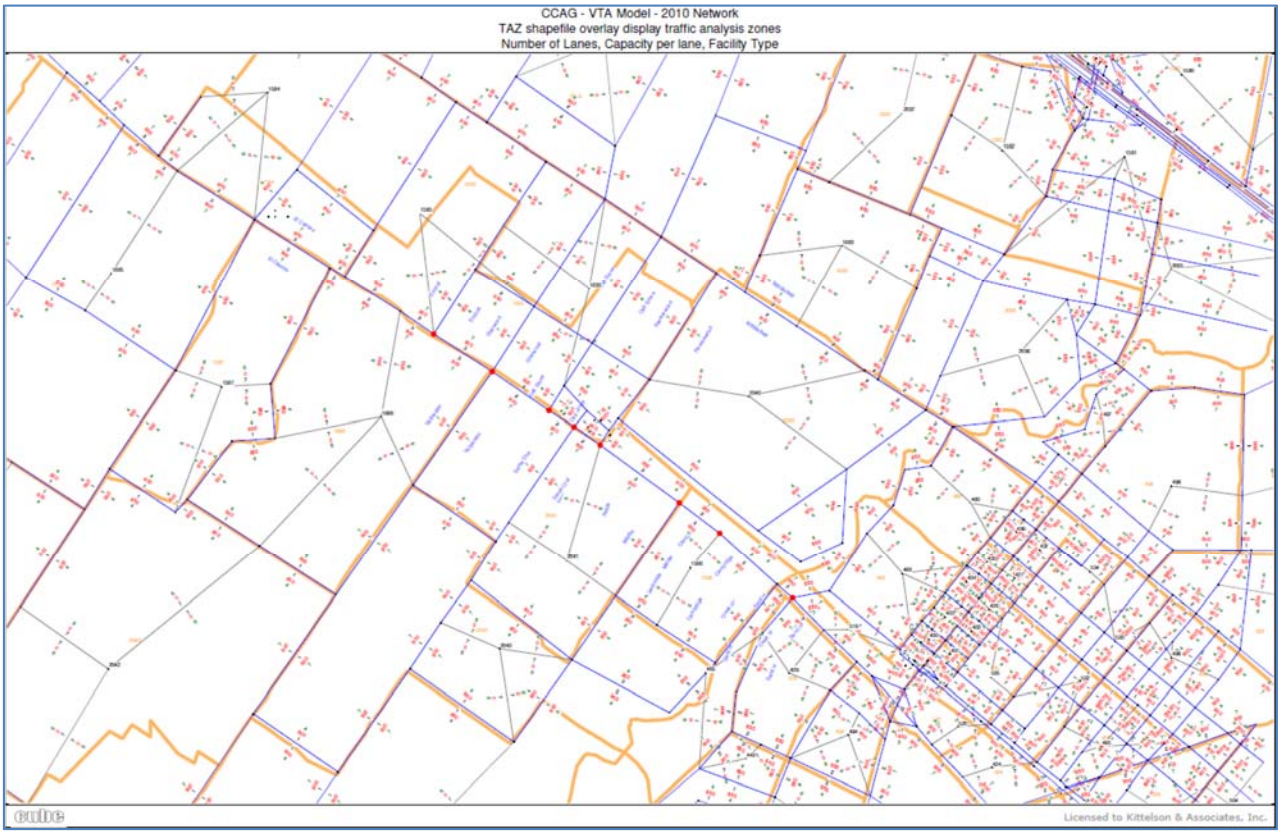
Results from the travel demand forecasting are summarized in the Appendix.

APPENDIX

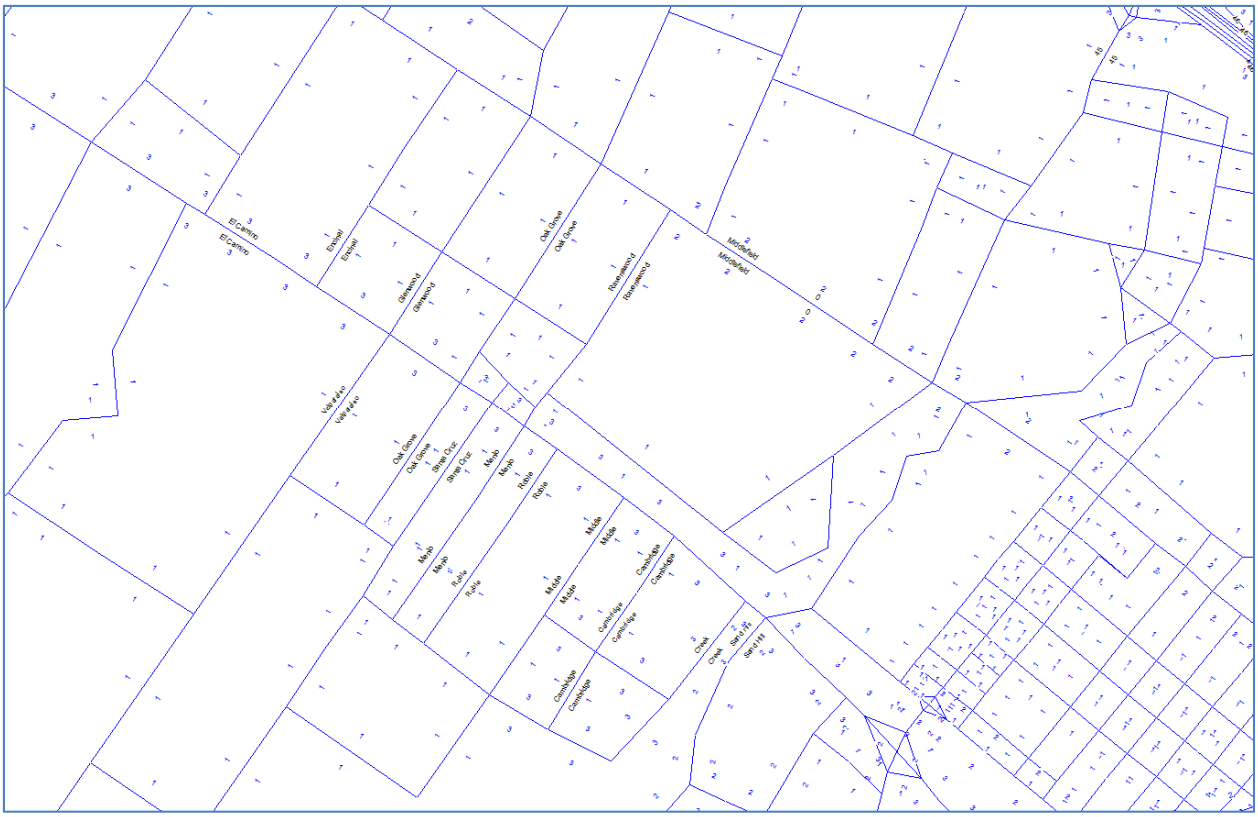
Study Intersections (shown in red)



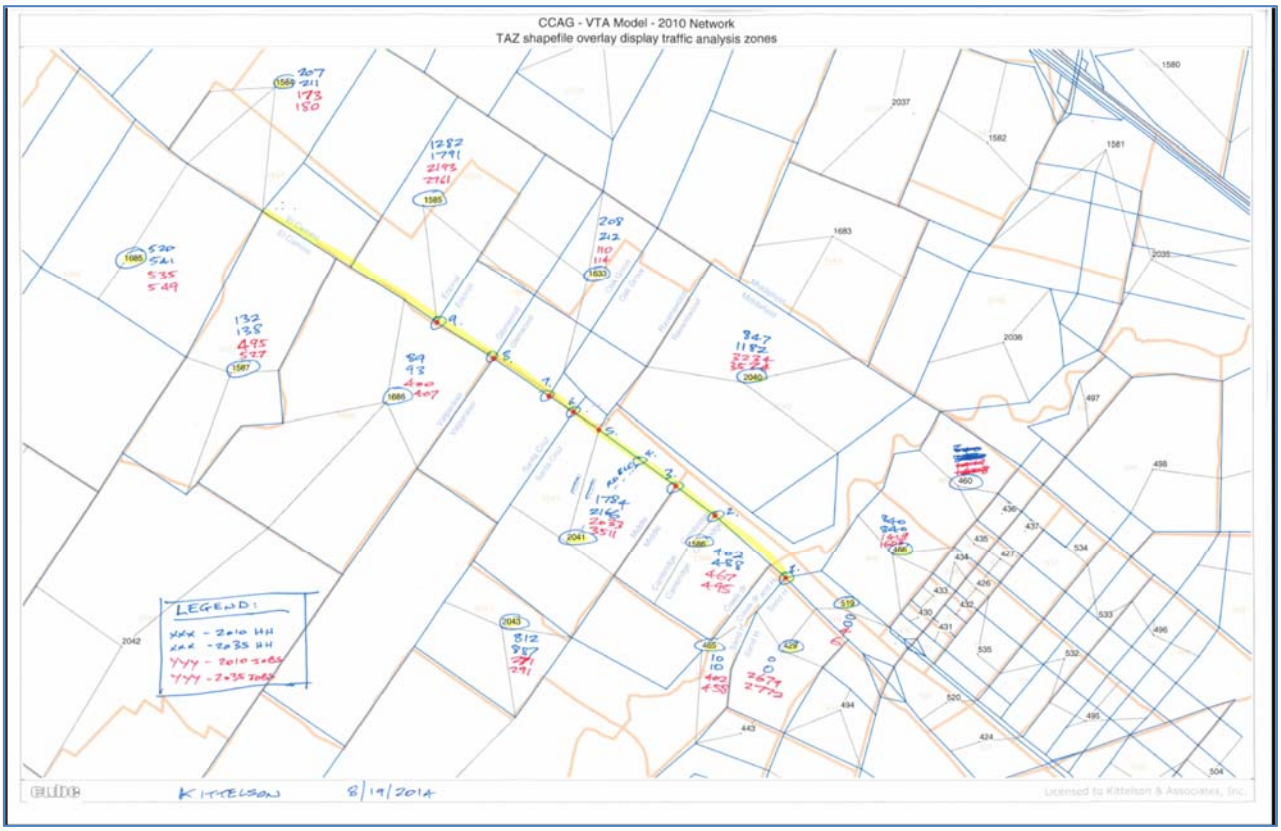
CCAG Model Network - (prior to adjustments)



CCAG Model Network -(with additional network adjustments)



TAZ Map (Menlo Park Area TAZs)



Land Use Adjustments

Table 1: CCAG-VTA Model - 2010 & 2035 Socio-Demographic data							City Edits in red							
	Model TAZs in Menlo Park El Camino Study Area													
								Total	Retail	Service	Other	Ag	Manuf	Wholesale
2010		households						Jobs	Jobs	Jobs	Jobs	Jobs	jobs	Jobs
ZONE		TOTHH	HHPOP	TOTPOP	EMPRES	SFHH	MFHH	TEMP	RETEMP	SEREMP	OTHEMP	AGEMP	MANEMP	WHOEMP
429		0	0	0	0	0	0	2679	1352	493	93	0	0	741
465		10	10	1120	431	0	10	402	0	311	91	0	0	0
466		840	1315	1316	620	240	600	1419	294	245	252	5	516	107
519		0	0	0	0	0	0	4	4	0	0	0	0	0
1584		207	495	496	182	207	0	173	47	112	11	0	0	3
1585		1282	2344	2448	1258	410	872	2193	528	34	1623	4	0	4
1586		402	812	845	400	135	267	467	62	319	51	0	2	33
1587		132	386	412	249	131	1	495	93	346	6	1	23	26
1633		208	598	600	240	208	0	110	13	83	3	0	8	3
1685		520	1333	1423	490	518	2	535	91	358	67	1	13	5
1686		89	615	656	165	89	0	400	30	265	86	1	15	3
2040		847	1602	1673	826	271	576	3234	389	633	2106	4	56	46
2041		1784	3012	3138	1623	601	1183	2033	435	921	328	5	55	289
2043		812	2138	2141	717	812	0	271	14	194	6	1	45	11
	Sum	**7133**						**14415**	**3352**	**4314**	**4723**	**22**	**733**	**1271**
2035														
ZONE		TOTHH	HHPOP	TOTPOP	EMPRES	SFHH	MFHH	TEMP	RETEMP	SEREMP	OTHEMP	AGEMP	MANEMP	WHOEMP
429		0	0	0	0	0	0	2772	1350	501	118	0	0	803
465		10	12	1505	703	1	9	458	12	345	91	0	0	10
466		840	1314	1315	642	270	570	1608	238	219	335	5	692	119
519		0	0	0	0	0	0	6	4	0	0	0	0	2
1584		211	498	498	187	211	0	180	49	116	12	0	0	3
1585		1791	3523	3635	1820	435	1356	2395	578	154	1655	4	0	4
1586		488	1049	1086	503	143	345	1457	62	1099	261	0	2	33
1587		138	394	428	263	137	1	527	98	374	6	1	22	26
1633		212	602	604	246	212	0	114	13	87	3	0	8	3
1685		541	1356	1470	514	539	2	549	95	365	70	1	13	5
1686		93	625	681	174	93	0	407	33	270	86	1	14	3
2040		1182	2407	2483	1193	423	759	3574	491	667	2298	4	64	50
2041		2166	3883	4015	2041	639	1527	2423	545	1141	388	5	55	289
2043		887	2318	2321	812	887	0	291	14	212	8	1	45	11
	Sum	**8559**						**16761**	**3582**	**5550**	**5331**	**22**	**915**	**1361**

Land Use Adjustments Cont/d

Growth														
ZONE		TOTHH	HHPOP	TOTPOP	EMPRES	SFHH	MFHH	TEMP	RETEMP	SEREMP	OTHEMP	AGEMP	MANEMP	WHOEMP
429		0	0	0	0	0	0	93	-2	8	25	0	0	62
465		0	2	385	272	1	-1	56	12	34	0	0	0	10
466		0	-1	-1	22	30	-30	189	-56	-26	83	0	176	12
519		0	0	0	0	0	0	2	0	0	0	0	0	2
1584		4	3	2	5	4	0	7	2	4	1	0	0	0
1585		509	1179	1187	562	25	484	202	50	120	32	0	0	0
1586		86	237	241	103	8	78	990	0	780	210	0	0	0
1587		6	8	16	14	6	0	32	5	28	0	0	-1	0
1633		4	4	4	6	4	0	4	0	4	0	0	0	0
1685		21	23	47	24	21	0	14	4	7	3	0	0	0
1686		4	10	25	9	4	0	7	3	5	0	0	-1	0
2040		335	805	810	367	152	183	340	102	34	192	0	8	4
2041		382	871	877	418	38	344	390	110	220	60	0	0	0
2043		75	180	180	95	75	0	20	0	18	2	0	0	0
	Growth	**1426**	**3321**	**3773**	**1897**	**368**	**1058**	**2346**	**230**	**1236**	**608**	**0**	**182**	**90**
Percent Growth														
ZONE		TOTHH	HHPOP	TOTPOP	EMPRES	SFHH	MFHH	TEMP	RETEMP	SEREMP	OTHEMP	AGEMP	MANEMP	WHOEMP
429		0%	0%	0%	0%	0%	0%	3%	0%	2%	27%	0%	0%	8%
465		0%	20%	34%	63%	0%	-10%	14%	0%	11%	0%	0%	0%	0%
466		0%	0%	0%	4%	13%	-5%	13%	-19%	-11%	33%	0%	34%	11%
519		0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%
1584		2%	1%	0%	3%	2%	0%	4%	4%	4%	9%	0%	0%	0%
1585		40%	50%	48%	45%	6%	56%	9%	9%	353%	2%	0%	0%	0%
1586		21%	29%	29%	26%	6%	29%	212%	0%	245%	412%	0%	0%	0%
1587		5%	2%	4%	6%	5%	0%	6%	5%	8%	0%	0%	-4%	0%
1633		2%	1%	1%	3%	2%	0%	4%	0%	5%	0%	0%	0%	0%
1685		4%	2%	3%	5%	4%	0%	3%	4%	2%	4%	0%	0%	0%
1686		4%	2%	4%	5%	4%	0%	2%	10%	2%	0%	0%	-7%	0%
2040		40%	50%	48%	44%	56%	32%	11%	26%	5%	9%	0%	14%	9%
2041		21%	29%	28%	26%	6%	29%	19%	25%	24%	18%	0%	0%	0%
2043		9%	8%	8%	13%	9%	0%	7%	0%	9%	33%	0%	0%	0%
	% Growth	**20%**						**16%**	**7%**	**29%**	**13%**	**0%**	**25%**	**7%**

APPENDIX F

Alternatives Analysis

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	24.7	294.4	0.1	12
Driveway Entrance	2	18.4	42.3	0.2	19
	3	23.1	44.4	0.2	18
Driveway Entrance	4	6.5	24.6	0.2	26
Ravenswood Avenue	5	15.1	26.7	0.1	17
Santa Cruz Ave	6	10.1	18.5	0.1	17
Oak Grove Ave	7	10.9	20.1	0.1	17
Glenwood Ave	8	61.8	80.0	0.2	9
Encinal Ave	9	7.7	28.4	0.2	26
Total		178.4	579.4	1.4	16

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	19.5	32.4	0.1	15
Valparaiso Ave	8	107.8	126.0	0.2	6
Oak Grove Ave	7	7.7	28.6	0.2	26
Santa Cruz Ave	6	10.7	20.0	0.1	17
Menlo Avenue	5	9.9	18.4	0.1	17
Roble Avenue	4	2.0	15.2	0.1	30
Middle Avenue	3	12.4	29.8	0.2	21
Cambridge Avenue	2	5.2	26.4	0.2	30
Sand Hill Rd	1	25.4	46.0	0.2	17
Total		200.6	342.7	1.5	15

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	65.8	84.6	0.1	5
Cambridge Avenue	2	14.4	38.5	0.2	21
	3	18.1	40.0	0.2	20
Driveway Entrance	4	12.1	29.2	0.2	22
Ravenswood Avenue	5	52.9	65.1	0.1	7
Santa Cruz Ave	6	12.9	21.4	0.1	15
Oak Grove Ave	7	22.1	31.0	0.1	11
Glenwood Ave	8	68.5	87.1	0.2	8
Encinal Ave	9	15.7	36.3	0.2	21
Total		282.7	433.3	1.4	12

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	25.8	59.8	0.1	12
Valparaiso Ave	8	27.3	46.0	0.2	16
Oak Grove Ave	7	46.2	65.0	0.2	11
Santa Cruz Ave	6	10.5	19.9	0.1	17
Menlo Avenue	5	27.3	35.6	0.1	9
Roble Avenue	4	2.7	14.9	0.1	31
Middle Avenue	3	33.0	50.2	0.2	13
Cambridge Avenue	2	11.3	32.8	0.2	24
Sand Hill Rd	1	16.2	37.5	0.2	21
Total		200.3	361.8	1.5	16

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	36.5	126.8	0.1	9
Driveway Entrance	2	15.8	39.6	0.2	20
	3	24.0	46.0	0.2	17
Driveway Entrance	4	39.1	56.4	0.2	11
Ravenswood Avenue	5	105.8	127.6	0.1	4
Santa Cruz Ave	6	15.5	24.3	0.1	13
Oak Grove Ave	7	20.5	29.9	0.1	11
Glenwood Ave	8	40.6	59.9	0.2	12
Encinal Ave	9	7.0	27.7	0.2	27
Total		304.8	538.2	1.4	12

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	98.2	165.7	0.1	4
Valparaiso Ave	8	155.8	173.4	0.2	4
Oak Grove Ave	7	12.9	32.7	0.2	22
Santa Cruz Ave	6	42.0	54.9	0.1	7
Menlo Avenue	5	20.3	28.6	0.1	11
Roble Avenue	4	2.1	14.5	0.1	32
Middle Avenue	3	11.2	28.6	0.2	22
Cambridge Avenue	2	6.9	28.0	0.2	28
Sand Hill Rd	1	21.0	42.4	0.2	19
Total		370.4	568.7	1.5	10

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	85.3	128.6	0.1	4
Cambridge Avenue	2	12.7	36.5	0.2	22
	3	17.7	39.6	0.2	20
Driveway Entrance	4	19.8	36.8	0.2	17
Ravenswood Avenue	5	63.9	76.0	0.1	6
Santa Cruz Ave	6	32.9	43.4	0.1	8
Oak Grove Ave	7	49.8	58.5	0.1	6
Glenwood Ave	8	114.5	131.4	0.2	6
Encinal Ave	9	7.9	28.8	0.2	26
Total		404.4	579.7	1.4	10

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	20.9	33.6	0.1	14
Valparaiso Ave	8	102.8	119.3	0.2	6
Oak Grove Ave	7	15.3	34.2	0.2	21
Santa Cruz Ave	6	13.6	22.8	0.1	15
Menlo Avenue	5	28.8	37.2	0.1	8
Roble Avenue	4	5.3	17.9	0.1	26
Middle Avenue	3	32.9	49.6	0.2	13
Cambridge Avenue	2	8.4	29.8	0.2	26
Sand Hill Rd	1	12.9	33.8	0.2	23
Total		241.0	378.2	1.5	14

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	33.8	593.7	0.1	9
Driveway Entrance	2	16.5	40.4	0.2	20
	3	21.4	43.6	0.2	18
Driveway Entrance	4	4.3	22.1	0.2	29
Ravenswood Avenue	5	19.5	31.5	0.1	15
Santa Cruz Ave	6	11.6	20.1	0.1	15
Oak Grove Ave	7	9.9	19.1	0.1	18
Glenwood Ave	8	50.7	68.5	0.2	11
Encinal Ave	9	6.4	27.0	0.2	28
Total		174.1	866.0	1.4	16

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	91.0	276.7	0.1	5
Valparaiso Ave	8	139.2	156.1	0.2	5
Oak Grove Ave	7	4.6	24.6	0.2	30
Santa Cruz Ave	6	9.7	19.0	0.1	18
Menlo Avenue	5	11.4	19.9	0.1	16
Roble Avenue	4	2.3	14.6	0.1	32
Middle Avenue	3	11.4	29.0	0.2	22
Cambridge Avenue	2	4.3	25.4	0.2	31
Sand Hill Rd	1	23.0	43.8	0.2	18
Total		297.0	608.9	1.5	12

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	56.2	68.4	0.1	6
Cambridge Avenue	2	14.4	38.4	0.2	21
	3	17.0	38.9	0.2	20
Driveway Entrance	4	9.8	26.9	0.2	24
Ravenswood Avenue	5	46.1	58.0	0.1	8
Santa Cruz Ave	6	16.1	24.6	0.1	13
Oak Grove Ave	7	25.6	34.6	0.1	10
Glenwood Ave	8	78.1	96.7	0.2	8
Encinal Ave	9	18.1	39.0	0.2	19
Total		281.3	425.5	1.4	12

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	41.1	207.6	0.1	9
Valparaiso Ave	8	34.0	52.2	0.2	14
Oak Grove Ave	7	42.9	61.5	0.2	12
Santa Cruz Ave	6	9.1	18.4	0.1	18
Menlo Avenue	5	24.1	32.5	0.1	10
Roble Avenue	4	2.7	14.8	0.1	31
Middle Avenue	3	25.9	43.3	0.2	15
Cambridge Avenue	2	9.0	30.5	0.2	26
Sand Hill Rd	1	14.3	36.1	0.2	22
Total		203.2	497.0	1.5	15

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	34.7	495.2	0.1	9
Driveway Entrance	2	17.6	41.4	0.2	19
	3	21.1	43.1	0.2	18
Driveway Entrance	4	5.6	23.5	0.2	27
Ravenswood Avenue	5	24.9	36.9	0.1	13
Santa Cruz Ave	6	11.0	19.6	0.1	16
Oak Grove Ave	7	13.8	23.1	0.1	15
Glenwood Ave	8	48.3	66.2	0.2	11
Encinal Ave	9	8.8	29.4	0.2	26
Total		185.9	778.3	1.4	16

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	99.9	309.6	0.1	4
Valparaiso Ave	8	154.2	170.6	0.2	4
Oak Grove Ave	7	5.6	26.0	0.2	28
Santa Cruz Ave	6	5.4	14.7	0.1	23
Menlo Avenue	5	17.1	25.5	0.1	12
Roble Avenue	4	1.9	14.2	0.1	32
Middle Avenue	3	8.2	25.9	0.2	25
Cambridge Avenue	2	3.8	25.1	0.2	31
Sand Hill Rd	1	23.0	44.3	0.2	18
Total		319.0	655.8	1.5	12

Arterial Level of Service: NB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Alma St	1	58.2	75.4	0.1	6
Cambridge Avenue	2	14.4	38.6	0.2	21
	3	16.1	37.8	0.2	21
Driveway Entrance	4	24.1	41.0	0.2	16
Ravenswood Avenue	5	79.7	92.0	0.1	5
Santa Cruz Ave	6	25.6	34.6	0.1	9
Oak Grove Ave	7	20.7	29.7	0.1	11
Glenwood Ave	8	73.5	92.1	0.2	8
Encinal Ave	9	24.9	45.3	0.2	17
Total		337.3	486.4	1.4	11

Arterial Level of Service: SB El Camino Real

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Encinal Ave	9	39.5	205.7	0.1	9
Valparaiso Ave	8	54.7	72.9	0.2	10
Oak Grove Ave	7	43.2	61.3	0.2	12
Santa Cruz Ave	6	8.6	17.9	0.1	19
Menlo Avenue	5	21.9	30.2	0.1	10
Roble Avenue	4	2.6	15.1	0.1	31
Middle Avenue	3	25.6	42.8	0.2	15
Cambridge Avenue	2	8.8	30.2	0.2	26
Sand Hill Rd	1	13.0	34.3	0.2	23
Total		217.9	510.4	1.5	15

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	0	235	0	0	439	145	505	22	359	1519	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			4.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1576			1561	1770	5085	1549	1770	5085	1550
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1576			1561	1770	5085	1549	1770	5085	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	0	247	0	0	462	153	532	23	378	1599	245
RTOR Reduction (vph)	0	0	174	0	0	282	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	73	0	0	180	153	532	23	378	1599	245
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						1			8
Turn Type	Prot		pm+ov			Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			8			2			6
Actuated Green, G (s)	11.4		35.4			24.8	24.0	25.5	25.5	39.8	41.3	52.7
Effective Green, g (s)	11.4		35.4			24.8	24.0	25.5	25.5	39.8	41.3	52.7
Actuated g/C Ratio	0.10		0.29			0.21	0.20	0.21	0.21	0.33	0.34	0.44
Clearance Time (s)	5.0		5.0			4.0	5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0			0.2	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	326		464			322	354	1080	329	587	1750	680
v/s Ratio Prot	c0.05		0.03				0.09	0.10		c0.21	c0.31	0.03
v/s Ratio Perm			0.01			c0.12			0.01			0.12
v/c Ratio	0.53		0.16			0.56	0.43	0.49	0.07	0.64	0.91	0.36
Uniform Delay, d1	51.8		31.3			42.7	42.0	41.6	37.8	34.1	37.6	22.4
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.88	0.55	0.70
Incremental Delay, d2	1.7		0.2			1.3	0.8	1.6	0.4	2.0	7.6	0.3
Delay (s)	53.4		31.4			44.0	42.9	43.2	38.2	32.1	28.4	16.1
Level of Service	D		C			D	D	D	D	C	C	B
Approach Delay (s)		40.5			44.0			42.9			27.7	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	54	0	0	0	32	1138	0	14	2085	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00				1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98				1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00				1.00	1.00		1.00	1.00	
Frt		1.00	0.85				1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765	1558				1770	5085		1770	5077	
Flt Permitted		0.76	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1407	1558				1770	5085		1770	5077	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	0	59	0	0	0	35	1251	0	15	2291	21
RTOR Reduction (vph)	0	0	53	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	22	6	0	0	0	35	1251	0	15	2312	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						3			6
Turn Type	Perm	NA	Perm				Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6				4.7	92.8		2.6	90.7	
Effective Green, g (s)		12.6	12.6				4.7	92.8		2.6	90.7	
Actuated g/C Ratio		0.10	0.10				0.04	0.77		0.02	0.76	
Clearance Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		147	163				69	3932		38	3837	
v/s Ratio Prot							c0.02	0.25		0.01	c0.46	
v/s Ratio Perm		c0.02	0.00									
v/c Ratio		0.15	0.04				0.51	0.32		0.39	0.60	
Uniform Delay, d1		48.8	48.3				56.5	4.1		57.9	6.6	
Progression Factor		1.00	1.00				0.97	1.25		1.11	0.20	
Incremental Delay, d2		0.5	0.1				5.2	0.2		5.4	0.6	
Delay (s)		49.3	48.4				59.8	5.3		69.4	1.9	
Level of Service		D	D				E	A		E	A	
Approach Delay (s)		48.6			0.0			6.8			2.3	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	200	309	164	970	1754	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	5046	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	5046	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	222	343	182	1078	1949	78
RTOR Reduction (vph)	0	237	0	0	3	0
Lane Group Flow (vph)	222	106	182	1078	2024	0
Confl. Peds. (#/hr)	3					8
Confl. Bikes (#/hr)						8
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	20.6	20.6	17.0	92.4	72.4	
Effective Green, g (s)	20.6	20.6	17.0	92.4	72.4	
Actuated g/C Ratio	0.17	0.17	0.14	0.77	0.60	
Clearance Time (s)	3.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	303	271	250	3915	3044	
v/s Ratio Prot	c0.13		c0.10	0.21	c0.40	
v/s Ratio Perm		0.07				
v/c Ratio	0.73	0.39	0.73	0.28	0.66	
Uniform Delay, d1	47.1	44.1	49.3	4.0	15.8	
Progression Factor	1.00	1.00	1.16	0.62	0.38	
Incremental Delay, d2	8.8	0.9	9.9	0.2	0.8	
Delay (s)	55.9	45.1	67.2	2.7	6.8	
Level of Service	E	D	E	A	A	
Approach Delay (s)	49.3			12.0	6.8	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	5	50	4	4	8	41	1082	23	35	1756	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1817	1545	1770	5067		1770	3530	
Flt Permitted		0.83			0.91	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1458			1702	1545	1770	5067		1770	3530	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	5	54	4	4	9	45	1176	25	38	1909	34
RTOR Reduction (vph)	0	28	0	0	0	8	0	1	0	0	1	0
Lane Group Flow (vph)	0	96	0	0	8	1	45	1200	0	38	1942	0
Confl. Bikes (#/hr)						6			6			
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		13.2			13.2	13.2	7.8	88.7		5.6	86.5	
Effective Green, g (s)		13.2			13.2	13.2	7.8	88.7		5.6	86.5	
Actuated g/C Ratio		0.11			0.11	0.11	0.06	0.74		0.05	0.72	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		160			187	169	115	3745		82	2544	
v/s Ratio Prot							c0.03	0.24		0.02	c0.55	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.60			0.04	0.01	0.39	0.32		0.46	0.76	
Uniform Delay, d1		50.9			47.8	47.6	53.8	5.3		55.7	10.4	
Progression Factor		1.00			1.00	1.00	0.81	1.58		0.99	0.46	
Incremental Delay, d2		5.9			0.1	0.0	2.1	0.2		2.5	1.4	
Delay (s)		56.7			47.8	47.6	45.8	8.7		57.5	6.2	
Level of Service		E			D	D	D	A		E	A	
Approach Delay (s)		56.7			47.7			10.0			7.1	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	334	46	451	243	46	94	604	385	170	1296	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.93
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3455		3433	1863	1541	1534	3539	1554	1770	3539	1475
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3455		3433	1863	1541	1534	3539	1554	1770	3539	1475
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	355	49	480	259	49	100	643	410	181	1379	13
RTOR Reduction (vph)	0	9	0	0	0	39	0	0	255	0	0	8
Lane Group Flow (vph)	0	414	0	480	259	10	100	643	155	181	1379	5
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			5			6
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		16.0		24.3	24.3	24.3	11.5	45.3	45.3	16.9	50.7	50.7
Effective Green, g (s)		16.0		24.3	24.3	24.3	11.5	45.3	45.3	16.9	50.7	50.7
Actuated g/C Ratio		0.13		0.20	0.20	0.20	0.10	0.38	0.38	0.14	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		460		695	377	312	147	1335	586	249	1495	623
v/s Ratio Prot		c0.12		c0.14	0.14		0.07	0.18		c0.10	c0.39	
v/s Ratio Perm						0.01			0.10			0.00
v/c Ratio		0.90		0.69	0.69	0.03	0.68	0.48	0.26	0.73	0.92	0.01
Uniform Delay, d1		51.2		44.4	44.3	38.4	52.5	28.4	25.8	49.3	32.8	20.1
Progression Factor		1.00		1.00	1.00	1.00	1.28	0.78	2.71	1.51	0.19	1.00
Incremental Delay, d2		20.5		3.0	5.1	0.0	11.8	1.2	1.1	4.9	5.8	0.0
Delay (s)		71.7		47.3	49.5	38.4	78.9	23.4	71.2	79.4	11.9	20.1
Level of Service		E		D	D	D	E	C	E	E	B	C
Approach Delay (s)		71.7			47.5			45.2			19.7	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	67	81	65	59	30	0	681	49	0	1433	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.92	1.00	0.97			1.00	0.94		1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1455	1770	1716			3539	1485		3539	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1455	1770	1716			3539	1485		3539	1537
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	109	72	87	70	63	32	0	732	53	0	1541	67
RTOR Reduction (vph)	0	0	71	0	15	0	0	0	28	0	0	24
Lane Group Flow (vph)	109	72	16	70	80	0	0	732	25	0	1541	43
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			4			1
Turn Type	Split	NA	Perm	Split	NA			NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	21.7	21.7	21.7	30.0	30.0			55.8	55.8		55.8	55.8
Effective Green, g (s)	21.7	21.7	21.7	30.0	30.0			55.8	55.8		55.8	55.8
Actuated g/C Ratio	0.18	0.18	0.18	0.25	0.25			0.46	0.46		0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	320	336	263	442	429			1645	690		1645	714
v/s Ratio Prot	c0.06	0.04		0.04	c0.05			0.21			c0.44	
v/s Ratio Perm			0.01						0.02			0.03
v/c Ratio	0.34	0.21	0.06	0.16	0.19			0.44	0.04		0.94	0.06
Uniform Delay, d1	42.9	41.9	40.7	35.1	35.4			21.7	17.5		30.4	17.7
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.56	0.81		0.46	0.72
Incremental Delay, d2	0.6	0.3	0.1	0.2	0.2			0.8	0.1		9.0	0.1
Delay (s)	43.5	42.2	40.8	35.3	35.6			12.9	14.2		23.0	12.8
Level of Service	D	D	D	D	D			B	B		C	B
Approach Delay (s)		42.3			35.5			13.0			22.6	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	139	47	86	229	45	81	658	62	88	1303	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1492	1770	1863	1522	1770	3539	1532	1770	3539	1546
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1492	1770	1863	1522	1770	3539	1532	1770	3539	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	59	149	51	92	246	48	87	708	67	95	1401	92
RTOR Reduction (vph)	0	0	42	0	0	38	0	0	30	0	0	29
Lane Group Flow (vph)	59	149	9	92	246	10	87	708	37	95	1401	63
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	21.4	21.4	9.4	23.8	23.8	9.6	63.7	63.7	11.0	65.1	65.1
Effective Green, g (s)	7.0	21.4	21.4	9.4	23.8	23.8	9.6	63.7	63.7	11.0	65.1	65.1
Actuated g/C Ratio	0.06	0.18	0.18	0.08	0.20	0.20	0.08	0.53	0.53	0.09	0.54	0.54
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	103	332	266	138	369	301	141	1878	813	162	1919	838
v/s Ratio Prot	0.03	0.08		c0.05	c0.13		0.05	0.20		c0.05	c0.40	
v/s Ratio Perm			0.01			0.01			0.02			0.04
v/c Ratio	0.57	0.45	0.03	0.67	0.67	0.03	0.62	0.38	0.05	0.59	0.73	0.07
Uniform Delay, d1	55.0	44.0	40.8	53.8	44.4	38.8	53.4	16.5	13.5	52.3	20.8	13.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.22	0.46	0.16	1.57	0.32	0.02
Incremental Delay, d2	7.5	1.0	0.1	11.5	4.5	0.0	7.3	0.5	0.1	2.8	1.3	0.1
Delay (s)	62.5	45.0	40.8	65.3	48.9	38.8	72.6	8.1	2.2	85.0	8.0	0.3
Level of Service	E	D	D	E	D	D	E	A	A	F	A	A
Approach Delay (s)		48.2			51.6			14.1			12.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	219	167	85	47	169	10	110	684	35	64	1369	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1756	1550	1770	1845		1770	3539	1529	1770	3539	1525
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1756	1550	1770	1845		1770	3539	1529	1770	3539	1525
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	221	169	86	47	171	10	111	691	35	65	1383	452
RTOR Reduction (vph)	0	0	71	0	2	0	0	0	18	0	0	173
Lane Group Flow (vph)	190	200	15	47	179	0	111	691	17	65	1383	279
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			4			12
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	20.4	20.4	20.4	18.6	18.6		16.3	57.2	57.2	8.3	49.2	49.2
Effective Green, g (s)	20.4	20.4	20.4	18.6	18.6		16.3	57.2	57.2	8.3	49.2	49.2
Actuated g/C Ratio	0.17	0.17	0.17	0.16	0.16		0.14	0.48	0.48	0.07	0.41	0.41
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	298	263	274	285		240	1686	728	122	1450	625
v/s Ratio Prot	0.11	c0.11		0.03	c0.10		c0.06	0.20		0.04	c0.39	
v/s Ratio Perm			0.01						0.01			0.18
v/c Ratio	0.67	0.67	0.06	0.17	0.63		0.46	0.41	0.02	0.53	0.95	0.45
Uniform Delay, d1	46.6	46.7	41.7	44.0	47.5		47.8	20.4	16.6	54.0	34.3	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.64	1.51	1.00	1.26	0.85	0.57
Incremental Delay, d2	5.8	5.8	0.1	0.3	4.3		1.3	0.7	0.1	3.9	13.8	2.1
Delay (s)	52.4	52.5	41.8	44.3	51.8		31.9	31.6	16.7	72.2	42.8	16.7
Level of Service	D	D	D	D	D		C	C	B	E	D	B
Approach Delay (s)		50.5			50.2			31.0			37.6	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	57	9	132	20	92	14	803	105	107	1747	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1856	1556		1785	1549	1770	3539	1534	1770	5064	
Flt Permitted		0.99	1.00		0.69	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1836	1556		1285	1549	1770	3539	1534	1770	5064	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4	58	9	135	20	94	14	819	107	109	1783	43
RTOR Reduction (vph)	0	0	7	0	0	78	0	0	35	0	1	0
Lane Group Flow (vph)	0	62	2	0	155	16	14	819	72	109	1825	0
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			7			11
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		20.1	20.1		20.1	20.1	3.0	77.2	77.2	12.7	86.9	
Effective Green, g (s)		20.1	20.1		20.1	20.1	3.0	77.2	77.2	12.7	86.9	
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.02	0.64	0.64	0.11	0.72	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		307	260		215	259	44	2276	986	187	3667	
v/s Ratio Prot							0.01	0.23		c0.06	c0.36	
v/s Ratio Perm		0.03	0.00		c0.12	0.01			0.05			
v/c Ratio		0.20	0.01		0.72	0.06	0.32	0.36	0.07	0.58	0.50	
Uniform Delay, d1		43.0	41.6		47.3	42.0	57.5	9.9	8.0	51.1	7.1	
Progression Factor		1.00	1.00		1.00	1.00	0.97	0.76	0.86	1.00	1.00	
Incremental Delay, d2		0.3	0.0		11.3	0.1	3.9	0.4	0.1	4.6	0.5	
Delay (s)		43.4	41.6		58.6	42.1	59.5	8.0	7.1	55.7	7.6	
Level of Service		D	D		E	D	E	A	A	E	A	
Approach Delay (s)		43.1			52.4			8.6			10.3	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	536	0	235	0	0	714	179	1266	142	397	902	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1566			1583	1770	5085	1583	1770	5085	1539
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1566			1583	1770	5085	1583	1770	5085	1539
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	589	0	258	0	0	785	197	1391	156	436	991	410
RTOR Reduction (vph)	0	0	186	0	0	5	0	0	0	0	0	0
Lane Group Flow (vph)	589	0	72	0	0	780	197	1391	156	436	991	410
Confl. Peds. (#/hr)			9									8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	18.0		35.2			85.0	17.2	31.5	31.5	31.6	45.9	63.9
Effective Green, g (s)	18.0		35.2			81.0	17.2	31.5	31.5	31.6	45.9	63.9
Actuated g/C Ratio	0.14		0.28			0.64	0.14	0.25	0.25	0.25	0.36	0.51
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490		437			1017	241	1271	395	443	1852	780
v/s Ratio Prot	c0.17		0.02				0.11	c0.27		c0.25	0.19	0.08
v/s Ratio Perm			0.02			c0.49			0.10			0.19
v/c Ratio	1.20		0.16			0.77	0.82	1.09	0.39	0.98	0.54	0.53
Uniform Delay, d1	54.0		34.3			15.9	52.9	47.2	39.3	47.0	31.6	20.9
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.08	0.44	0.82
Incremental Delay, d2	109.1		0.2			3.5	18.9	55.1	2.9	36.0	1.0	0.6
Delay (s)	163.1		34.5			19.4	71.8	102.4	42.3	86.9	15.0	17.6
Level of Service	F		C			B	E	F	D	F	B	B
Approach Delay (s)		123.9			19.4			93.6			32.6	
Approach LOS		F			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	65.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	0	48	4	1	1	182	2211	2	13	1612	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1761	1583		1755		1770	5085		1770	5066	
Flt Permitted		0.75	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1397	1583		1604		1770	5085		1770	5066	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	0	51	4	1	1	194	2352	2	14	1715	31
RTOR Reduction (vph)	0	0	46	0	1	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	24	5	0	5	0	194	2354	0	14	1745	0
Confl. Peds. (#/hr)	4					4			5			11
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		19.0	99.0		2.4	82.4	
Effective Green, g (s)		12.6	12.6		12.6		19.0	99.0		2.4	82.4	
Actuated g/C Ratio		0.10	0.10		0.10		0.15	0.79		0.02	0.65	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		139	158		160		266	3995		33	3313	
v/s Ratio Prot							c0.11	c0.46		0.01	0.34	
v/s Ratio Perm		c0.02	0.00		0.00							
v/c Ratio		0.17	0.03		0.03		0.73	0.59		0.42	0.53	
Uniform Delay, d1		51.9	51.2		51.2		51.0	5.4		61.1	11.5	
Progression Factor		1.00	1.00		1.00		1.04	1.30		0.76	0.89	
Incremental Delay, d2		0.6	0.1		0.1		0.9	0.1		7.5	0.5	
Delay (s)		52.5	51.3		51.3		54.2	7.1		53.9	10.8	
Level of Service		D	D		D		D	A		D	B	
Approach Delay (s)		51.7			51.3			10.6			11.1	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	245	195	339	1977	1428	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	5028	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	5028	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	250	199	346	2017	1457	87
RTOR Reduction (vph)	0	121	0	0	4	0
Lane Group Flow (vph)	250	78	346	2017	1540	0
Confl. Peds. (#/hr)	3					9
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	22.7	22.7	29.5	96.3	63.8	
Effective Green, g (s)	22.7	22.7	29.5	96.3	63.8	
Actuated g/C Ratio	0.18	0.18	0.23	0.76	0.51	
Clearance Time (s)	3.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	318	285	414	3886	2545	
v/s Ratio Prot	c0.14		c0.20	0.40	c0.31	
v/s Ratio Perm		0.05				
v/c Ratio	0.79	0.27	0.84	0.52	0.60	
Uniform Delay, d1	49.3	44.5	45.9	5.8	22.1	
Progression Factor	1.00	1.00	1.46	0.42	0.31	
Incremental Delay, d2	12.1	0.5	11.8	0.4	1.0	
Delay (s)	61.4	45.1	78.9	2.9	7.7	
Level of Service	E	D	E	A	A	
Approach Delay (s)	54.1			14.0	7.7	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	47	3	35	53	10	38	83	1944	16	72	1491	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1762	1583	1770	5077		1770	5064	
Flt Permitted		0.81			0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1412			1345	1583	1770	5077		1770	5064	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	50	3	37	56	11	40	88	2068	17	77	1586	32
RTOR Reduction (vph)	0	22	0	0	0	33	0	0	0	0	1	0
Lane Group Flow (vph)	0	68	0	0	67	7	88	2085	0	77	1617	0
Confl. Peds. (#/hr)			18	18					7			12
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		21.8			21.8	21.8	10.5	82.6		9.1	81.2	
Effective Green, g (s)		21.8			21.8	21.8	10.5	82.6		9.1	81.2	
Actuated g/C Ratio		0.17			0.17	0.17	0.08	0.66		0.07	0.64	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		244			232	273	147	3328		127	3263	
v/s Ratio Prot							c0.05	c0.41		0.04	0.32	
v/s Ratio Perm		0.05			c0.05	0.00						
v/c Ratio		0.28			0.29	0.03	0.60	0.63		0.61	0.50	
Uniform Delay, d1		45.3			45.4	43.3	55.7	12.7		56.7	11.7	
Progression Factor		1.00			1.00	1.00	1.01	0.77		1.00	0.70	
Incremental Delay, d2		0.6			0.7	0.0	5.6	0.8		5.7	0.4	
Delay (s)		45.9			46.0	43.3	61.8	10.5		62.6	8.6	
Level of Service		D			D	D	E	B		E	A	
Approach Delay (s)		45.9			45.0			12.6			11.0	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	285	81	441	254	80	134	1346	623	211	1104	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3417		3433	1863	1553	1534	3539	1505	1770	3539	1485
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3417		3433	1863	1553	1534	3539	1505	1770	3539	1485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	300	85	464	267	84	141	1417	656	222	1162	54
RTOR Reduction (vph)	0	17	0	0	0	67	0	0	258	0	0	31
Lane Group Flow (vph)	0	410	0	464	267	17	141	1417	398	222	1162	23
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									29			
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		16.0		25.0	25.0	25.0	14.9	48.5	48.5	19.0	52.6	52.6
Effective Green, g (s)		16.0		25.0	25.0	25.0	14.9	48.5	48.5	19.0	52.6	52.6
Actuated g/C Ratio		0.13		0.20	0.20	0.20	0.12	0.38	0.38	0.15	0.42	0.42
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		433		681	369	308	181	1362	579	266	1477	619
v/s Ratio Prot		c0.12		0.14	c0.14		0.09	c0.40		c0.13	c0.33	
v/s Ratio Perm						0.01			0.26			0.02
v/c Ratio		0.95		0.68	0.72	0.05	0.78	1.04	0.69	0.83	0.79	0.04
Uniform Delay, d1		54.6		46.8	47.3	40.9	54.0	38.8	32.4	52.0	31.8	21.7
Progression Factor		1.00		1.00	1.00	1.00	1.19	1.01	1.15	1.40	0.53	1.18
Incremental Delay, d2		29.6		2.8	6.9	0.1	15.7	33.3	5.3	15.8	3.3	0.1
Delay (s)		84.2		49.6	54.1	41.0	79.8	72.5	42.6	88.6	20.3	25.8
Level of Service		F		D	D	D	E	E	D	F	C	C
Approach Delay (s)		84.2			50.2			64.1			31.0	
Approach LOS		F			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	85	142	58	72	59	0	1431	92	0	1133	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.88	1.00	0.98			1.00	0.94		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1394	1770	1703			3539	1496		3539	1510
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1394	1770	1703			3539	1496		3539	1510
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	183	89	148	60	75	61	0	1491	96	0	1180	100
RTOR Reduction (vph)	0	0	113	0	24	0	0	0	36	0	0	23
Lane Group Flow (vph)	183	89	35	60	112	0	0	1491	60	0	1180	77
Confl. Peds. (#/hr)			87			26			12			9
Turn Type	Split	NA	Perm	Split	NA			NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	30.0	30.0	30.0	25.5	25.5			58.0	58.0		58.0	58.0
Effective Green, g (s)	30.0	30.0	30.0	25.5	25.5			58.0	58.0		58.0	58.0
Actuated g/C Ratio	0.24	0.24	0.24	0.20	0.20			0.46	0.46		0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	421	443	331	358	344			1629	688		1629	695
v/s Ratio Prot	c0.10	0.05		0.03	c0.07			c0.42			0.33	
v/s Ratio Perm			0.03						0.04			0.05
v/c Ratio	0.43	0.20	0.11	0.17	0.33			0.92	0.09		0.72	0.11
Uniform Delay, d1	40.8	38.4	37.5	41.5	42.9			31.7	19.1		27.5	19.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.33	0.00		0.49	0.43
Incremental Delay, d2	0.7	0.2	0.1	0.2	0.6			3.2	0.1		2.4	0.3
Delay (s)	41.5	38.6	37.7	41.7	43.5			13.7	0.2		15.8	8.6
Level of Service	D	D	D	D	D			B	A		B	A
Approach Delay (s)		39.5			42.9			12.9			15.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	211	117	107	195	100	82	1410	96	105	1105	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1526	1770	1863	1520	1770	3539	1503	1770	3539	1503
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1526	1770	1863	1520	1770	3539	1503	1770	3539	1503
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	141	215	119	109	199	102	84	1439	98	107	1128	96
RTOR Reduction (vph)	0	0	97	0	0	85	0	0	29	0	0	28
Lane Group Flow (vph)	141	215	22	109	199	17	84	1439	69	107	1128	68
Confl. Peds. (#/hr)			19			22			10			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.5	22.6	22.6	10.5	20.6	20.6	10.8	66.9	66.9	11.5	67.6	67.6
Effective Green, g (s)	12.5	22.6	22.6	10.5	20.6	20.6	10.8	66.9	66.9	11.5	67.6	67.6
Actuated g/C Ratio	0.10	0.18	0.18	0.08	0.16	0.16	0.09	0.53	0.53	0.09	0.54	0.54
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	175	334	273	147	304	248	151	1879	798	161	1898	806
v/s Ratio Prot	c0.08	c0.12		0.06	0.11		0.05	c0.41		c0.06	0.32	
v/s Ratio Perm			0.01			0.01			0.05			0.05
v/c Ratio	0.81	0.64	0.08	0.74	0.65	0.07	0.56	0.77	0.09	0.66	0.59	0.08
Uniform Delay, d1	55.6	48.0	43.1	56.4	49.4	44.6	55.3	23.4	14.5	55.4	19.9	14.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.28	0.07	0.63	1.74	2.49
Incremental Delay, d2	23.0	4.2	0.1	18.1	5.0	0.1	2.3	1.6	0.1	8.9	1.2	0.2
Delay (s)	78.5	52.2	43.2	74.5	54.4	44.7	75.2	8.1	1.1	44.0	35.8	35.5
Level of Service	E	D	D	E	D	D	E	A	A	D	D	D
Approach Delay (s)		57.7			57.3			11.1			36.5	
Approach LOS		E			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	282	142	124	50	182	24	133	1467	22	42	918	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1740	1555	1770	1831		1770	3539	1533	1770	3539	1547
Flt Permitted	0.95	0.98	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1740	1555	1770	1831		1770	3539	1533	1770	3539	1547
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	288	145	127	51	186	24	136	1497	22	43	937	255
RTOR Reduction (vph)	0	0	105	0	4	0	0	0	11	0	0	135
Lane Group Flow (vph)	213	220	22	51	206	0	136	1497	11	43	937	120
Confl. Peds. (#/hr)			5						3			1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	22.2	22.2	22.2	19.4	19.4		16.3	61.4	61.4	7.5	52.6	52.6
Effective Green, g (s)	22.2	22.2	22.2	19.4	19.4		16.3	61.4	61.4	7.5	52.6	52.6
Actuated g/C Ratio	0.18	0.18	0.18	0.15	0.15		0.13	0.49	0.49	0.06	0.42	0.42
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	296	306	273	272	281		228	1724	747	105	1477	645
v/s Ratio Prot	c0.13	0.13		0.03	c0.11		c0.08	c0.42		0.02	0.26	
v/s Ratio Perm			0.01						0.01			0.08
v/c Ratio	0.72	0.72	0.08	0.19	0.73		0.60	0.87	0.01	0.41	0.63	0.19
Uniform Delay, d1	49.0	49.0	43.4	46.4	50.8		51.7	28.7	16.7	57.1	29.1	23.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.11	0.46	1.00	1.01	0.91	1.14
Incremental Delay, d2	8.1	7.8	0.1	0.3	9.5		2.8	4.3	0.0	2.5	2.0	0.6
Delay (s)	57.1	56.8	43.5	46.8	60.3		60.3	17.6	16.7	60.3	28.5	27.1
Level of Service	E	E	D	D	E		E	B	B	E	C	C
Approach Delay (s)		53.9			57.6			21.1			29.3	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

7/22/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	81	12	161	36	1676	96	67	1375	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1809	1583		1785	1555	1770	3539	1546	1770	5075	
Flt Permitted		0.85	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1579	1583		1355	1555	1770	3539	1546	1770	5075	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	82	12	163	36	1693	97	68	1389	19
RTOR Reduction (vph)	0	0	12	0	0	99	0	0	14	0	1	0
Lane Group Flow (vph)	0	37	2	0	94	64	36	1693	83	68	1407	0
Confl. Peds. (#/hr)	5					5			1			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		16.1	16.1		16.1	16.1	4.8	91.6	91.6	8.3	95.1	
Effective Green, g (s)		16.1	16.1		16.1	16.1	4.8	91.6	91.6	8.3	95.1	
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.04	0.73	0.73	0.07	0.75	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		201	202		173	198	67	2572	1123	116	3830	
v/s Ratio Prot							0.02	c0.48		c0.04	0.28	
v/s Ratio Perm		0.02	0.00		c0.07	0.04			0.05			
v/c Ratio		0.18	0.01		0.54	0.32	0.54	0.66	0.07	0.59	0.37	
Uniform Delay, d1		49.1	48.0		51.5	50.0	59.5	9.0	5.0	57.2	5.2	
Progression Factor		1.00	1.00		1.00	1.00	1.23	0.29	0.04	1.00	1.00	
Incremental Delay, d2		0.4	0.0		3.5	0.9	4.8	0.8	0.1	7.4	0.3	
Delay (s)		49.5	48.0		55.0	50.9	77.9	3.4	0.3	64.5	5.5	
Level of Service		D	D		D	D	E	A	A	E	A	
Approach Delay (s)		49.1			52.4			4.7			8.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	0	235	0	0	442	157	510	21	358	1534	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			4.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1576			1561	1770	5085	1550	1770	5085	1550
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1576			1561	1770	5085	1550	1770	5085	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	0	247	0	0	465	165	537	22	377	1615	268
RTOR Reduction (vph)	0	0	176	0	0	373	0	0	0	0	0	0
Lane Group Flow (vph)	174	0	71	0	0	92	165	537	22	377	1615	268
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						1			8
Turn Type	Prot		pm+ov			Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			8			2			6
Actuated Green, G (s)	11.7		36.3			24.8	24.6	34.3	34.3	36.7	46.4	58.1
Effective Green, g (s)	11.7		36.3			24.8	24.6	34.3	34.3	36.7	46.4	58.1
Actuated g/C Ratio	0.09		0.29			0.20	0.20	0.27	0.27	0.29	0.37	0.46
Clearance Time (s)	5.0		5.0			4.0	5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0			0.2	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	318		454			307	345	1384	421	515	1872	714
v/s Ratio Prot	c0.05		0.03				0.09	0.11		c0.21	c0.32	0.03
v/s Ratio Perm			0.01			c0.06			0.01			0.14
v/c Ratio	0.55		0.16			0.30	0.48	0.39	0.05	0.73	0.86	0.38
Uniform Delay, d1	54.6		33.4			43.2	45.0	37.3	33.9	40.2	36.9	22.1
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.98	0.59	0.47
Incremental Delay, d2	1.9		0.2			0.2	1.0	0.8	0.2	4.5	4.7	0.3
Delay (s)	56.5		33.6			43.4	46.1	38.1	34.1	43.7	26.4	10.8
Level of Service	E		C			D	D	D	C	D	C	B
Approach Delay (s)		43.1			43.4			39.8			27.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	53	0	0	0	32	1149	0	14	2115	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00				1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98				1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00				1.00	1.00		1.00	1.00	
Frt		1.00	0.85				1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765	1557				1770	5085		1770	5077	
Flt Permitted		0.76	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1407	1557				1770	5085		1770	5077	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	0	58	0	0	0	35	1263	0	15	2324	21
RTOR Reduction (vph)	0	0	52	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	22	6	0	0	0	35	1263	0	15	2345	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						3			6
Turn Type	Perm	NA	Perm				Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6				4.8	98.7		2.7	96.6	
Effective Green, g (s)		12.6	12.6				4.8	98.7		2.7	96.6	
Actuated g/C Ratio		0.10	0.10				0.04	0.78		0.02	0.77	
Clearance Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		140	155				67	3983		37	3892	
v/s Ratio Prot							c0.02	0.25		0.01	c0.46	
v/s Ratio Perm		c0.02	0.00									
v/c Ratio		0.16	0.04				0.52	0.32		0.41	0.60	
Uniform Delay, d1		51.8	51.2				59.5	3.9		60.9	6.4	
Progression Factor		1.00	1.00				0.76	2.09		1.23	0.21	
Incremental Delay, d2		0.5	0.1				6.7	0.2		5.7	0.6	
Delay (s)		52.4	51.3				51.7	8.4		80.4	1.9	
Level of Service		D	D				D	A		F	A	
Approach Delay (s)		51.6			0.0			9.6			2.4	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

6/2/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	206	302	177	970	1796	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	5041	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	5041	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	336	197	1078	1996	90
RTOR Reduction (vph)	0	225	0	0	3	0
Lane Group Flow (vph)	229	111	197	1078	2083	0
Confl. Peds. (#/hr)	3					8
Confl. Bikes (#/hr)						8
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	21.6	21.6	18.6	97.4	75.8	
Effective Green, g (s)	21.6	21.6	18.6	97.4	75.8	
Actuated g/C Ratio	0.17	0.17	0.15	0.77	0.60	
Clearance Time (s)	3.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	303	271	261	3930	3032	
v/s Ratio Prot	c0.13		c0.11	0.21	c0.41	
v/s Ratio Perm		0.07				
v/c Ratio	0.76	0.41	0.75	0.27	0.69	
Uniform Delay, d1	49.7	46.5	51.5	4.1	17.0	
Progression Factor	1.00	1.00	1.17	0.86	0.33	
Incremental Delay, d2	10.3	1.0	11.4	0.2	1.1	
Delay (s)	59.9	47.5	71.7	3.7	6.7	
Level of Service	E	D	E	A	A	
Approach Delay (s)	52.6			14.2	6.7	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	4	46	3	3	8	38	1092	20	37	1827	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1713			1817	1545	1770	5069		1770	5071	
Flt Permitted		0.82			0.93	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1448			1726	1545	1770	5069		1770	5071	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	4	50	3	3	9	41	1187	22	40	1986	37
RTOR Reduction (vph)	0	23	0	0	0	8	0	1	0	0	1	0
Lane Group Flow (vph)	0	101	0	0	6	1	41	1208	0	40	2022	0
Confl. Bikes (#/hr)						6			6			
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		14.0			14.0	14.0	7.2	92.3		7.2	92.3	
Effective Green, g (s)		14.0			14.0	14.0	7.2	92.3		7.2	92.3	
Actuated g/C Ratio		0.11			0.11	0.11	0.06	0.73		0.06	0.73	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		160			191	171	101	3713		101	3714	
v/s Ratio Prot							c0.02	0.24		0.02	c0.40	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.63			0.03	0.01	0.41	0.33		0.40	0.54	
Uniform Delay, d1		53.5			50.0	49.8	57.3	5.9		57.3	7.5	
Progression Factor		1.00			1.00	1.00	1.04	0.99		1.36	0.17	
Incremental Delay, d2		7.8			0.1	0.0	2.6	0.2		2.1	0.5	
Delay (s)		61.4			50.0	49.8	62.0	6.1		79.8	1.8	
Level of Service		E			D	D	E	A		E	A	
Approach Delay (s)		61.4			49.9			7.9			3.3	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	4	46	310	310	82	74	663	304	404	1653	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes		0.95		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3002		3433	1863	1542	1534	5085	1552	1770	5067	
Flt Permitted		0.98		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3002		3433	1863	1542	1534	5085	1552	1770	5067	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	26	4	49	330	330	87	79	705	323	430	1759	30
RTOR Reduction (vph)	0	47	0	0	0	67	0	0	236	0	1	0
Lane Group Flow (vph)	0	32	0	330	330	20	79	705	87	430	1788	0
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			5			6
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		6.2		29.0	29.0	29.0	11.2	33.8	33.8	39.5	62.1	
Effective Green, g (s)		6.2		29.0	29.0	29.0	11.2	33.8	33.8	39.5	62.1	
Actuated g/C Ratio		0.05		0.23	0.23	0.23	0.09	0.27	0.27	0.31	0.49	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		147		790	428	354	136	1364	416	554	2497	
v/s Ratio Prot		c0.01		0.10	c0.18		0.05	0.14		c0.24	c0.35	
v/s Ratio Perm						0.01			0.06			
v/c Ratio		0.22		0.42	0.77	0.06	0.58	0.52	0.21	0.78	0.72	
Uniform Delay, d1		57.6		41.3	45.4	37.8	55.1	39.2	35.7	39.2	25.0	
Progression Factor		1.00		1.00	1.00	1.00	0.98	0.71	1.64	1.33	0.19	
Incremental Delay, d2		0.8		0.4	8.4	0.1	6.0	1.4	1.1	2.3	0.6	
Delay (s)		58.3		41.7	53.7	37.9	60.0	29.3	59.7	54.4	5.3	
Level of Service		E		D	D	D	E	C	E	D	A	
Approach Delay (s)		58.3			46.6			40.4			14.9	
Approach LOS		E			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	67	122	24	51	72	0	760	49	0	2178	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.91			0.91	
Frpb, ped/bikes	1.00	1.00	0.92	1.00	0.95			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.91			0.99			1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863	1451	1770	1608			5019			5055	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (perm)	1770	1863	1451	1770	1608			5019			5055	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	144	72	131	26	55	77	0	817	53	0	2342	80
RTOR Reduction (vph)	0	0	108	0	40	0	0	5	0	0	3	0
Lane Group Flow (vph)	144	72	23	26	92	0	0	865	0	0	2419	0
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			4			1
Turn Type	Split	NA	Perm	Split	NA			NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4									
Actuated Green, G (s)	22.6	22.6	22.6	30.0	30.0			60.9			60.9	
Effective Green, g (s)	22.6	22.6	22.6	30.0	30.0			60.9			60.9	
Actuated g/C Ratio	0.18	0.18	0.18	0.24	0.24			0.48			0.48	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	317	334	260	421	382			2425			2443	
v/s Ratio Prot	c0.08	0.04		0.01	c0.06			0.17			c0.48	
v/s Ratio Perm			0.02									
v/c Ratio	0.45	0.22	0.09	0.06	0.24			0.36			0.99	
Uniform Delay, d1	46.2	44.1	43.1	37.1	38.8			20.3			32.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.73			0.26	
Incremental Delay, d2	1.0	0.3	0.2	0.1	0.3			0.4			11.4	
Delay (s)	47.2	44.5	43.3	37.2	39.1			15.2			19.7	
Level of Service	D	D	D	D	D			B			B	
Approach Delay (s)		45.2			38.8			15.2			19.7	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	127	65	109	222	37	102	700	66	91	2074	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1488	1770	1863	1520	1770	5005		1770	5043	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1488	1770	1863	1520	1770	5005		1770	5043	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	53	137	70	117	239	40	110	753	71	98	2230	113
RTOR Reduction (vph)	0	0	58	0	0	32	0	8	0	0	4	0
Lane Group Flow (vph)	53	137	12	117	239	8	110	816	0	98	2339	0
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	6.9	21.7	21.7	9.0	23.8	23.8	11.5	69.2		11.6	69.3	
Effective Green, g (s)	6.9	21.7	21.7	9.0	23.8	23.8	11.5	69.2		11.6	69.3	
Actuated g/C Ratio	0.05	0.17	0.17	0.07	0.19	0.19	0.09	0.55		0.09	0.55	
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	96	320	256	126	351	287	161	2748		162	2773	
v/s Ratio Prot	0.03	0.07		c0.07	c0.13		c0.06	0.16		0.06	c0.46	
v/s Ratio Perm			0.01			0.00						
v/c Ratio	0.55	0.43	0.05	0.93	0.68	0.03	0.68	0.30		0.60	0.84	
Uniform Delay, d1	58.0	46.6	43.5	58.2	47.6	41.7	55.5	15.3		55.0	23.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.92		1.23	0.46	
Incremental Delay, d2	6.7	0.9	0.1	57.8	5.4	0.0	10.8	0.3		0.6	0.3	
Delay (s)	64.8	47.5	43.6	116.0	52.9	41.7	60.5	29.6		68.4	11.2	
Level of Service	E	D	D	F	D	D	E	C		E	B	
Approach Delay (s)		50.0			70.4			33.3			13.5	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	173	169	130	247	12	133	701	41	47	1931	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.98	
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1761	1549	1770	1848		1770	5034		1770	4945	
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1761	1549	1770	1848		1770	5034		1770	4945	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	196	175	171	131	249	12	134	708	41	47	1951	336
RTOR Reduction (vph)	0	0	143	0	2	0	0	4	0	0	18	0
Lane Group Flow (vph)	176	195	28	131	259	0	134	745	0	47	2269	0
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			4			12
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	20.7	20.7	20.7	23.2	23.2		19.4	59.0		7.6	47.2	
Effective Green, g (s)	20.7	20.7	20.7	23.2	23.2		19.4	59.0		7.6	47.2	
Actuated g/C Ratio	0.16	0.16	0.16	0.18	0.18		0.15	0.47		0.06	0.37	
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	276	289	254	325	340		272	2357		106	1852	
v/s Ratio Prot	0.10	c0.11		0.07	c0.14		c0.08	0.15		0.03	c0.46	
v/s Ratio Perm			0.02									
v/c Ratio	0.64	0.67	0.11	0.40	0.76		0.49	0.32		0.44	1.23	
Uniform Delay, d1	49.1	49.5	44.8	45.3	48.8		48.8	20.9		57.2	39.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.26	0.74		1.36	0.84	
Incremental Delay, d2	4.8	6.1	0.2	0.8	9.7		1.4	0.3		2.5	105.7	
Delay (s)	53.9	55.6	45.0	46.1	58.5		62.8	15.9		80.2	138.6	
Level of Service	D	E	D	D	E		E	B		F	F	
Approach Delay (s)		51.7			54.4			23.0			137.5	
Approach LOS		D			D			C			F	

Intersection Summary			
HCM 2000 Control Delay	94.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	55	12	164	18	69	17	814	120	85	2041	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1858	1557		1782	1549	1770	4967		1770	5069	
Flt Permitted		0.99	1.00		0.69	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1843	1557		1285	1549	1770	4967		1770	5069	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	56	12	167	18	70	17	831	122	87	2083	38
RTOR Reduction (vph)	0	0	10	0	0	50	0	11	0	0	1	0
Lane Group Flow (vph)	0	59	2	0	185	20	17	942	0	87	2120	0
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			7			11
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		23.1	23.1		23.1	23.1	3.2	81.4		11.5	89.7	
Effective Green, g (s)		23.1	23.1		23.1	23.1	3.2	81.4		11.5	89.7	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.03	0.65		0.09	0.71	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		337	285		235	283	44	3208		161	3608	
v/s Ratio Prot							0.01	0.19		c0.05	c0.42	
v/s Ratio Perm		0.03	0.00		c0.14	0.01						
v/c Ratio		0.18	0.01		0.79	0.07	0.39	0.29		0.54	0.59	
Uniform Delay, d1		43.4	42.1		49.1	42.6	60.4	9.7		54.7	9.0	
Progression Factor		1.00	1.00		1.00	1.00	0.72	1.60		1.00	1.00	
Incremental Delay, d2		0.2	0.0		15.9	0.1	5.4	0.2		3.7	0.7	
Delay (s)		43.7	42.1		65.0	42.7	48.6	15.8		58.4	9.7	
Level of Service		D	D		E	D	D	B		E	A	
Approach Delay (s)		43.4			58.8			16.4			11.6	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	555	0	244	0	0	719	180	1320	143	402	948	379
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1566			1583	1770	5085	1583	1770	5085	1537
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1566			1583	1770	5085	1583	1770	5085	1537
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	610	0	268	0	0	790	198	1451	157	442	1042	416
RTOR Reduction (vph)	0	0	192	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	610	0	76	0	0	786	198	1451	157	442	1042	416
Confl. Peds. (#/hr)			9									8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	21.0		39.9			93.0	18.9	37.5	37.5	35.0	53.6	74.6
Effective Green, g (s)	21.0		39.9			89.0	18.9	37.5	37.5	35.0	53.6	74.6
Actuated g/C Ratio	0.15		0.28			0.64	0.13	0.27	0.27	0.25	0.38	0.53
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	514		446			1006	238	1362	424	442	1946	819
v/s Ratio Prot	c0.18		0.02				0.11	c0.29		c0.25	0.20	0.08
v/s Ratio Perm			0.03			c0.50			0.10			0.19
v/c Ratio	1.19		0.17			0.78	0.83	1.07	0.37	1.00	0.54	0.51
Uniform Delay, d1	59.5		37.6			18.4	59.0	51.2	41.7	52.5	33.5	20.9
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.36	0.87	0.32
Incremental Delay, d2	102.3		0.2			4.0	21.3	43.9	2.5	40.6	1.0	0.4
Delay (s)	161.8		37.8			22.4	80.3	95.1	44.1	112.2	30.1	7.1
Level of Service	F		D			C	F	F	D	F	C	A
Approach Delay (s)		124.0			22.4			89.0			44.2	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	69.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	0	48	4	1	1	181	2294	2	13	1676	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1760	1583		1755		1770	5085		1770	5066	
Flt Permitted		0.75	1.00		0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1396	1583		1598		1770	5085		1770	5066	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	0	51	4	1	1	193	2440	2	14	1783	31
RTOR Reduction (vph)	0	0	46	0	1	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	24	5	0	5	0	193	2442	0	14	1813	0
Confl. Peds. (#/hr)	4					4			5			11
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		20.5	112.7		2.7	94.9	
Effective Green, g (s)		12.6	12.6		12.6		20.5	112.7		2.7	94.9	
Actuated g/C Ratio		0.09	0.09		0.09		0.15	0.81		0.02	0.68	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		125	142		143		259	4093		34	3434	
v/s Ratio Prot							c0.11	c0.48		0.01	0.36	
v/s Ratio Perm		c0.02	0.00		0.00							
v/c Ratio		0.19	0.03		0.04		0.75	0.60		0.41	0.53	
Uniform Delay, d1		59.0	58.1		58.2		57.2	5.1		67.9	11.3	
Progression Factor		1.00	1.00		1.00		0.76	1.55		1.04	0.23	
Incremental Delay, d2		0.8	0.1		0.1		3.2	0.2		6.8	0.5	
Delay (s)		59.7	58.2		58.3		46.6	8.1		77.4	3.1	
Level of Service		E	E		E		D	A		E	A	
Approach Delay (s)		58.7			58.3			10.9			3.6	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	261	203	358	2048	1483	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	5085	5025	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	5085	5025	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	266	207	365	2090	1513	94
RTOR Reduction (vph)	0	106	0	0	4	0
Lane Group Flow (vph)	266	101	365	2090	1603	0
Confl. Peds. (#/hr)	3					9
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	25.7	25.7	33.9	107.3	70.4	
Effective Green, g (s)	25.7	25.7	33.9	107.3	70.4	
Actuated g/C Ratio	0.18	0.18	0.24	0.77	0.50	
Clearance Time (s)	3.0	3.0	3.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	324	290	428	3897	2526	
v/s Ratio Prot	c0.15		c0.21	0.41	c0.32	
v/s Ratio Perm		0.06				
v/c Ratio	0.82	0.35	0.85	0.54	0.63	
Uniform Delay, d1	54.9	49.8	50.7	6.5	25.4	
Progression Factor	1.00	1.00	1.07	0.78	0.48	
Incremental Delay, d2	15.3	0.7	13.2	0.5	1.1	
Delay (s)	70.2	50.6	67.4	5.5	13.3	
Level of Service	E	D	E	A	B	
Approach Delay (s)	61.6			14.7	13.3	
Approach LOS	E			B	B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	2	32	49	9	41	79	2045	14	74	1567	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1693			1760	1583	1770	5078		1770	5062	
Flt Permitted		0.80			0.74	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1400			1357	1583	1770	5078		1770	5062	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	2	34	52	10	44	84	2176	15	79	1667	35
RTOR Reduction (vph)	0	17	0	0	0	36	0	0	0	0	1	0
Lane Group Flow (vph)	0	72	0	0	62	8	84	2191	0	79	1701	0
Confl. Peds. (#/hr)			18	18					7			12
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.2			25.2	25.2	11.1	91.1		11.2	91.2	
Effective Green, g (s)		25.2			25.2	25.2	11.1	91.1		11.2	91.2	
Actuated g/C Ratio		0.18			0.18	0.18	0.08	0.65		0.08	0.65	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		252			244	284	140	3304		141	3297	
v/s Ratio Prot							c0.05	c0.43		0.04	0.34	
v/s Ratio Perm		c0.05			0.05	0.01						
v/c Ratio		0.28			0.25	0.03	0.60	0.66		0.56	0.52	
Uniform Delay, d1		49.6			49.3	47.3	62.3	15.0		62.0	12.8	
Progression Factor		1.00			1.00	1.00	1.14	0.74		1.00	0.46	
Incremental Delay, d2		0.6			0.6	0.0	5.7	0.9		4.1	0.5	
Delay (s)		50.2			49.9	47.3	76.7	12.1		66.4	6.3	
Level of Service		D			D	D	E	B		E	A	
Approach Delay (s)		50.2			48.8			14.4			9.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	313	58	310	305	174	96	1762	400	382	1315	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3439		3433	1863	1551	1534	5085	1497	1770	5006	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3439		3433	1863	1551	1534	5085	1497	1770	5006	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	94	329	61	326	321	183	101	1855	421	402	1384	108
RTOR Reduction (vph)	0	8	0	0	0	95	0	0	175	0	6	0
Lane Group Flow (vph)	0	476	0	326	321	88	101	1855	246	402	1486	0
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									29			
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		20.0		28.1	28.1	28.1	14.0	46.0	46.0	28.4	60.4	
Effective Green, g (s)		20.0		28.1	28.1	28.1	14.0	46.0	46.0	28.4	60.4	
Actuated g/C Ratio		0.14		0.20	0.20	0.20	0.10	0.33	0.33	0.20	0.43	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		491		689	373	311	153	1670	491	359	2159	
v/s Ratio Prot		c0.14		0.09	c0.17		0.07	c0.36		c0.23	0.30	
v/s Ratio Perm						0.06			0.16			
v/c Ratio		0.97		0.47	0.86	0.28	0.66	1.11	0.50	1.12	0.69	
Uniform Delay, d1		59.7		49.4	54.1	47.4	60.7	47.0	37.8	55.8	32.2	
Progression Factor		1.00		1.00	1.00	1.00	1.40	0.74	0.45	1.44	0.57	
Incremental Delay, d2		32.9		0.5	18.0	0.5	8.4	57.5	3.0	80.0	1.5	
Delay (s)		92.6		49.9	72.0	47.9	93.5	92.1	20.1	160.2	19.9	
Level of Service		F		D	E	D	F	F	C	F	B	
Approach Delay (s)		92.6			58.0			79.4			49.6	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	67.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	85	257	75	73	38	0	2090	92	0	1427	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.91			0.91	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.98			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.95			0.99			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863	1375	1770	1737			5040			5022	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (perm)	1770	1863	1375	1770	1737			5040			5022	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	164	89	268	78	76	40	0	2177	96	0	1486	99
RTOR Reduction (vph)	0	0	174	0	14	0	0	3	0	0	5	0
Lane Group Flow (vph)	164	89	94	78	102	0	0	2270	0	0	1580	0
Confl. Peds. (#/hr)			87			26			12			9
Turn Type	Split	NA	Perm	Split	NA			NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4									
Actuated Green, G (s)	30.0	30.0	30.0	25.6	25.6			71.9			71.9	
Effective Green, g (s)	30.0	30.0	30.0	25.6	25.6			71.9			71.9	
Actuated g/C Ratio	0.21	0.21	0.21	0.18	0.18			0.51			0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	379	399	294	323	317			2588			2579	
v/s Ratio Prot	c0.09	0.05		0.04	c0.06			c0.45			0.31	
v/s Ratio Perm			0.07									
v/c Ratio	0.43	0.22	0.32	0.24	0.32			0.88			0.61	
Uniform Delay, d1	47.6	45.4	46.4	48.9	49.7			30.1			24.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.59			0.57	
Incremental Delay, d2	0.8	0.3	0.6	0.4	0.6			1.3			0.9	
Delay (s)	48.4	45.7	47.0	49.3	50.3			19.0			14.6	
Level of Service	D	D	D	D	D			B			B	
Approach Delay (s)		47.2			49.9			19.0			14.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	218	127	129	184	111	96	1942	136	124	1377	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1522	1770	1863	1515	1770	5017		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1522	1770	1863	1515	1770	5017		1770	5021	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	141	222	130	132	188	113	98	1982	139	127	1405	93
RTOR Reduction (vph)	0	0	89	0	0	91	0	5	0	0	5	0
Lane Group Flow (vph)	141	222	41	132	188	22	98	2116	0	127	1493	0
Confl. Peds. (#/hr)			19			22			10			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.1	24.5	24.5	13.3	23.7	23.7	12.4	74.3		13.4	75.3	
Effective Green, g (s)	14.1	24.5	24.5	13.3	23.7	23.7	12.4	74.3		13.4	75.3	
Actuated g/C Ratio	0.10	0.18	0.18	0.10	0.17	0.17	0.09	0.53		0.10	0.54	
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	178	326	266	168	315	256	156	2662		169	2700	
v/s Ratio Prot	c0.08	c0.12		0.07	0.10		0.06	c0.42		c0.07	0.30	
v/s Ratio Perm			0.03			0.01						
v/c Ratio	0.79	0.68	0.15	0.79	0.60	0.08	0.63	0.79		0.75	0.55	
Uniform Delay, d1	61.5	54.1	49.0	62.0	53.7	49.0	61.6	26.7		61.7	21.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.39	0.21		0.81	1.56	
Incremental Delay, d2	21.0	5.8	0.3	21.0	3.0	0.1	4.1	1.3		16.4	0.8	
Delay (s)	82.5	59.8	49.2	83.0	56.8	49.1	89.8	7.0		66.3	33.9	
Level of Service	F	E	D	F	E	D	F	A		E	C	
Approach Delay (s)		63.5			62.8			10.6			36.4	
Approach LOS		E			E			B			D	

Intersection Summary			
HCM 2000 Control Delay	29.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	282	142	124	50	182	24	133	1467	22	42	918	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00		1.00	0.97	
Flt Protected	0.95	0.98	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1740	1554	1770	1831		1770	5072		1770	4897	
Flt Permitted	0.95	0.98	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1740	1554	1770	1831		1770	5072		1770	4897	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	288	145	127	51	186	24	136	1497	22	43	937	255
RTOR Reduction (vph)	0	0	99	0	3	0	0	1	0	0	27	0
Lane Group Flow (vph)	213	220	28	51	207	0	136	1518	0	43	1165	0
Confl. Peds. (#/hr)			5						3			1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	23.7	23.7	23.7	21.0	21.0		16.0	72.1		7.7	63.8	
Effective Green, g (s)	23.7	23.7	23.7	21.0	21.0		16.0	72.1		7.7	63.8	
Actuated g/C Ratio	0.17	0.17	0.17	0.15	0.15		0.11	0.51		0.06	0.46	
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	294	263	265	274		202	2612		97	2231	
v/s Ratio Prot	c0.13	0.13		0.03	c0.11		c0.08	c0.30		0.02	0.24	
v/s Ratio Perm			0.02									
v/c Ratio	0.75	0.75	0.11	0.19	0.75		0.67	0.58		0.44	0.52	
Uniform Delay, d1	55.3	55.3	49.2	52.1	57.0		59.5	23.5		64.1	27.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.15	0.35		1.04	0.80	
Incremental Delay, d2	10.6	10.0	0.2	0.4	11.2		5.4	0.6		3.1	0.8	
Delay (s)	65.9	65.3	49.4	52.4	68.2		73.9	8.8		70.0	22.5	
Level of Service	E	E	D	D	E		E	A		E	C	
Approach Delay (s)		61.9			65.1			14.2			24.2	
Approach LOS		E			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

6/2/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	81	12	161	36	1676	96	67	1375	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1808	1583		1785	1554	1770	5037		1770	5075	
Flt Permitted		0.85	1.00		0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1572	1583		1354	1554	1770	5037		1770	5075	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	82	12	163	36	1693	97	68	1389	19
RTOR Reduction (vph)	0	0	12	0	0	141	0	3	0	0	1	0
Lane Group Flow (vph)	0	37	2	0	94	22	36	1787	0	68	1407	0
Confl. Peds. (#/hr)	5					5			1			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		16.8	16.8		16.8	16.8	7.2	103.8		9.4	106.0	
Effective Green, g (s)		16.8	16.8		16.8	16.8	7.2	103.8		9.4	106.0	
Actuated g/C Ratio		0.12	0.12		0.12	0.12	0.05	0.74		0.07	0.76	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		188	189		162	186	91	3734		118	3842	
v/s Ratio Prot							0.02	c0.35		c0.04	0.28	
v/s Ratio Perm		0.02	0.00		c0.07	0.01						
v/c Ratio		0.20	0.01		0.58	0.12	0.40	0.48		0.58	0.37	
Uniform Delay, d1		55.5	54.3		58.3	55.0	64.3	7.3		63.4	5.7	
Progression Factor		1.00	1.00		1.00	1.00	1.25	0.18		1.00	1.00	
Incremental Delay, d2		0.5	0.0		5.2	0.3	2.3	0.4		6.7	0.3	
Delay (s)		56.0	54.3		63.5	55.3	83.0	1.7		70.0	6.0	
Level of Service		E	D		E	E	F	A		E	A	
Approach Delay (s)		55.6			58.3			3.3			8.9	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	0	331	0	0	715	426	1069	28	359	1724	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1577			1563	1770	5085	1550	1770	5085	1550
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1577			1563	1770	5085	1550	1770	5085	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	0	348	0	0	753	448	1125	29	378	1815	245
RTOR Reduction (vph)	0	0	199	0	0	6	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	149	0	0	747	448	1125	29	378	1815	245
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						1			8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			1 7 8			2			6
Actuated Green, G (s)	13.0		48.6			76.1	35.6	50.4	50.4	36.1	50.9	63.9
Effective Green, g (s)	13.0		48.6			72.1	35.6	50.4	50.4	36.1	50.9	63.9
Actuated g/C Ratio	0.10		0.36			0.53	0.26	0.37	0.37	0.27	0.37	0.47
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	328		563			828	463	1884	574	469	1903	728
v/s Ratio Prot	0.05		0.07				c0.25	0.22		0.21	c0.36	0.03
v/s Ratio Perm			0.03			c0.48			0.02			0.13
v/c Ratio	0.53		0.26			0.90	0.97	0.60	0.05	0.81	0.95	0.34
Uniform Delay, d1	58.6		31.0			28.8	49.6	34.6	27.5	46.7	41.4	22.7
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.36	0.56	0.31
Incremental Delay, d2	1.5		0.3			13.0	33.2	1.4	0.2	8.1	10.5	0.2
Delay (s)	60.1		31.3			41.8	82.8	36.0	27.6	71.7	33.8	7.3
Level of Service	E		C			D	F	D	C	E	C	A
Approach Delay (s)		40.8			41.8			48.9			37.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	16	64	15	4	2	63	1899	47	59	2131	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1810	1557		1772		1770	5065		1770	5073	
Flt Permitted		0.84	1.00		0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1569	1557		1491		1770	5065		1770	5073	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	18	70	16	4	2	69	2087	52	65	2342	30
RTOR Reduction (vph)	0	0	64	0	2	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	40	6	0	20	0	69	2138	0	65	2372	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						3			6
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		8.8	103.0		8.4	102.6	
Effective Green, g (s)		12.6	12.6		12.6		8.8	103.0		8.4	102.6	
Actuated g/C Ratio		0.09	0.09		0.09		0.06	0.76		0.06	0.75	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		145	144		138		114	3835		109	3827	
v/s Ratio Prot							c0.04	0.42		0.04	c0.47	
v/s Ratio Perm		c0.03	0.00		0.01							
v/c Ratio		0.28	0.05		0.15		0.61	0.56		0.60	0.62	
Uniform Delay, d1		57.5	56.2		56.8		61.9	6.9		62.1	7.7	
Progression Factor		1.00	1.00		1.00		0.94	1.07		1.31	0.27	
Incremental Delay, d2		1.0	0.1		0.5		7.0	0.5		5.6	0.5	
Delay (s)		58.5	56.3		57.2		65.4	7.8		86.8	2.6	
Level of Service		E	E		E		E	A		F	A	
Approach Delay (s)		57.1			57.2			9.6			4.8	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	47	309	26	18	17	244	1658	1	64	1802	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.96		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1759	1620			1757		1770	5085		1770	5030	
Flt Permitted	0.71	1.00			0.26		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1306	1620			472		1770	5085		1770	5030	
Peak-hour factor, PHF	0.90	0.92	0.90	0.92	0.92	0.92	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	234	51	343	28	20	18	271	1842	1	70	2002	114
RTOR Reduction (vph)	0	185	0	0	10	0	0	0	0	0	4	0
Lane Group Flow (vph)	234	209	0	0	56	0	271	1843	0	70	2112	0
Confl. Peds. (#/hr)	3											8
Confl. Bikes (#/hr)												8
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	28.2	28.2			27.2		24.6	87.2		9.6	73.2	
Effective Green, g (s)	28.2	28.2			27.2		24.6	87.2		9.6	73.2	
Actuated g/C Ratio	0.21	0.21			0.20		0.18	0.64		0.07	0.54	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	270	335			94		320	3260		124	2707	
v/s Ratio Prot		0.13					c0.15	0.36		0.04	c0.42	
v/s Ratio Perm	c0.18				0.12							
v/c Ratio	0.87	0.62			0.59		0.85	0.57		0.56	0.78	
Uniform Delay, d1	52.1	49.1			49.4		53.9	13.7		61.2	25.0	
Progression Factor	1.00	1.00			1.00		0.72	1.25		0.68	0.39	
Incremental Delay, d2	24.0	3.6			9.6		16.0	0.6		5.1	2.0	
Delay (s)	76.1	52.7			59.0		54.9	17.8		46.7	11.7	
Level of Service	E	D			E		D	B		D	B	
Approach Delay (s)		61.4			59.0			22.6			12.8	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	5	50	4	4	8	41	1793	23	35	1856	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1817	1545	1770	5074		1770	5072	
Flt Permitted		0.83			0.91	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1458			1690	1545	1770	5074		1770	5072	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	5	54	4	4	9	45	1949	25	38	2017	35
RTOR Reduction (vph)	0	24	0	0	0	8	0	1	0	0	1	0
Lane Group Flow (vph)	0	100	0	0	8	1	45	1973	0	38	2051	0
Confl. Bikes (#/hr)						6			6			
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		14.5			14.5	14.5	7.7	101.7		7.3	101.3	
Effective Green, g (s)		14.5			14.5	14.5	7.7	101.7		7.3	101.3	
Actuated g/C Ratio		0.11			0.11	0.11	0.06	0.75		0.05	0.74	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		155			180	164	100	3794		95	3777	
v/s Ratio Prot							c0.03	0.39		0.02	c0.40	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.64			0.04	0.01	0.45	0.52		0.40	0.54	
Uniform Delay, d1		58.3			54.5	54.3	62.1	7.1		62.2	7.4	
Progression Factor		1.00			1.00	1.00	1.26	0.13		0.93	0.77	
Incremental Delay, d2		8.9			0.1	0.0	2.6	0.4		1.4	0.3	
Delay (s)		67.1			54.6	54.3	80.9	1.3		59.0	6.0	
Level of Service		E			D	D	F	A		E	A	
Approach Delay (s)		67.1			54.5			3.1			7.0	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	334	53	532	243	46	118	860	772	170	1328	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.93
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3445		3433	1863	1540	1534	3539	1554	1770	3539	1466
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3445		3433	1863	1540	1534	3539	1554	1770	3539	1466
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	355	56	566	259	49	126	915	821	181	1413	13
RTOR Reduction (vph)	0	9	0	0	0	39	0	0	339	0	0	7
Lane Group Flow (vph)	0	421	0	566	259	10	126	915	482	181	1413	6
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			5			6
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		17.7		27.8	27.8	27.8	13.5	56.7	56.7	16.3	59.5	59.5
Effective Green, g (s)		17.7		27.8	27.8	27.8	13.5	56.7	56.7	16.3	59.5	59.5
Actuated g/C Ratio		0.13		0.20	0.20	0.20	0.10	0.42	0.42	0.12	0.44	0.44
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		448		701	380	314	152	1475	647	212	1548	641
v/s Ratio Prot		c0.12		c0.16	0.14		0.08	0.26		c0.10	c0.40	
v/s Ratio Perm						0.01			0.31			0.00
v/c Ratio		0.94		0.81	0.68	0.03	0.83	0.62	0.75	0.85	0.91	0.01
Uniform Delay, d1		58.6		51.5	50.0	43.3	60.1	31.2	33.5	58.7	35.8	21.6
Progression Factor		1.00		1.00	1.00	1.00	1.27	0.62	1.02	1.46	0.26	1.00
Incremental Delay, d2		28.0		6.8	5.0	0.0	26.6	1.7	6.7	17.8	6.3	0.0
Delay (s)		86.7		58.3	55.0	43.4	102.9	21.0	41.0	103.8	15.7	21.6
Level of Service		F		E	D	D	F	C	D	F	B	C
Approach Delay (s)		86.7			56.5			35.4			25.7	
Approach LOS		F			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	79	92	65	59	31	0	930	57	0	1433	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.97			1.00	0.93		1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1442	1770	1707			3539	1477		3539	1535
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1442	1770	1707			3539	1477		3539	1535
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	151	85	99	70	63	33	0	1000	61	0	1541	67
RTOR Reduction (vph)	0	0	82	0	14	0	0	0	29	0	0	19
Lane Group Flow (vph)	151	85	17	70	82	0	0	1000	32	0	1541	48
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			4			1
Turn Type	Split	NA	Perm	Split	NA			NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	23.0	23.0	23.0	30.0	30.0			70.5	70.5		70.5	70.5
Effective Green, g (s)	23.0	23.0	23.0	30.0	30.0			70.5	70.5		70.5	70.5
Actuated g/C Ratio	0.17	0.17	0.17	0.22	0.22			0.52	0.52		0.52	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	299	315	243	390	376			1834	765		1834	795
v/s Ratio Prot	c0.09	0.05		0.04	c0.05			0.28			c0.44	
v/s Ratio Perm			0.01						0.02			0.03
v/c Ratio	0.51	0.27	0.07	0.18	0.22			0.55	0.04		0.84	0.06
Uniform Delay, d1	51.3	49.2	47.5	43.0	43.4			22.0	16.1		27.9	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.37	0.38		0.24	0.07
Incremental Delay, d2	1.3	0.5	0.1	0.2	0.3			1.0	0.1		3.6	0.1
Delay (s)	52.7	49.7	47.6	43.2	43.7			9.1	6.2		10.3	1.3
Level of Service	D	D	D	D	D			A	A		B	A
Approach Delay (s)		50.4			43.5			8.9			9.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	139	47	86	298	69	99	958	62	89	1306	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1485	1770	1863	1520	1770	3539	1531	1770	3539	1546
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1485	1770	1863	1520	1770	3539	1531	1770	3539	1546
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	149	51	92	320	74	106	1030	67	96	1404	123
RTOR Reduction (vph)	0	0	42	0	0	51	0	0	25	0	0	25
Lane Group Flow (vph)	67	149	9	92	320	23	106	1030	42	96	1404	98
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.2	24.5	24.5	10.3	27.6	27.6	12.0	74.7	74.7	12.0	74.7	74.7
Effective Green, g (s)	7.2	24.5	24.5	10.3	27.6	27.6	12.0	74.7	74.7	12.0	74.7	74.7
Actuated g/C Ratio	0.05	0.18	0.18	0.08	0.20	0.20	0.09	0.55	0.55	0.09	0.55	0.55
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	93	335	267	134	378	308	156	1943	840	156	1943	849
v/s Ratio Prot	0.04	0.08		c0.05	c0.17		c0.06	0.29		0.05	c0.40	
v/s Ratio Perm			0.01			0.02			0.03			0.06
v/c Ratio	0.72	0.44	0.03	0.69	0.85	0.07	0.68	0.53	0.05	0.62	0.72	0.12
Uniform Delay, d1	63.4	49.7	46.0	61.3	52.2	43.9	60.1	19.5	14.2	59.8	22.9	14.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.11	0.72	0.77	1.42	0.15	0.02
Incremental Delay, d2	23.8	0.9	0.1	13.6	15.9	0.1	9.8	0.9	0.1	2.8	0.9	0.1
Delay (s)	87.2	50.6	46.0	74.9	68.1	44.0	76.4	14.9	11.1	87.6	4.4	0.4
Level of Service	F	D	D	E	E	D	E	B	B	F	A	A
Approach Delay (s)		58.9			65.7			20.1			9.0	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	294	210	85	59	348	132	110	1005	48	121	1369	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1753	1548	1770	1777		1770	3539	1525	1770	3539	1522
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1753	1548	1770	1777		1770	3539	1525	1770	3539	1522
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	297	212	86	60	352	133	111	1015	48	122	1383	452
RTOR Reduction (vph)	0	0	70	0	9	0	0	0	32	0	0	181
Lane Group Flow (vph)	249	260	16	60	476	0	111	1015	16	122	1383	271
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			4			12
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	25.6	25.6	25.6	38.4	38.4		6.0	45.9	45.9	10.6	50.5	50.5
Effective Green, g (s)	25.6	25.6	25.6	38.4	38.4		6.0	45.9	45.9	10.6	50.5	50.5
Actuated g/C Ratio	0.19	0.19	0.19	0.28	0.28		0.04	0.34	0.34	0.08	0.37	0.37
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	316	329	291	499	501		78	1194	514	137	1314	565
v/s Ratio Prot	0.15	c0.15		0.03	c0.27		c0.06	0.29		c0.07	c0.39	
v/s Ratio Perm			0.01						0.01			0.18
v/c Ratio	0.79	0.79	0.06	0.12	0.95		1.42	0.85	0.03	0.89	1.05	0.48
Uniform Delay, d1	52.6	52.6	45.3	36.3	47.8		65.0	41.9	30.2	62.1	42.8	32.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.90	1.24	1.00	1.17	0.86	0.51
Incremental Delay, d2	12.2	12.2	0.1	0.1	27.6		243.5	6.8	0.1	42.1	38.6	2.6
Delay (s)	64.8	64.8	45.4	36.4	75.4		302.1	58.7	30.3	114.8	75.4	19.2
Level of Service	E	E	D	D	E		F	E	C	F	E	B
Approach Delay (s)		62.0			71.1			80.6			64.9	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	69.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	57	9	132	20	99	14	1320	111	284	1798	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1856	1556		1785	1547	1770	3539	1531	1770	5065	
Flt Permitted		0.99	1.00		0.67	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1836	1556		1257	1547	1770	3539	1531	1770	5065	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4	58	9	135	20	101	14	1347	113	290	1835	43
RTOR Reduction (vph)	0	0	8	0	0	76	0	0	24	0	1	0
Lane Group Flow (vph)	0	62	1	0	155	25	14	1347	89	290	1877	0
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			7			11
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		21.8	21.8		21.8	21.8	2.7	77.6	77.6	26.6	101.5	
Effective Green, g (s)		21.8	21.8		21.8	21.8	2.7	77.6	77.6	26.6	101.5	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.02	0.57	0.57	0.20	0.75	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		294	249		201	247	35	2019	873	346	3780	
v/s Ratio Prot							0.01	c0.38		c0.16	0.37	
v/s Ratio Perm		0.03	0.00		c0.12	0.02			0.06			
v/c Ratio		0.21	0.01		0.77	0.10	0.40	0.67	0.10	0.84	0.50	
Uniform Delay, d1		49.6	48.0		54.7	48.8	65.8	20.2	13.3	52.6	7.0	
Progression Factor		1.00	1.00		1.00	1.00	0.90	0.55	0.59	1.00	1.00	
Incremental Delay, d2		0.4	0.0		16.6	0.2	4.3	1.0	0.1	16.1	0.5	
Delay (s)		50.0	48.0		71.3	48.9	63.8	12.2	8.0	68.7	7.4	
Level of Service		D	D		E	D	E	B	A	E	A	
Approach Delay (s)		49.7			62.5			12.4			15.6	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	536	0	373	0	0	744	269	1434	195	397	1517	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1568			1583	1770	5085	1583	1770	5085	1537
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1568			1583	1770	5085	1583	1770	5085	1537
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	589	0	410	0	0	818	296	1576	214	436	1667	410
RTOR Reduction (vph)	0	0	285	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	589	0	125	0	0	814	296	1576	214	436	1667	410
Confl. Peds. (#/hr)			9									8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	20.0		42.8			92.0	22.8	38.5	38.5	32.8	48.5	68.5
Effective Green, g (s)	20.0		42.8			88.0	22.8	38.5	38.5	32.8	48.5	68.5
Actuated g/C Ratio	0.14		0.31			0.63	0.16	0.28	0.28	0.23	0.35	0.49
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490		479			995	288	1398	435	414	1761	752
v/s Ratio Prot	c0.17		0.04				0.17	c0.31		c0.25	0.33	0.08
v/s Ratio Perm			0.04			c0.51			0.14			0.19
v/c Ratio	1.20		0.26			0.82	1.03	1.13	0.49	1.05	0.95	0.55
Uniform Delay, d1	60.0		36.7			19.9	58.6	50.8	42.6	53.6	44.5	24.9
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.92	0.63	0.99
Incremental Delay, d2	109.1		0.3			5.3	60.4	67.0	3.9	53.0	9.7	0.6
Delay (s)	169.1		37.0			25.2	119.0	117.8	46.5	102.4	37.8	25.2
Level of Service	F		D			C	F	F	D	F	D	C
Approach Delay (s)		114.9			25.2			110.6			47.0	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	75.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	5	89	84	16	14	188	2260	11	16	2119	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1779	1583		1762		1770	5081		1770	5070	
Flt Permitted		0.76	1.00		0.76		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1402	1583		1385		1770	5081		1770	5070	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	5	95	89	17	15	200	2404	12	17	2254	31
RTOR Reduction (vph)	0	0	83	0	4	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	39	12	0	117	0	200	2416	0	17	2284	0
Confl. Peds. (#/hr)	4					4			5			11
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.4	18.4		18.4		20.4	106.9		2.7	89.2	
Effective Green, g (s)		18.4	18.4		18.4		20.4	106.9		2.7	89.2	
Actuated g/C Ratio		0.13	0.13		0.13		0.15	0.76		0.02	0.64	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		184	208		182		257	3879		34	3230	
v/s Ratio Prot							c0.11	0.48		0.01	c0.45	
v/s Ratio Perm		0.03	0.01		c0.08							
v/c Ratio		0.21	0.06		0.64		0.78	0.62		0.50	0.71	
Uniform Delay, d1		54.3	53.2		57.7		57.6	7.5		68.0	16.8	
Progression Factor		1.00	1.00		1.00		1.06	1.05		0.97	0.25	
Incremental Delay, d2		0.6	0.1		7.5		1.4	0.1		7.2	0.9	
Delay (s)		54.9	53.4		65.2		62.6	7.9		73.2	5.0	
Level of Service		D	D		E		E	A		E	A	
Approach Delay (s)		53.8			65.2			12.1			5.5	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	21	276	33	46	28	348	2017	3	41	1829	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.86			0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1761	1604			1770		1770	5084		1770	5040	
Flt Permitted	0.62	1.00			0.59		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1155	1604			1055		1770	5084		1770	5040	
Peak-hour factor, PHF	0.98	0.92	0.98	0.92	0.92	0.92	0.98	0.98	0.92	0.92	0.98	0.98
Adj. Flow (vph)	266	23	282	36	50	30	355	2058	3	45	1866	87
RTOR Reduction (vph)	0	212	0	0	9	0	0	0	0	0	3	0
Lane Group Flow (vph)	266	94	0	0	107	0	355	2061	0	45	1950	0
Confl. Peds. (#/hr)	3											9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	35.0	35.0			34.0		30.9	87.1		6.9	64.1	
Effective Green, g (s)	35.0	35.0			34.0		30.9	87.1		6.9	64.1	
Actuated g/C Ratio	0.25	0.25			0.24		0.22	0.62		0.05	0.46	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	288	401			256		390	3162		87	2307	
v/s Ratio Prot		0.06					c0.20	0.41		0.03	c0.39	
v/s Ratio Perm	c0.23				0.10							
v/c Ratio	0.92	0.23			0.42		0.91	0.65		0.52	0.85	
Uniform Delay, d1	51.2	41.8			44.7		53.2	16.8		64.9	33.6	
Progression Factor	1.00	1.00			1.00		1.41	0.51		1.05	0.56	
Incremental Delay, d2	33.4	0.3			1.1		21.1	0.9		4.1	3.2	
Delay (s)	84.6	42.1			45.8		96.3	9.5		72.3	22.1	
Level of Service	F	D			D		F	A		E	C	
Approach Delay (s)		61.9			45.8			22.2			23.2	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	3	35	53	10	41	83	2082	16	73	1897	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1760	1583	1770	5078		1770	5066	
Flt Permitted		0.81			0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1406			1333	1583	1770	5078		1770	5066	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	52	3	37	56	11	44	88	2215	17	78	2018	35
RTOR Reduction (vph)	0	18	0	0	0	36	0	0	0	0	1	0
Lane Group Flow (vph)	0	74	0	0	67	8	88	2232	0	78	2052	0
Confl. Peds. (#/hr)			18	18					7			12
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.2			25.2	25.2	11.2	91.2		11.1	91.1	
Effective Green, g (s)		25.2			25.2	25.2	11.2	91.2		11.1	91.1	
Actuated g/C Ratio		0.18			0.18	0.18	0.08	0.65		0.08	0.65	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		253			239	284	141	3307		140	3296	
v/s Ratio Prot							c0.05	c0.44		0.04	0.41	
v/s Ratio Perm		c0.05			0.05	0.01						
v/c Ratio		0.29			0.28	0.03	0.62	0.67		0.56	0.62	
Uniform Delay, d1		49.7			49.6	47.3	62.4	15.2		62.1	14.4	
Progression Factor		1.00			1.00	1.00	1.11	0.43		0.95	0.76	
Incremental Delay, d2		0.6			0.6	0.0	6.2	0.8		1.5	0.3	
Delay (s)		50.3			50.2	47.3	75.6	7.4		60.4	11.2	
Level of Service		D			D	D	E	A		E	B	
Approach Delay (s)		50.3			49.1			10.0			13.0	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	300	134	678	269	80	162	1399	665	211	1290	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.93
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3375		3433	1863	1551	1534	3539	1502	1770	3539	1477
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3375		3433	1863	1551	1534	3539	1502	1770	3539	1477
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	316	141	714	283	84	171	1473	700	222	1358	54
RTOR Reduction (vph)	0	30	0	0	0	64	0	0	256	0	0	32
Lane Group Flow (vph)	0	470	0	714	283	20	171	1473	444	222	1358	22
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									29			
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		18.0		30.0	30.0	30.0	16.6	57.0	57.0	17.5	57.9	57.9
Effective Green, g (s)		18.0		30.0	30.0	30.0	16.6	57.0	57.0	17.5	57.9	57.9
Actuated g/C Ratio		0.13		0.21	0.21	0.21	0.12	0.41	0.41	0.12	0.41	0.41
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		433		735	399	332	181	1440	611	221	1463	610
v/s Ratio Prot		c0.14		c0.21	0.15		0.11	c0.42		c0.13	0.38	
v/s Ratio Perm						0.01			0.30			0.02
v/c Ratio		1.09		0.97	0.71	0.06	0.94	1.02	0.73	1.00	0.93	0.04
Uniform Delay, d1		61.0		54.6	51.0	43.8	61.2	41.5	35.0	61.2	39.1	24.4
Progression Factor		1.00		1.00	1.00	1.00	1.19	0.89	0.85	1.34	0.44	0.64
Incremental Delay, d2		68.5		26.1	5.7	0.1	42.9	26.7	5.7	54.2	9.5	0.1
Delay (s)		129.5		80.7	56.7	43.8	115.9	63.5	35.5	136.0	26.7	15.7
Level of Service		F		F	E	D	F	E	D	F	C	B
Approach Delay (s)		129.5			71.5			58.9			41.2	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	62.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	233	153	107	120	66	1	1431	256	0	1251	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.98			1.00	0.94		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1375	1770	1733			3539	1490		3539	1505
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1375	1770	1733			3378	1490		3539	1505
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	183	243	159	111	125	69	1	1491	267	0	1303	100
RTOR Reduction (vph)	0	0	111	0	15	0	0	0	92	0	0	19
Lane Group Flow (vph)	183	243	48	111	179	0	0	1492	175	0	1303	81
Confl. Peds. (#/hr)			87			26			12			9
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2		2			6
Actuated Green, G (s)	30.0	30.0	30.0	26.5	26.5			71.0	71.0		71.0	71.0
Effective Green, g (s)	30.0	30.0	30.0	26.5	26.5			71.0	71.0		71.0	71.0
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19			0.51	0.51		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	379	399	294	335	328			1713	755		1794	763
v/s Ratio Prot	0.10	c0.13		0.06	c0.10						0.37	
v/s Ratio Perm			0.04					c0.44	0.12			0.05
v/c Ratio	0.48	0.61	0.16	0.33	0.55			0.87	0.23		0.73	0.11
Uniform Delay, d1	48.2	49.7	44.8	49.1	51.3			30.5	19.3		26.9	18.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.18	0.00		0.31	0.19
Incremental Delay, d2	1.0	2.6	0.3	0.6	1.9			2.9	0.3		2.1	0.2
Delay (s)	49.2	52.3	45.1	49.7	53.2			8.5	0.3		10.5	3.6
Level of Service	D	D	D	D	D			A	A		B	A
Approach Delay (s)		49.4			51.9			7.2			10.0	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	303	124	107	256	100	92	1410	96	146	1142	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1522	1770	1863	1515	1770	3539	1497	1770	3539	1497
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1522	1770	1863	1515	1770	3539	1497	1770	3539	1497
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	164	309	127	109	261	102	94	1439	98	149	1165	158
RTOR Reduction (vph)	0	0	62	0	0	71	0	0	39	0	0	38
Lane Group Flow (vph)	164	309	65	109	261	31	94	1439	59	149	1165	120
Confl. Peds. (#/hr)			19			22			10			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.4	28.4	28.4	11.4	24.4	24.4	12.1	70.5	70.5	15.2	73.6	73.6
Effective Green, g (s)	15.4	28.4	28.4	11.4	24.4	24.4	12.1	70.5	70.5	15.2	73.6	73.6
Actuated g/C Ratio	0.11	0.20	0.20	0.08	0.17	0.17	0.09	0.50	0.50	0.11	0.53	0.53
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	194	377	308	144	324	264	152	1782	753	192	1860	786
v/s Ratio Prot	c0.09	c0.17		0.06	0.14		0.05	c0.41		c0.08	c0.33	
v/s Ratio Perm			0.04			0.02			0.04			0.08
v/c Ratio	0.85	0.82	0.21	0.76	0.81	0.12	0.62	0.81	0.08	0.78	0.63	0.15
Uniform Delay, d1	61.1	53.4	46.5	62.9	55.5	48.7	61.7	29.1	18.0	60.7	23.5	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.22	0.53	0.43	0.58	1.73	2.24
Incremental Delay, d2	27.1	13.0	0.3	20.1	13.6	0.2	4.1	2.3	0.1	14.5	1.3	0.3
Delay (s)	88.3	66.4	46.8	83.0	69.1	48.9	79.5	17.7	7.8	49.7	41.9	38.7
Level of Service	F	E	D	F	E	D	E	B	A	D	D	D
Approach Delay (s)		68.2			67.9			20.7			42.3	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	233	124	50	219	49	133	1470	26	142	1065	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1750	1554	1770	1812		1770	3539	1531	1770	3539	1546
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1750	1554	1770	1812		1770	3539	1531	1770	3539	1546
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	367	238	127	51	223	50	136	1500	27	145	1087	388
RTOR Reduction (vph)	0	0	68	0	6	0	0	0	17	0	0	180
Lane Group Flow (vph)	297	308	59	51	267	0	136	1500	10	145	1087	208
Confl. Peds. (#/hr)			5						3			1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	28.7	28.7	28.7	25.3	25.3		14.7	53.7	53.7	16.8	55.8	55.8
Effective Green, g (s)	28.7	28.7	28.7	25.3	25.3		14.7	53.7	53.7	16.8	55.8	55.8
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18		0.10	0.38	0.38	0.12	0.40	0.40
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	344	358	318	319	327		185	1357	587	212	1410	616
v/s Ratio Prot	c0.18	0.18		0.03	c0.15		0.08	c0.42		c0.08	0.31	
v/s Ratio Perm			0.04						0.01			0.13
v/c Ratio	0.86	0.86	0.19	0.16	0.82		0.74	1.11	0.02	0.68	0.77	0.34
Uniform Delay, d1	53.8	53.7	46.0	48.4	55.1		60.8	43.1	26.8	59.1	36.6	29.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.99	0.74	1.00	1.22	0.84	0.46
Incremental Delay, d2	19.5	18.6	0.3	0.2	14.6		8.9	54.8	0.0	8.0	3.8	1.3
Delay (s)	73.2	72.3	46.3	48.6	69.7		68.8	86.9	26.8	79.9	34.3	14.8
Level of Service	E	E	D	D	E		E	F	C	E	C	B
Approach Delay (s)		68.2			66.4			84.4			33.7	
Approach LOS		E			E			F			C	

Intersection Summary			
HCM 2000 Control Delay	61.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

2/9/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	81	12	226	36	1680	197	384	1760	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1808	1583		1785	1554	1770	3539	1545	1770	5077	
Flt Permitted		0.85	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1572	1583		1354	1554	1770	3539	1545	1770	5077	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	82	12	228	36	1697	199	388	1778	19
RTOR Reduction (vph)	0	0	12	0	0	201	0	0	36	0	0	0
Lane Group Flow (vph)	0	37	2	0	94	27	36	1697	163	388	1797	0
Confl. Peds. (#/hr)	5					5			1			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		16.8	16.8		16.8	16.8	6.5	75.4	75.4	37.8	106.7	
Effective Green, g (s)		16.8	16.8		16.8	16.8	6.5	75.4	75.4	37.8	106.7	
Actuated g/C Ratio		0.12	0.12		0.12	0.12	0.05	0.54	0.54	0.27	0.76	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		188	189		162	186	82	1906	832	477	3869	
v/s Ratio Prot							0.02	c0.48		c0.22	0.35	
v/s Ratio Perm		0.02	0.00		c0.07	0.02			0.11			
v/c Ratio		0.20	0.01		0.58	0.15	0.44	0.89	0.20	0.81	0.46	
Uniform Delay, d1		55.5	54.3		58.3	55.2	65.0	28.6	16.7	47.8	6.1	
Progression Factor		1.00	1.00		1.00	1.00	0.81	0.43	0.43	1.00	1.00	
Incremental Delay, d2		0.5	0.0		5.2	0.4	0.3	0.7	0.0	10.2	0.4	
Delay (s)		56.0	54.3		63.5	55.5	53.0	13.0	7.3	58.0	6.5	
Level of Service		E	D		E	E	D	B	A	E	A	
Approach Delay (s)		55.6			57.9			13.2			15.7	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	0	330	0	0	672	341	1295	72	359	1692	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1577			1562	1770	5085	1550	1770	5085	1550
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1577			1562	1770	5085	1550	1770	5085	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	0	347	0	0	707	359	1363	76	378	1781	245
RTOR Reduction (vph)	0	0	193	0	0	6	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	154	0	0	701	359	1363	76	378	1781	245
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						1			8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			1 7 8			2			6
Actuated Green, G (s)	13.0		44.9			74.6	31.9	55.9	55.9	34.6	58.6	71.6
Effective Green, g (s)	13.0		44.9			70.6	31.9	55.9	55.9	34.6	58.6	71.6
Actuated g/C Ratio	0.09		0.32			0.50	0.23	0.40	0.40	0.25	0.42	0.51
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	318		505			787	403	2030	618	437	2128	792
v/s Ratio Prot	0.05		0.07				0.20	0.27		0.21	c0.35	0.03
v/s Ratio Perm			0.03			c0.45			0.05			0.13
v/c Ratio	0.54		0.31			0.89	0.89	0.67	0.12	0.86	0.84	0.31
Uniform Delay, d1	60.7		35.8			31.2	52.4	34.5	26.6	50.5	36.4	19.8
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.49	0.45	0.23
Incremental Delay, d2	1.9		0.3			12.3	21.0	1.8	0.4	13.6	3.4	0.2
Delay (s)	62.6		36.1			43.5	73.4	36.3	27.0	88.7	19.8	4.7
Level of Service	E		D			D	E	D	C	F	B	A
Approach Delay (s)		44.9			43.5			43.3			29.1	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	16	64	15	4	2	53	2107	47	59	2168	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1807	1557		1772		1770	5067		1770	5074	
Flt Permitted		0.83	1.00		0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1543	1557		1485		1770	5067		1770	5074	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	25	18	70	16	4	2	58	2315	52	65	2382	27
RTOR Reduction (vph)	0	0	64	0	2	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	43	6	0	20	0	58	2366	0	65	2409	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						3			6
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		8.2	106.7		8.7	107.2	
Effective Green, g (s)		12.6	12.6		12.6		8.2	106.7		8.7	107.2	
Actuated g/C Ratio		0.09	0.09		0.09		0.06	0.76		0.06	0.77	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		138	140		133		103	3861		109	3885	
v/s Ratio Prot							0.03	0.47		c0.04	c0.47	
v/s Ratio Perm		c0.03	0.00		0.01							
v/c Ratio		0.31	0.04		0.15		0.56	0.61		0.60	0.62	
Uniform Delay, d1		59.6	58.2		58.8		64.2	7.4		63.9	7.3	
Progression Factor		1.00	1.00		1.00		0.90	0.85		1.34	0.30	
Incremental Delay, d2		1.3	0.1		0.5		5.2	0.6		4.7	0.4	
Delay (s)		60.9	58.3		59.3		62.9	6.9		90.1	2.6	
Level of Service		E	E		E		E	A		F	A	
Approach Delay (s)		59.3			59.3			8.2			4.9	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	47	309	26	18	17	316	1797	1	64	1835	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.96		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1763	1620			1757		1770	5085		1770	5018	
Flt Permitted	0.70	1.00			0.28		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1307	1620			508		1770	5085		1770	5018	
Peak-hour factor, PHF	0.90	0.92	0.90	0.92	0.92	0.92	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	256	51	343	28	20	18	351	1997	1	70	2039	142
RTOR Reduction (vph)	0	175	0	0	10	0	0	0	0	0	6	0
Lane Group Flow (vph)	256	219	0	0	56	0	351	1998	0	70	2176	0
Confl. Peds. (#/hr)	3											8
Confl. Bikes (#/hr)												8
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	29.7	29.7			28.7		30.3	89.7		9.6	70.0	
Effective Green, g (s)	29.7	29.7			28.7		30.3	89.7		9.6	70.0	
Actuated g/C Ratio	0.21	0.21			0.20		0.22	0.64		0.07	0.50	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	277	343			104		383	3258		121	2509	
v/s Ratio Prot		0.14					c0.20	0.39		0.04	c0.43	
v/s Ratio Perm	c0.20				0.11							
v/c Ratio	0.92	0.64			0.54		0.92	0.61		0.58	0.87	
Uniform Delay, d1	54.0	50.3			49.8		53.6	14.9		63.2	30.9	
Progression Factor	1.00	1.00			1.00		0.69	1.20		0.63	0.33	
Incremental Delay, d2	34.4	3.9			5.7		22.4	0.7		5.7	3.8	
Delay (s)	88.4	54.1			55.5		59.1	18.6		45.2	14.1	
Level of Service	F	D			E		E	B		D	B	
Approach Delay (s)		67.7			55.5			24.7			15.1	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	5	50	4	4	8	41	2014	23	35	1904	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1817	1545	1770	5075		1770	5073	
Flt Permitted		0.83			0.91	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1453			1694	1545	1770	5075		1770	5073	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	5	54	4	4	9	45	2189	25	38	2070	35
RTOR Reduction (vph)	0	21	0	0	0	8	0	1	0	0	1	0
Lane Group Flow (vph)	0	108	0	0	8	1	45	2213	0	38	2104	0
Confl. Bikes (#/hr)						6			6			
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		15.5			15.5	15.5	7.8	104.7		7.3	104.2	
Effective Green, g (s)		15.5			15.5	15.5	7.8	104.7		7.3	104.2	
Actuated g/C Ratio		0.11			0.11	0.11	0.06	0.75		0.05	0.74	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		160			187	171	98	3795		92	3775	
v/s Ratio Prot							c0.03	c0.44		0.02	0.41	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.67			0.04	0.01	0.46	0.58		0.41	0.56	
Uniform Delay, d1		59.8			55.6	55.4	64.1	7.9		64.3	7.8	
Progression Factor		1.00			1.00	1.00	1.27	0.12		1.06	0.59	
Incremental Delay, d2		10.6			0.1	0.0	2.6	0.5		2.0	0.4	
Delay (s)		70.4			55.7	55.4	84.1	1.5		69.9	5.0	
Level of Service		E			E	E	F	A		E	A	
Approach Delay (s)		70.4			55.6			3.1			6.2	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	334	46	451	243	93	94	1671	385	536	1583	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3450		3433	1863	1539	1534	5085	1552	1770	5039	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3450		3433	1863	1539	1534	5085	1552	1770	5039	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	46	355	49	480	259	99	100	1778	410	570	1684	71
RTOR Reduction (vph)	0	7	0	0	0	80	0	0	146	0	3	0
Lane Group Flow (vph)	0	443	0	480	259	19	100	1778	264	570	1752	0
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			5			6
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		19.8		26.3	26.3	26.3	12.6	41.0	41.0	35.4	63.8	
Effective Green, g (s)		19.8		26.3	26.3	26.3	12.6	41.0	41.0	35.4	63.8	
Actuated g/C Ratio		0.14		0.19	0.19	0.19	0.09	0.29	0.29	0.25	0.46	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		487		644	349	289	138	1489	454	447	2296	
v/s Ratio Prot		c0.13		c0.14	0.14		0.07	c0.35		c0.32	0.35	
v/s Ratio Perm						0.01			0.17			
v/c Ratio		0.91		0.75	0.74	0.06	0.72	1.19	0.58	1.28	0.76	
Uniform Delay, d1		59.2		53.7	53.6	46.7	62.0	49.5	42.2	52.3	31.8	
Progression Factor		1.00		1.00	1.00	1.00	1.22	0.67	0.49	1.48	0.60	
Incremental Delay, d2		20.7		4.7	8.3	0.1	14.5	93.1	4.5	131.4	1.1	
Delay (s)		80.0		58.4	61.9	46.8	90.1	126.4	25.3	208.6	20.1	
Level of Service		E		E	E	D	F	F	C	F	C	
Approach Delay (s)		80.0			58.1			106.7			66.3	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	81.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	103.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	158	67	105	65	59	31	0	1744	51	0	2262	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.91			0.91	
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.97			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.95			1.00			1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863	1439	1770	1705			5054			5058	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (perm)	1770	1863	1439	1770	1705			5054			5058	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	170	72	113	70	63	33	0	1875	55	0	2432	75
RTOR Reduction (vph)	0	0	94	0	13	0	0	2	0	0	2	0
Lane Group Flow (vph)	170	72	19	70	83	0	0	1928	0	0	2505	0
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			4			1
Turn Type	Split	NA	Perm	Split	NA			NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4									
Actuated Green, G (s)	23.6	23.6	23.6	30.0	30.0			73.9			73.9	
Effective Green, g (s)	23.6	23.6	23.6	30.0	30.0			73.9			73.9	
Actuated g/C Ratio	0.17	0.17	0.17	0.21	0.21			0.53			0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	298	314	242	379	365			2667			2669	
v/s Ratio Prot	c0.10	0.04		0.04	c0.05			0.38			c0.50	
v/s Ratio Perm			0.01									
v/c Ratio	0.57	0.23	0.08	0.18	0.23			0.72			0.94	
Uniform Delay, d1	53.5	50.3	49.0	45.0	45.4			25.2			30.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.71			0.26	
Incremental Delay, d2	2.6	0.4	0.1	0.2	0.3			0.2			4.5	
Delay (s)	56.2	50.7	49.2	45.2	45.7			18.2			12.6	
Level of Service	E	D	D	D	D			B			B	
Approach Delay (s)		52.8			45.5			18.2			12.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	139	47	93	252	79	132	1734	62	88	2141	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1482	1770	1863	1517	1770	5053		1770	5030	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1482	1770	1863	1517	1770	5053		1770	5030	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	71	149	51	100	271	85	142	1865	67	95	2302	153
RTOR Reduction (vph)	0	0	42	0	0	51	0	3	0	0	5	0
Lane Group Flow (vph)	71	149	9	100	271	34	142	1929	0	95	2450	0
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.8	24.0	24.0	9.0	25.2	25.2	14.5	80.3		12.2	78.0	
Effective Green, g (s)	7.8	24.0	24.0	9.0	25.2	25.2	14.5	80.3		12.2	78.0	
Actuated g/C Ratio	0.06	0.17	0.17	0.06	0.18	0.18	0.10	0.57		0.09	0.56	
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	319	254	113	335	273	183	2898		154	2802	
v/s Ratio Prot	0.04	0.08		c0.06	c0.15		c0.08	0.38		0.05	c0.49	
v/s Ratio Perm			0.01			0.02						
v/c Ratio	0.72	0.47	0.03	0.88	0.81	0.13	0.78	0.67		0.62	0.87	
Uniform Delay, d1	65.0	52.2	48.3	65.0	55.1	48.2	61.2	20.6		61.6	26.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.06	0.78		1.32	0.25	
Incremental Delay, d2	23.1	1.1	0.1	50.2	13.4	0.2	13.6	0.9		0.7	0.4	
Delay (s)	88.2	53.3	48.4	115.2	68.5	48.4	78.7	17.0		82.2	7.0	
Level of Service	F	D	D	F	E	D	E	B		F	A	
Approach Delay (s)		61.5			75.0			21.2			9.8	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	178	209	146	196	19	168	1711	62	64	2031	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	0.97	
Flt Protected	0.95	0.98	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1743	1548	1770	1835		1770	5052		1770	4913	
Flt Permitted	0.95	0.98	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1743	1548	1770	1835		1770	5052		1770	4913	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	333	180	211	147	198	19	170	1728	63	65	2052	452
RTOR Reduction (vph)	0	0	135	0	3	0	0	2	0	0	25	0
Lane Group Flow (vph)	253	260	76	147	214	0	170	1789	0	65	2479	0
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			4			12
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	26.5	26.5	26.5	22.1	22.1		22.7	67.3		8.6	53.2	
Effective Green, g (s)	26.5	26.5	26.5	22.1	22.1		22.7	67.3		8.6	53.2	
Actuated g/C Ratio	0.19	0.19	0.19	0.16	0.16		0.16	0.48		0.06	0.38	
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	318	329	293	279	289		286	2428		108	1866	
v/s Ratio Prot	c0.15	0.15		0.08	c0.12		c0.10	c0.35		0.04	c0.50	
v/s Ratio Perm			0.05									
v/c Ratio	0.80	0.79	0.26	0.53	0.74		0.59	0.74		0.60	1.33	
Uniform Delay, d1	54.2	54.1	48.4	54.1	56.2		54.4	29.2		64.0	43.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.93	1.19		1.04	0.95	
Incremental Delay, d2	12.9	12.2	0.5	1.8	9.8		2.5	1.6		6.8	150.7	
Delay (s)	67.0	66.3	48.8	55.9	66.1		52.9	36.2		73.3	192.1	
Level of Service	E	E	D	E	E		D	D		E	F	
Approach Delay (s)		61.5			62.0			37.7			189.0	
Approach LOS		E			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	111.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	57	13	203	20	92	14	2006	107	107	2322	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1856	1558		1782	1549	1770	5039		1770	5069	
Flt Permitted		0.98	1.00		0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1834	1558		1263	1549	1770	5039		1770	5069	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4	58	13	207	20	94	14	2047	109	109	2369	43
RTOR Reduction (vph)	0	0	10	0	0	46	0	3	0	0	1	0
Lane Group Flow (vph)	0	62	3	0	227	48	14	2153	0	109	2411	0
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			7			11
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		29.7	29.7		29.7	29.7	2.5	87.0		13.3	97.8	
Effective Green, g (s)		29.7	29.7		29.7	29.7	2.5	87.0		13.3	97.8	
Actuated g/C Ratio		0.21	0.21		0.21	0.21	0.02	0.62		0.10	0.70	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		389	330		267	328	31	3131		168	3541	
v/s Ratio Prot							0.01	0.43		c0.06	c0.48	
v/s Ratio Perm		0.03	0.00		c0.18	0.03						
v/c Ratio		0.16	0.01		0.85	0.14	0.45	0.69		0.65	0.68	
Uniform Delay, d1		45.0	43.5		53.0	44.8	68.1	17.5		61.1	12.1	
Progression Factor		1.00	1.00		1.00	1.00	1.27	0.28		1.00	1.00	
Incremental Delay, d2		0.2	0.0		21.9	0.2	7.4	0.9		8.3	1.1	
Delay (s)		45.2	43.5		74.9	45.0	94.1	5.8		69.4	13.2	
Level of Service		D	D		E	D	F	A		E	B	
Approach Delay (s)		44.9			66.2			6.4			15.6	
Approach LOS		D			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	557	0	380	0	0	763	200	1543	179	437	1497	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1566			1583	1770	5085	1583	1770	5085	1537
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1566			1583	1770	5085	1583	1770	5085	1537
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	612	0	418	0	0	838	220	1696	197	480	1645	410
RTOR Reduction (vph)	0	0	301	0	0	5	0	0	0	0	0	0
Lane Group Flow (vph)	612	0	117	0	0	833	220	1696	197	480	1645	410
Confl. Peds. (#/hr)			9									8
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	20.0		39.1			91.0	19.1	39.5	39.5	30.7	51.1	71.1
Effective Green, g (s)	20.0		39.1			87.0	19.1	39.5	39.5	30.7	51.1	71.1
Actuated g/C Ratio	0.14		0.28			0.62	0.14	0.28	0.28	0.22	0.37	0.51
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490		437			983	241	1434	446	388	1856	780
v/s Ratio Prot	c0.18		0.04				0.12	c0.33		c0.27	0.32	0.08
v/s Ratio Perm			0.04			c0.53			0.12			0.19
v/c Ratio	1.25		0.27			0.85	0.91	1.18	0.44	1.24	0.89	0.53
Uniform Delay, d1	60.0		39.3			21.2	59.6	50.2	41.2	54.6	41.7	23.1
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.98	0.55	0.85
Incremental Delay, d2	128.2		0.3			6.9	35.3	89.7	3.2	122.3	5.1	0.5
Delay (s)	188.2		39.6			28.1	94.9	139.9	44.4	175.7	27.9	20.2
Level of Service	F		D			C	F	F	D	F	C	C
Approach Delay (s)		127.9			28.1			126.3			54.6	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	86.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	5	73	84	16	14	182	2391	11	16	2156	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1778	1583		1762		1770	5081		1770	5071	
Flt Permitted		0.75	1.00		0.76		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1397	1583		1384		1770	5081		1770	5071	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	35	5	78	89	17	15	194	2544	12	17	2294	31
RTOR Reduction (vph)	0	0	68	0	4	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	40	10	0	117	0	194	2556	0	17	2324	0
Confl. Peds. (#/hr)	4					4			5			11
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.4	18.4		18.4		19.8	106.9		2.7	89.8	
Effective Green, g (s)		18.4	18.4		18.4		19.8	106.9		2.7	89.8	
Actuated g/C Ratio		0.13	0.13		0.13		0.14	0.76		0.02	0.64	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		183	208		181		250	3879		34	3252	
v/s Ratio Prot							c0.11	0.50		0.01	c0.46	
v/s Ratio Perm		0.03	0.01		c0.08							
v/c Ratio		0.22	0.05		0.64		0.78	0.66		0.50	0.71	
Uniform Delay, d1		54.4	53.2		57.7		58.0	7.9		68.0	16.6	
Progression Factor		1.00	1.00		1.00		1.03	1.22		0.98	0.22	
Incremental Delay, d2		0.6	0.1		7.6		1.4	0.1		6.5	0.8	
Delay (s)		55.0	53.3		65.3		61.1	9.7		73.2	4.5	
Level of Service		D	D		E		E	A		E	A	
Approach Delay (s)		53.8			65.3			13.3			5.0	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	21	250	33	46	28	346	2152	3	41	1889	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.86			0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1760	1606			1770		1770	5084		1770	5033	
Flt Permitted	0.63	1.00			0.71		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1176	1606			1275		1770	5084		1770	5033	
Peak-hour factor, PHF	0.98	0.92	0.98	0.92	0.92	0.92	0.98	0.98	0.92	0.92	0.98	0.98
Adj. Flow (vph)	315	23	255	36	50	30	353	2196	3	45	1928	104
RTOR Reduction (vph)	0	184	0	0	9	0	0	0	0	0	4	0
Lane Group Flow (vph)	315	94	0	0	107	0	353	2199	0	45	2028	0
Confl. Peds. (#/hr)	3											9
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	38.9	38.9			37.9		29.0	83.2		6.9	62.1	
Effective Green, g (s)	38.9	38.9			37.9		29.0	83.2		6.9	62.1	
Actuated g/C Ratio	0.28	0.28			0.27		0.21	0.59		0.05	0.44	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	326	446			345		366	3021		87	2232	
v/s Ratio Prot		0.06					c0.20	0.43		0.03	c0.40	
v/s Ratio Perm	c0.27				0.08							
v/c Ratio	0.97	0.21			0.31		0.96	0.73		0.52	0.91	
Uniform Delay, d1	49.9	38.8			40.7		55.0	20.3		64.9	36.3	
Progression Factor	1.00	1.00			1.00		1.37	0.51		0.97	0.82	
Incremental Delay, d2	40.4	0.2			0.5		32.1	1.2		4.0	5.5	
Delay (s)	90.3	39.0			41.2		107.7	11.6		67.0	35.3	
Level of Service	F	D			D		F	B		E	D	
Approach Delay (s)		66.3			41.2			24.9			36.0	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	3	35	53	10	44	83	2359	16	73	1968	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1692			1760	1583	1770	5078		1770	5065	
Flt Permitted		0.80			0.72	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1398			1329	1583	1770	5078		1770	5065	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	55	3	37	56	11	47	88	2510	17	78	2094	38
RTOR Reduction (vph)	0	17	0	0	0	39	0	0	0	0	1	0
Lane Group Flow (vph)	0	78	0	0	67	8	88	2527	0	78	2131	0
Confl. Peds. (#/hr)			18	18					7			12
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.2			25.2	25.2	11.2	91.4		10.9	91.1	
Effective Green, g (s)		25.2			25.2	25.2	11.2	91.4		10.9	91.1	
Actuated g/C Ratio		0.18			0.18	0.18	0.08	0.65		0.08	0.65	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		251			239	284	141	3315		137	3295	
v/s Ratio Prot							c0.05	c0.50		0.04	0.42	
v/s Ratio Perm		c0.06			0.05	0.01						
v/c Ratio		0.31			0.28	0.03	0.62	0.76		0.57	0.65	
Uniform Delay, d1		49.8			49.6	47.3	62.4	16.8		62.3	14.7	
Progression Factor		1.00			1.00	1.00	1.08	0.43		0.99	0.31	
Incremental Delay, d2		0.7			0.6	0.0	5.7	1.2		2.3	0.4	
Delay (s)		50.6			50.2	47.4	73.2	8.4		63.9	5.0	
Level of Service		D			D	D	E	A		E	A	
Approach Delay (s)		50.6			49.0			10.6			7.1	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	285	81	441	254	307	134	1890	623	249	1747	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3410		3433	1863	1551	1534	5085	1501	1770	4976	
Flt Permitted		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3410		3433	1863	1551	1534	5085	1501	1770	4976	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	300	85	464	267	323	141	1989	656	262	1839	204
RTOR Reduction (vph)	0	12	0	0	0	204	0	0	301	0	9	0
Lane Group Flow (vph)	0	489	0	464	267	119	141	1989	355	262	2034	0
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									29			
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		20.0		27.0	27.0	27.0	15.2	53.0	53.0	22.5	60.3	
Effective Green, g (s)		20.0		27.0	27.0	27.0	15.2	53.0	53.0	22.5	60.3	
Actuated g/C Ratio		0.14		0.19	0.19	0.19	0.11	0.38	0.38	0.16	0.43	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		487		662	359	299	166	1925	568	284	2143	
v/s Ratio Prot		c0.14		0.14	c0.14		0.09	c0.39		c0.15	0.41	
v/s Ratio Perm						0.08			0.24			
v/c Ratio		1.00		0.70	0.74	0.40	0.85	1.03	0.63	0.92	0.95	
Uniform Delay, d1		60.0		52.7	53.2	49.4	61.3	43.5	35.4	57.9	38.4	
Progression Factor		1.00		1.00	1.00	1.00	1.28	0.77	0.54	1.41	0.54	
Incremental Delay, d2		41.8		3.4	8.1	0.9	23.8	26.6	3.7	23.0	7.0	
Delay (s)		101.8		56.1	61.3	50.3	102.2	59.9	22.9	104.8	27.9	
Level of Service		F		E	E	D	F	E	C	F	C	
Approach Delay (s)		101.8			55.6			53.3			36.6	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	253	85	213	59	72	59	1	2259	98	0	1977	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.91			0.91	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.98			1.00			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.93			0.99			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863	1375	1770	1700			5041			5025	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.94			1.00	
Satd. Flow (perm)	1770	1863	1375	1770	1700			4735			5025	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	264	89	222	61	75	61	1	2353	102	0	2059	130
RTOR Reduction (vph)	0	0	174	0	22	0	0	3	0	0	5	0
Lane Group Flow (vph)	264	89	48	61	114	0	0	2453	0	0	2184	0
Confl. Peds. (#/hr)			87			26			12			9
Turn Type	Split	NA	Perm	Split	NA		Perm	NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2					
Actuated Green, G (s)	30.0	30.0	30.0	25.6	25.6			71.9			71.9	
Effective Green, g (s)	30.0	30.0	30.0	25.6	25.6			71.9			71.9	
Actuated g/C Ratio	0.21	0.21	0.21	0.18	0.18			0.51			0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	379	399	294	323	310			2431			2580	
v/s Ratio Prot	c0.15	0.05		0.03	c0.07						0.43	
v/s Ratio Perm			0.03					c0.52				
v/c Ratio	0.70	0.22	0.16	0.19	0.37			1.01			0.85	
Uniform Delay, d1	50.8	45.4	44.8	48.4	50.1			34.0			29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.43			0.25	
Incremental Delay, d2	5.5	0.3	0.3	0.3	0.7			12.2			2.4	
Delay (s)	56.3	45.7	45.0	48.7	50.8			26.8			9.8	
Level of Service	E	D	D	D	D			C			A	
Approach Delay (s)		50.3			50.2			26.8			9.8	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	179	273	152	122	198	114	114	2230	151	180	1917	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1522	1770	1863	1515	1770	5020		1770	5013	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1522	1770	1863	1515	1770	5020		1770	5013	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	183	279	155	124	202	116	116	2276	154	184	1956	146
RTOR Reduction (vph)	0	0	83	0	0	87	0	5	0	0	6	0
Lane Group Flow (vph)	183	279	72	124	202	29	116	2425	0	184	2096	0
Confl. Peds. (#/hr)			19			22			10			10
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.0	26.1	26.1	12.4	24.5	24.5	12.4	69.5		17.5	74.6	
Effective Green, g (s)	14.0	26.1	26.1	12.4	24.5	24.5	12.4	69.5		17.5	74.6	
Actuated g/C Ratio	0.10	0.19	0.19	0.09	0.18	0.18	0.09	0.50		0.12	0.53	
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	177	347	283	156	326	265	156	2492		221	2671	
v/s Ratio Prot	c0.10	c0.15		0.07	0.11		0.07	c0.48		c0.10	0.42	
v/s Ratio Perm			0.05			0.02						
v/c Ratio	1.03	0.80	0.25	0.79	0.62	0.11	0.74	0.97		0.83	0.78	
Uniform Delay, d1	63.0	54.5	48.6	62.6	53.4	48.6	62.2	34.3		59.8	26.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	0.69		1.36	0.21	
Incremental Delay, d2	76.8	12.7	0.5	23.7	3.5	0.2	5.6	5.4		10.4	1.0	
Delay (s)	139.8	67.2	49.1	86.2	56.9	48.8	73.7	29.1		92.0	6.5	
Level of Service	F	E	D	F	E	D	E	C		F	A	
Approach Delay (s)		84.2			63.0			31.2			13.4	
Approach LOS		F			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	292	166	105	234	45	141	2295	58	123	1758	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00		1.00	0.98	
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1760	1554	1770	1818		1770	5062		1770	4959	
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1760	1554	1770	1818		1770	5062		1770	4959	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	350	298	169	107	239	46	144	2342	59	126	1794	300
RTOR Reduction (vph)	0	0	82	0	5	0	0	2	0	0	16	0
Lane Group Flow (vph)	315	333	87	107	280	0	144	2399	0	126	2078	0
Confl. Peds. (#/hr)			5						3			1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	29.8	29.8	29.8	26.0	26.0		15.6	54.5		14.2	53.1	
Effective Green, g (s)	29.8	29.8	29.8	26.0	26.0		15.6	54.5		14.2	53.1	
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19		0.11	0.39		0.10	0.38	
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	357	374	330	328	337		197	1970		179	1880	
v/s Ratio Prot	0.19	c0.19		0.06	c0.15		c0.08	c0.47		0.07	0.42	
v/s Ratio Perm			0.06									
v/c Ratio	0.88	0.89	0.26	0.33	0.83		0.73	1.22		0.70	1.11	
Uniform Delay, d1	53.4	53.5	46.0	49.4	54.9		60.2	42.8		60.9	43.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.94	1.23		1.06	0.91	
Incremental Delay, d2	21.7	22.2	0.4	0.6	15.8		4.6	99.7		9.4	54.2	
Delay (s)	75.1	75.7	46.4	50.0	70.7		61.3	152.4		74.2	93.8	
Level of Service	E	E	D	D	E		E	F		E	F	
Approach Delay (s)		69.4			65.1			147.3			92.7	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	110.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	160	12	202	36	2529	143	69	2257	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1809	1583		1780	1554	1770	5038		1770	5079	
Flt Permitted		0.79	1.00		0.71	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1475	1583		1330	1554	1770	5038		1770	5079	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	162	12	204	36	2555	144	70	2280	19
RTOR Reduction (vph)	0	0	12	0	0	79	0	4	0	0	1	0
Lane Group Flow (vph)	0	37	2	0	174	125	36	2695	0	70	2298	0
Confl. Peds. (#/hr)	5					5			1			
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		23.5	23.5		23.5	23.5	6.3	97.8		8.7	100.2	
Effective Green, g (s)		23.5	23.5		23.5	23.5	6.3	97.8		8.7	100.2	
Actuated g/C Ratio		0.17	0.17		0.17	0.17	0.04	0.70		0.06	0.72	
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		247	265		223	260	79	3519		109	3635	
v/s Ratio Prot							0.02	c0.54		c0.04	0.45	
v/s Ratio Perm		0.03	0.00		c0.13	0.08						
v/c Ratio		0.15	0.01		0.78	0.48	0.46	0.77		0.64	0.63	
Uniform Delay, d1		49.7	48.5		55.8	52.7	65.2	13.7		64.1	10.3	
Progression Factor		1.00	1.00		1.00	1.00	1.21	0.49		1.00	1.00	
Incremental Delay, d2		0.3	0.0		16.1	1.4	0.4	0.2		12.2	0.8	
Delay (s)		50.0	48.6		71.9	54.1	79.4	6.8		76.4	11.2	
Level of Service		D	D		E	D	E	A		E	B	
Approach Delay (s)		49.6			62.3			7.8			13.1	
Approach LOS		D			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	0	331	0	0	715	426	1069	28	359	1724	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1577			1563	1770	5085	1503	1770	5085	1528
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1577			1563	1770	5085	1503	1770	5085	1528
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	0	348	0	0	753	448	1125	29	378	1815	245
RTOR Reduction (vph)	0	0	193	0	0	6	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	155	0	0	747	448	1125	29	378	1815	245
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						30			30
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			1 7 8			2			6
Actuated Green, G (s)	13.0		50.1			79.7	37.1	50.8	50.8	39.7	53.4	66.4
Effective Green, g (s)	13.0		50.1			75.7	37.1	50.8	50.8	39.7	53.4	66.4
Actuated g/C Ratio	0.09		0.36			0.54	0.27	0.36	0.36	0.28	0.38	0.47
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	318		564			845	469	1845	545	501	1939	724
v/s Ratio Prot	0.05		0.07				c0.25	0.22		0.21	c0.36	0.03
v/s Ratio Perm			0.03			c0.48			0.02			0.13
v/c Ratio	0.54		0.27			0.88	0.96	0.61	0.05	0.75	0.94	0.34
Uniform Delay, d1	60.7		32.0			28.3	50.6	36.5	29.0	45.7	41.7	23.0
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.35	0.56	0.32
Incremental Delay, d2	1.9		0.3			10.9	30.2	1.5	0.2	5.3	8.6	0.2
Delay (s)	62.6		32.3			39.2	80.8	38.0	29.2	67.0	31.9	7.6
Level of Service	E		C			D	F	D	C	E	C	A
Approach Delay (s)		42.3			39.2			49.8			34.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	16	64	15	4	2	63	1899	47	59	2131	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1810	1557		1772		1770	5064		1770	5072	
Flt Permitted		0.84	1.00		0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1567	1557		1488		1770	5064		1770	5072	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	18	70	16	4	2	69	2087	52	65	2342	30
RTOR Reduction (vph)	0	0	64	0	2	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	40	6	0	20	0	69	2138	0	65	2372	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						30			30
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		9.1	106.7		8.7	106.3	
Effective Green, g (s)		12.6	12.6		12.6		9.1	106.7		8.7	106.3	
Actuated g/C Ratio		0.09	0.09		0.09		0.06	0.76		0.06	0.76	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		141	140		133		115	3859		109	3851	
v/s Ratio Prot							c0.04	0.42		0.04	c0.47	
v/s Ratio Perm		c0.03	0.00		0.01							
v/c Ratio		0.28	0.04		0.15		0.60	0.55		0.60	0.62	
Uniform Delay, d1		59.5	58.2		58.8		63.7	6.9		63.9	7.6	
Progression Factor		1.00	1.00		1.00		0.92	1.19		1.30	0.25	
Incremental Delay, d2		1.1	0.1		0.5		6.5	0.5		5.6	0.5	
Delay (s)		60.6	58.3		59.3		64.9	8.6		88.8	2.4	
Level of Service		E	E		E		E	A		F	A	
Approach Delay (s)		59.2			59.3			10.4			4.7	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	47	309	26	18	17	244	1658	1	64	1802	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.96		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1758	1620			1757		1770	5085		1770	5025	
Flt Permitted	0.70	1.00			0.27		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1302	1620			483		1770	5085		1770	5025	
Peak-hour factor, PHF	0.90	0.92	0.90	0.92	0.92	0.92	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	234	51	343	28	20	18	271	1842	1	70	2002	114
RTOR Reduction (vph)	0	180	0	0	10	0	0	0	0	0	4	0
Lane Group Flow (vph)	234	214	0	0	56	0	271	1843	0	70	2112	0
Confl. Peds. (#/hr)	3											8
Confl. Bikes (#/hr)									30			30
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	29.3	29.3			28.3		25.3	90.1		9.6	75.4	
Effective Green, g (s)	29.3	29.3			28.3		25.3	90.1		9.6	75.4	
Actuated g/C Ratio	0.21	0.21			0.20		0.18	0.64		0.07	0.54	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	339			97		319	3272		121	2706	
v/s Ratio Prot		0.13					c0.15	0.36		0.04	c0.42	
v/s Ratio Perm	c0.18				0.12							
v/c Ratio	0.86	0.63			0.57		0.85	0.56		0.58	0.78	
Uniform Delay, d1	53.4	50.4			50.4		55.5	13.9		63.2	25.7	
Progression Factor	1.00	1.00			1.00		0.75	1.24		0.65	0.34	
Incremental Delay, d2	23.1	3.8			8.0		16.3	0.6		5.8	2.0	
Delay (s)	76.5	54.2			58.4		58.1	18.0		47.1	10.8	
Level of Service	E	D			E		E	B		D	B	
Approach Delay (s)		62.5			58.4			23.1			11.9	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	5	50	4	4	8	41	1793	23	35	1856	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1817	1544	1770	5073		1770	5069	
Flt Permitted		0.83			0.91	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1458			1687	1544	1770	5073		1770	5069	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	5	54	4	4	9	45	1949	25	38	2017	35
RTOR Reduction (vph)	0	23	0	0	0	8	0	0	0	0	1	0
Lane Group Flow (vph)	0	101	0	0	8	1	45	1974	0	38	2051	0
Confl. Bikes (#/hr)						6			30			30
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		14.8			14.8	14.8	7.8	105.4		7.3	104.9	
Effective Green, g (s)		14.8			14.8	14.8	7.8	105.4		7.3	104.9	
Actuated g/C Ratio		0.11			0.11	0.11	0.06	0.75		0.05	0.75	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		154			178	163	98	3819		92	3798	
v/s Ratio Prot							c0.03	0.39		0.02	c0.40	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.65			0.04	0.01	0.46	0.52		0.41	0.54	
Uniform Delay, d1		60.1			56.2	56.0	64.1	7.0		64.3	7.4	
Progression Factor		1.00			1.00	1.00	1.25	0.14		0.95	0.81	
Incremental Delay, d2		9.6			0.1	0.0	2.8	0.4		1.5	0.3	
Delay (s)		69.7			56.4	56.0	83.1	1.4		62.7	6.3	
Level of Service		E			E	E	F	A		E	A	
Approach Delay (s)		69.7			56.2			3.2			7.3	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	334	53	532	243	46	118	860	772	170	1328	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.91
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3446		3433	1863	1540	1534	5085	1533	1770	3539	1434
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3446		3433	1863	1540	1534	5085	1533	1770	3539	1434
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	355	56	566	259	49	126	915	821	181	1413	13
RTOR Reduction (vph)	0	9	0	0	0	39	0	0	325	0	0	7
Lane Group Flow (vph)	0	421	0	566	259	10	126	915	496	181	1413	6
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			30			30
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		19.5		28.0	28.0	28.0	13.7	58.5	58.5	16.5	61.3	61.3
Effective Green, g (s)		19.5		28.0	28.0	28.0	13.7	58.5	58.5	16.5	61.3	61.3
Actuated g/C Ratio		0.14		0.20	0.20	0.20	0.10	0.42	0.42	0.12	0.44	0.44
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		479		686	372	308	150	2124	640	208	1549	627
v/s Ratio Prot		c0.12		c0.16	0.14		0.08	0.18		c0.10	c0.40	
v/s Ratio Perm						0.01			0.32			0.00
v/c Ratio		0.88		0.83	0.70	0.03	0.84	0.43	0.78	0.87	0.91	0.01
Uniform Delay, d1		59.1		53.7	52.0	45.1	62.1	28.9	35.1	60.7	36.8	22.2
Progression Factor		1.00		1.00	1.00	1.00	1.24	0.67	0.98	1.36	0.26	1.00
Incremental Delay, d2		16.6		8.0	5.6	0.0	28.7	0.6	7.9	21.1	6.5	0.0
Delay (s)		75.7		61.7	57.6	45.1	105.9	20.1	42.4	103.5	15.9	22.2
Level of Service		E		E	E	D	F	C	D	F	B	C
Approach Delay (s)		75.7			59.5			35.7			25.8	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	79	92	65	59	31	0	930	57	0	1433	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.97			1.00	0.91		1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1439	1770	1705			3539	1448		3539	1503
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1439	1770	1705			3539	1448		3539	1503
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	151	85	99	70	63	33	0	1000	61	0	1541	67
RTOR Reduction (vph)	0	0	83	0	13	0	0	0	29	0	0	18
Lane Group Flow (vph)	151	85	16	70	83	0	0	1000	32	0	1541	49
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			30			30
Turn Type	Split	NA	Perm	Split	NA			NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4						2			6
Actuated Green, G (s)	23.1	23.1	23.1	30.0	30.0			74.4	74.4		74.4	74.4
Effective Green, g (s)	23.1	23.1	23.1	30.0	30.0			74.4	74.4		74.4	74.4
Actuated g/C Ratio	0.17	0.17	0.17	0.21	0.21			0.53	0.53		0.53	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	292	307	237	379	365			1880	769		1880	798
v/s Ratio Prot	c0.09	0.05		0.04	c0.05			0.28			c0.44	
v/s Ratio Perm			0.01						0.02			0.03
v/c Ratio	0.52	0.28	0.07	0.18	0.23			0.53	0.04		0.82	0.06
Uniform Delay, d1	53.4	51.1	49.4	45.0	45.4			21.4	15.7		27.2	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.52	0.67		0.26	0.25
Incremental Delay, d2	1.5	0.5	0.1	0.2	0.3			1.0	0.1		3.1	0.1
Delay (s)	54.9	51.6	49.5	45.2	45.7			12.2	10.6		10.3	4.0
Level of Service	D	D	D	D	D			B	B		B	A
Approach Delay (s)		52.5			45.5			12.2			10.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	139	47	86	298	69	99	958	62	89	1306	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1482	1770	1863	1520	1770	3539	1504	1770	3539	1520
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1482	1770	1863	1520	1770	3539	1504	1770	3539	1520
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	149	51	92	320	74	106	1030	67	96	1404	123
RTOR Reduction (vph)	0	0	42	0	0	49	0	0	30	0	0	35
Lane Group Flow (vph)	67	149	9	92	320	25	106	1030	37	96	1404	88
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			30			30
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.2	24.4	24.4	11.4	28.6	28.6	12.3	77.5	77.5	12.2	77.4	77.4
Effective Green, g (s)	7.2	24.4	24.4	11.4	28.6	28.6	12.3	77.5	77.5	12.2	77.4	77.4
Actuated g/C Ratio	0.05	0.17	0.17	0.08	0.20	0.20	0.09	0.55	0.55	0.09	0.55	0.55
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	91	324	258	144	380	310	155	1959	832	154	1956	840
v/s Ratio Prot	c0.04	0.08		c0.05	c0.17		c0.06	0.29		0.05	c0.40	
v/s Ratio Perm			0.01			0.02			0.02			0.06
v/c Ratio	0.74	0.46	0.03	0.64	0.84	0.08	0.68	0.53	0.04	0.62	0.72	0.10
Uniform Delay, d1	65.5	51.9	48.0	62.3	53.5	45.1	62.0	19.7	14.3	61.7	23.2	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.16	0.66	0.49	1.38	0.16	0.01
Incremental Delay, d2	26.3	1.0	0.1	9.0	15.4	0.1	10.5	0.9	0.1	2.7	0.8	0.1
Delay (s)	91.8	52.9	48.1	71.3	69.0	45.2	82.3	13.8	7.1	87.9	4.5	0.2
Level of Service	F	D	D	E	E	D	F	B	A	F	A	A
Approach Delay (s)		61.7			65.8			19.5			9.1	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	294	210	85	59	348	132	110	1005	48	121	1369	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.93	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1753	1548	1770	1777		1770	3539	1478	1770	3539	1492
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1753	1548	1770	1777		1770	3539	1478	1770	3539	1492
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	297	212	86	60	352	133	111	1015	48	122	1383	452
RTOR Reduction (vph)	0	0	70	0	9	0	0	0	32	0	0	80
Lane Group Flow (vph)	249	260	16	60	476	0	111	1015	16	122	1383	372
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			30			30
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	26.1	26.1	26.1	39.9	39.9		8.0	45.9	45.9	12.6	50.5	50.5
Effective Green, g (s)	26.1	26.1	26.1	39.9	39.9		8.0	45.9	45.9	12.6	50.5	50.5
Actuated g/C Ratio	0.19	0.19	0.19	0.28	0.28		0.06	0.33	0.33	0.09	0.36	0.36
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	313	326	288	504	506		101	1160	484	159	1276	538
v/s Ratio Prot	0.15	c0.15		0.03	c0.27		c0.06	0.29		c0.07	c0.39	
v/s Ratio Perm			0.01						0.01			0.25
v/c Ratio	0.80	0.80	0.06	0.12	0.94		1.10	0.88	0.03	0.77	1.08	0.69
Uniform Delay, d1	54.4	54.4	46.8	37.0	48.9		66.0	44.3	32.0	62.3	44.8	38.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.96	1.15	1.00	1.12	0.99	1.02
Incremental Delay, d2	13.1	12.7	0.1	0.1	25.8		113.0	8.3	0.1	15.0	48.3	5.3
Delay (s)	67.5	67.1	46.9	37.1	74.7		176.2	59.2	32.1	84.8	92.6	44.3
Level of Service	E	E	D	D	E		F	E	C	F	F	D
Approach Delay (s)		64.3			70.5			69.1			81.0	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	74.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	57	9	132	20	99	14	1320	111	284	1798	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1856	1555		1785	1547	1770	3539	1508	1770	3539	1528
Flt Permitted		0.99	1.00		0.67	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1836	1555		1251	1547	1770	3539	1508	1770	3539	1528
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4	58	9	135	20	101	14	1347	113	290	1835	43
RTOR Reduction (vph)	0	0	8	0	0	73	0	0	23	0	0	9
Lane Group Flow (vph)	0	62	1	0	155	28	14	1347	90	290	1835	34
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			30			30
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		22.2	22.2		22.2	22.2	2.7	80.5	80.5	27.3	105.1	105.1
Effective Green, g (s)		22.2	22.2		22.2	22.2	2.7	80.5	80.5	27.3	105.1	105.1
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.02	0.58	0.58	0.20	0.75	0.75
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		291	246		198	245	34	2034	867	345	2656	1147
v/s Ratio Prot							0.01	0.38		c0.16	c0.52	
v/s Ratio Perm		0.03	0.00		c0.12	0.02			0.06			0.02
v/c Ratio		0.21	0.01		0.78	0.11	0.41	0.66	0.10	0.84	0.69	0.03
Uniform Delay, d1		51.3	49.6		56.6	50.5	67.9	20.4	13.4	54.3	9.0	4.4
Progression Factor		1.00	1.00		1.00	1.00	1.12	0.35	0.10	1.00	1.00	1.00
Incremental Delay, d2		0.4	0.0		18.0	0.2	4.4	0.9	0.1	16.6	1.5	0.0
Delay (s)		51.7	49.6		74.6	50.7	80.5	8.1	1.5	70.9	10.5	4.5
Level of Service		D	D		E	D	F	A	A	E	B	A
Approach Delay (s)		51.4			65.2			8.3			18.5	
Approach LOS		D			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	536	0	373	0	0	744	269	1433	195	397	1516	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	0.94	1.00	1.00	0.96
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1568			1583	1770	5085	1488	1770	5085	1512
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1568			1583	1770	5085	1488	1770	5085	1512
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	589	0	410	0	0	818	296	1575	214	436	1666	410
RTOR Reduction (vph)	0	0	285	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	589	0	125	0	0	814	296	1575	214	436	1666	410
Confl. Peds. (#/hr)			9									8
Confl. Bikes (#/hr)									30			30
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	20.0		42.8			92.0	22.8	38.5	38.5	32.8	48.5	68.5
Effective Green, g (s)	20.0		42.8			88.0	22.8	38.5	38.5	32.8	48.5	68.5
Actuated g/C Ratio	0.14		0.31			0.63	0.16	0.28	0.28	0.23	0.35	0.49
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490		479			995	288	1398	409	414	1761	739
v/s Ratio Prot	c0.17		0.04				0.17	c0.31		c0.25	0.33	0.08
v/s Ratio Perm			0.04			c0.51			0.14			0.19
v/c Ratio	1.20		0.26			0.82	1.03	1.13	0.52	1.05	0.95	0.55
Uniform Delay, d1	60.0		36.7			19.9	58.6	50.8	43.0	53.6	44.5	25.1
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.92	0.63	1.00
Incremental Delay, d2	109.1		0.3			5.3	60.4	66.8	4.7	53.0	9.6	0.7
Delay (s)	169.1		37.0			25.2	119.0	117.5	47.7	102.4	37.8	25.8
Level of Service	F		D			C	F	F	D	F	D	C
Approach Delay (s)		114.9			25.2			110.5			47.1	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	75.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	5	89	84	16	14	188	2259	11	16	2118	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1779	1583		1762		1770	5081		1770	5069	
Flt Permitted		0.76	1.00		0.76		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1402	1583		1385		1770	5081		1770	5069	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	5	95	89	17	15	200	2403	12	17	2253	31
RTOR Reduction (vph)	0	0	83	0	4	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	39	12	0	117	0	200	2415	0	17	2283	0
Confl. Peds. (#/hr)	4					4			5			11
Confl. Bikes (#/hr)									30			30
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.4	18.4		18.4		20.4	106.9		2.7	89.2	
Effective Green, g (s)		18.4	18.4		18.4		20.4	106.9		2.7	89.2	
Actuated g/C Ratio		0.13	0.13		0.13		0.15	0.76		0.02	0.64	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		184	208		182		257	3879		34	3229	
v/s Ratio Prot							c0.11	0.48		0.01	c0.45	
v/s Ratio Perm		0.03	0.01		c0.08							
v/c Ratio		0.21	0.06		0.64		0.78	0.62		0.50	0.71	
Uniform Delay, d1		54.3	53.2		57.7		57.6	7.5		68.0	16.8	
Progression Factor		1.00	1.00		1.00		1.06	1.04		0.98	0.25	
Incremental Delay, d2		0.6	0.1		7.5		1.4	0.1		7.2	0.9	
Delay (s)		54.9	53.4		65.2		62.6	7.9		73.6	5.0	
Level of Service		D	D		E		E	A		E	A	
Approach Delay (s)		53.8			65.2			12.1			5.5	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	21	276	33	46	28	348	2016	3	41	1828	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.86			0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1761	1604			1770		1770	5084		1770	5034	
Flt Permitted	0.62	1.00			0.59		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1155	1604			1055		1770	5084		1770	5034	
Peak-hour factor, PHF	0.98	0.92	0.98	0.92	0.92	0.92	0.98	0.98	0.92	0.92	0.98	0.98
Adj. Flow (vph)	266	23	282	36	50	30	355	2057	3	45	1865	87
RTOR Reduction (vph)	0	212	0	0	9	0	0	0	0	0	3	0
Lane Group Flow (vph)	266	94	0	0	107	0	355	2060	0	45	1949	0
Confl. Peds. (#/hr)	3											9
Confl. Bikes (#/hr)									30			30
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	35.0	35.0			34.0		30.9	87.1		6.9	64.1	
Effective Green, g (s)	35.0	35.0			34.0		30.9	87.1		6.9	64.1	
Actuated g/C Ratio	0.25	0.25			0.24		0.22	0.62		0.05	0.46	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	288	401			256		390	3162		87	2304	
v/s Ratio Prot		0.06					c0.20	0.41		0.03	c0.39	
v/s Ratio Perm	c0.23				0.10							
v/c Ratio	0.92	0.23			0.42		0.91	0.65		0.52	0.85	
Uniform Delay, d1	51.2	41.8			44.7		53.2	16.8		64.9	33.6	
Progression Factor	1.00	1.00			1.00		1.41	0.51		1.03	0.60	
Incremental Delay, d2	33.4	0.3			1.1		21.1	0.9		4.1	3.3	
Delay (s)	84.6	42.1			45.8		96.4	9.5		71.2	23.4	
Level of Service	F	D			D		F	A		E	C	
Approach Delay (s)		61.9			45.8			22.2			24.4	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	3	35	53	10	41	83	2081	16	73	1896	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1760	1583	1770	5077		1770	5065	
Flt Permitted		0.81			0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1406			1333	1583	1770	5077		1770	5065	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	52	3	37	56	11	44	88	2214	17	78	2017	35
RTOR Reduction (vph)	0	18	0	0	0	36	0	0	0	0	1	0
Lane Group Flow (vph)	0	74	0	0	67	8	88	2231	0	78	2051	0
Confl. Peds. (#/hr)			18	18					7			12
Confl. Bikes (#/hr)									30			30
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.2			25.2	25.2	11.2	91.2		11.1	91.1	
Effective Green, g (s)		25.2			25.2	25.2	11.2	91.2		11.1	91.1	
Actuated g/C Ratio		0.18			0.18	0.18	0.08	0.65		0.08	0.65	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		253			239	284	141	3307		140	3295	
v/s Ratio Prot							c0.05	c0.44		0.04	0.40	
v/s Ratio Perm		c0.05			0.05	0.01						
v/c Ratio		0.29			0.28	0.03	0.62	0.67		0.56	0.62	
Uniform Delay, d1		49.7			49.6	47.3	62.4	15.2		62.1	14.4	
Progression Factor		1.00			1.00	1.00	1.13	0.42		0.95	0.72	
Incremental Delay, d2		0.6			0.6	0.0	6.2	0.8		1.4	0.3	
Delay (s)		50.3			50.2	47.3	76.6	7.2		60.2	10.6	
Level of Service		D			D	D	E	A		E	B	
Approach Delay (s)		50.3			49.1			9.8			12.5	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	300	134	678	269	80	162	1398	665	211	1289	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.91
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		3375		3433	1863	1551	1534	5085	1499	1770	3539	1435
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		3375		3433	1863	1551	1534	5085	1499	1770	3539	1435
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	316	141	714	283	84	171	1472	700	222	1357	54
RTOR Reduction (vph)	0	30	0	0	0	66	0	0	343	0	0	32
Lane Group Flow (vph)	0	470	0	714	283	18	171	1472	357	222	1357	22
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									30			30
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)		20.1		30.0	30.0	30.0	16.6	52.1	52.1	20.3	55.8	55.8
Effective Green, g (s)		20.1		30.0	30.0	30.0	16.6	52.1	52.1	20.3	55.8	55.8
Actuated g/C Ratio		0.14		0.21	0.21	0.21	0.12	0.37	0.37	0.15	0.40	0.40
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	5.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		484		735	399	332	181	1892	557	256	1410	571
v/s Ratio Prot		c0.14		c0.21	0.15		0.11	0.29		c0.13	c0.38	
v/s Ratio Perm						0.01			0.24			0.01
v/c Ratio		0.97		0.97	0.71	0.05	0.94	0.78	0.64	0.87	0.96	0.04
Uniform Delay, d1		59.7		54.6	51.0	43.7	61.2	38.8	36.2	58.5	41.1	25.7
Progression Factor		1.00		1.00	1.00	1.00	1.20	0.91	1.00	1.42	0.45	0.60
Incremental Delay, d2		33.4		26.1	5.7	0.1	42.9	2.5	4.3	20.4	13.8	0.1
Delay (s)		93.0		80.7	56.7	43.8	116.4	37.8	40.5	103.3	32.3	15.5
Level of Service		F		F	E	D	F	D	D	F	C	B
Approach Delay (s)		93.0			71.5			44.3			41.4	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	53.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	233	153	107	120	66	1	1430	256	0	1250	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95	1.00		0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.98			1.00	0.92		1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1375	1770	1733			3539	1456		3539	1471
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		1.00	1.00
Satd. Flow (perm)	1770	1863	1375	1770	1733			3378	1456		3539	1471
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	183	243	159	111	125	69	1	1490	267	0	1302	100
RTOR Reduction (vph)	0	0	111	0	15	0	0	0	92	0	0	19
Lane Group Flow (vph)	183	243	48	111	179	0	0	1491	175	0	1302	81
Confl. Peds. (#/hr)			87			26			12			9
Confl. Bikes (#/hr)									30			30
Turn Type	Split	NA	Perm	Split	NA		Perm	NA	Perm		NA	Perm
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4				2		2			6
Actuated Green, G (s)	30.0	30.0	30.0	26.5	26.5			71.0	71.0		71.0	71.0
Effective Green, g (s)	30.0	30.0	30.0	26.5	26.5			71.0	71.0		71.0	71.0
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19			0.51	0.51		0.51	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	379	399	294	335	328			1713	738		1794	746
v/s Ratio Prot	0.10	c0.13		0.06	c0.10						0.37	
v/s Ratio Perm			0.04					c0.44	0.12			0.05
v/c Ratio	0.48	0.61	0.16	0.33	0.55			0.87	0.24		0.73	0.11
Uniform Delay, d1	48.2	49.7	44.8	49.1	51.3			30.4	19.3		26.9	18.0
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.45	0.00		0.31	0.19
Incremental Delay, d2	1.0	2.6	0.3	0.6	1.9			4.7	0.5		2.1	0.2
Delay (s)	49.2	52.3	45.1	49.7	53.2			18.3	0.5		10.5	3.6
Level of Service	D	D	D	D	D			B	A		B	A
Approach Delay (s)		49.4			51.9			15.6			10.0	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	303	124	107	256	100	92	1409	96	146	1141	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.92	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1522	1770	1863	1515	1770	3539	1464	1770	3539	1465
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1522	1770	1863	1515	1770	3539	1464	1770	3539	1465
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	164	309	127	109	261	102	94	1438	98	149	1164	158
RTOR Reduction (vph)	0	0	62	0	0	71	0	0	39	0	0	38
Lane Group Flow (vph)	164	309	65	109	261	31	94	1438	59	149	1164	120
Confl. Peds. (#/hr)			19			22			10			10
Confl. Bikes (#/hr)									30			30
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.4	28.4	28.4	11.4	24.4	24.4	12.1	70.5	70.5	15.2	73.6	73.6
Effective Green, g (s)	15.4	28.4	28.4	11.4	24.4	24.4	12.1	70.5	70.5	15.2	73.6	73.6
Actuated g/C Ratio	0.11	0.20	0.20	0.08	0.17	0.17	0.09	0.50	0.50	0.11	0.53	0.53
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5	4.5	3.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	194	377	308	144	324	264	152	1782	737	192	1860	770
v/s Ratio Prot	c0.09	c0.17		0.06	0.14		0.05	c0.41		c0.08	c0.33	
v/s Ratio Perm			0.04			0.02			0.04			0.08
v/c Ratio	0.85	0.82	0.21	0.76	0.81	0.12	0.62	0.81	0.08	0.78	0.63	0.16
Uniform Delay, d1	61.1	53.4	46.5	62.9	55.5	48.7	61.7	29.1	18.0	60.7	23.5	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.21	0.55	0.45	0.58	1.73	2.24
Incremental Delay, d2	27.1	13.0	0.3	20.1	13.6	0.2	4.1	2.3	0.1	14.5	1.3	0.3
Delay (s)	88.3	66.4	46.8	83.0	69.1	48.9	79.1	18.3	8.1	49.7	41.9	38.8
Level of Service	F	E	D	F	E	D	E	B	A	D	D	D
Approach Delay (s)		68.2			67.9			21.2			42.3	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	233	124	50	219	49	133	1469	26	142	1064	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.94	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1750	1554	1770	1812		1770	3539	1486	1770	3539	1502
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1750	1554	1770	1812		1770	3539	1486	1770	3539	1502
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	367	238	127	51	223	50	136	1499	27	145	1086	388
RTOR Reduction (vph)	0	0	68	0	6	0	0	0	17	0	0	82
Lane Group Flow (vph)	297	308	59	51	267	0	136	1499	10	145	1086	306
Confl. Peds. (#/hr)			5						3			1
Confl. Bikes (#/hr)									30			30
Turn Type	Split	NA	Perm	Split	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	28.7	28.7	28.7	25.3	25.3		14.7	53.7	53.7	16.8	55.8	55.8
Effective Green, g (s)	28.7	28.7	28.7	25.3	25.3		14.7	53.7	53.7	16.8	55.8	55.8
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18		0.10	0.38	0.38	0.12	0.40	0.40
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5	4.5	4.0	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	344	358	318	319	327		185	1357	569	212	1410	598
v/s Ratio Prot	c0.18	0.18		0.03	c0.15		0.08	c0.42		c0.08	0.31	
v/s Ratio Perm			0.04						0.01			0.20
v/c Ratio	0.86	0.86	0.19	0.16	0.82		0.74	1.10	0.02	0.68	0.77	0.51
Uniform Delay, d1	53.8	53.7	46.0	48.4	55.1		60.8	43.1	26.8	59.1	36.5	31.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.74	1.00	1.24	0.86	0.76
Incremental Delay, d2	19.5	18.6	0.3	0.2	14.6		8.9	54.5	0.0	6.9	3.2	2.4
Delay (s)	73.2	72.3	46.3	48.6	69.7		69.6	86.5	26.8	79.9	34.5	26.5
Level of Service	E	E	D	D	E		E	F	C	E	C	C
Approach Delay (s)		68.2			66.4			84.2			36.6	
Approach LOS		E			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	81	12	226	36	1679	197	384	1759	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1808	1583		1785	1554	1770	3539	1512	1770	3539	1529
Flt Permitted		0.85	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1572	1583		1354	1554	1770	3539	1512	1770	3539	1529
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	82	12	228	36	1696	199	388	1777	19
RTOR Reduction (vph)	0	0	12	0	0	201	0	0	36	0	0	5
Lane Group Flow (vph)	0	37	2	0	94	27	36	1696	163	388	1777	14
Confl. Peds. (#/hr)	5					5			1			
Confl. Bikes (#/hr)									30			30
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		16.8	16.8		16.8	16.8	6.5	75.4	75.4	37.8	106.7	106.7
Effective Green, g (s)		16.8	16.8		16.8	16.8	6.5	75.4	75.4	37.8	106.7	106.7
Actuated g/C Ratio		0.12	0.12		0.12	0.12	0.05	0.54	0.54	0.27	0.76	0.76
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0	4.0	3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		188	189		162	186	82	1906	814	477	2697	1165
v/s Ratio Prot							0.02	c0.48		c0.22	0.50	
v/s Ratio Perm		0.02	0.00		c0.07	0.02			0.11			0.01
v/c Ratio		0.20	0.01		0.58	0.15	0.44	0.89	0.20	0.81	0.66	0.01
Uniform Delay, d1		55.5	54.3		58.3	55.2	65.0	28.6	16.7	47.8	8.0	4.0
Progression Factor		1.00	1.00		1.00	1.00	0.81	0.43	0.43	1.00	1.00	1.00
Incremental Delay, d2		0.5	0.0		5.2	0.4	0.3	0.7	0.0	10.2	1.3	0.0
Delay (s)		56.0	54.3		63.5	55.5	53.0	13.0	7.3	58.0	9.2	4.0
Level of Service		E	D		E	E	D	B	A	E	A	A
Approach Delay (s)		55.6			57.9			13.2			17.9	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	0	331	0	0	715	426	1028	28	359	1671	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		1.00			0.99	1.00	1.00	0.93	1.00	1.00	0.95
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1577			1563	1770	5085	1471	1770	5085	1508
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1577			1563	1770	5085	1471	1770	5085	1508
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	173	0	348	0	0	753	448	1082	29	378	1759	245
RTOR Reduction (vph)	0	0	195	0	0	6	0	0	0	0	0	0
Lane Group Flow (vph)	173	0	153	0	0	747	448	1082	29	378	1759	245
Confl. Peds. (#/hr)						2						
Confl. Bikes (#/hr)			4						50			50
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		8		5	2		1	6	7
Permitted Phases			7			1 7 8			2			6
Actuated Green, G (s)	13.0		50.6			79.7	37.6	50.8	50.8	39.7	52.9	65.9
Effective Green, g (s)	13.0		50.6			75.7	37.6	50.8	50.8	39.7	52.9	65.9
Actuated g/C Ratio	0.09		0.36			0.54	0.27	0.36	0.36	0.28	0.38	0.47
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	318		569			845	475	1845	533	501	1921	709
v/s Ratio Prot	0.05		0.07				c0.25	0.21		0.21	c0.35	0.03
v/s Ratio Perm			0.02			c0.48			0.02			0.13
v/c Ratio	0.54		0.27			0.88	0.94	0.59	0.05	0.75	0.92	0.35
Uniform Delay, d1	60.7		31.6			28.3	50.2	36.1	29.0	45.7	41.4	23.4
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	1.59	0.68	0.36
Incremental Delay, d2	1.9		0.3			10.9	27.4	1.4	0.2	5.3	7.1	0.2
Delay (s)	62.6		31.9			39.2	77.6	37.5	29.2	77.9	35.3	8.7
Level of Service	E		C			D	E	D	C	E	D	A
Approach Delay (s)		42.1			39.2			48.8			39.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	16	64	15	4	2	63	1858	47	59	2078	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1810	1557		1772		1770	5062		1770	5071	
Flt Permitted		0.84	1.00		0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1567	1557		1488		1770	5062		1770	5071	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	22	18	70	16	4	2	69	2042	52	65	2284	30
RTOR Reduction (vph)	0	0	64	0	2	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	40	6	0	20	0	69	2093	0	65	2314	0
Confl. Peds. (#/hr)	2					2			2			4
Confl. Bikes (#/hr)			2						50			50
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		12.6	12.6		12.6		9.1	106.7		8.7	106.3	
Effective Green, g (s)		12.6	12.6		12.6		9.1	106.7		8.7	106.3	
Actuated g/C Ratio		0.09	0.09		0.09		0.06	0.76		0.06	0.76	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		141	140		133		115	3857		109	3850	
v/s Ratio Prot							c0.04	0.41		0.04	c0.46	
v/s Ratio Perm		c0.03	0.00		0.01							
v/c Ratio		0.28	0.04		0.15		0.60	0.54		0.60	0.60	
Uniform Delay, d1		59.5	58.2		58.8		63.7	6.8		63.9	7.5	
Progression Factor		1.00	1.00		1.00		0.90	0.82		1.22	0.22	
Incremental Delay, d2		1.1	0.1		0.5		6.6	0.4		5.8	0.5	
Delay (s)		60.6	58.3		59.3		64.1	6.0		84.0	2.1	
Level of Service		E	E		E		E	A		F	A	
Approach Delay (s)		59.2			59.3			7.9			4.3	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	211	47	309	26	18	17	244	1617	1	64	1749	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87			0.96		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1758	1620			1757		1770	5085		1770	5020	
Flt Permitted	0.70	1.00			0.27		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1302	1620			483		1770	5085		1770	5020	
Peak-hour factor, PHF	0.90	0.92	0.90	0.92	0.92	0.92	0.90	0.90	0.92	0.92	0.90	0.90
Adj. Flow (vph)	234	51	343	28	20	18	271	1797	1	70	1943	114
RTOR Reduction (vph)	0	180	0	0	10	0	0	0	0	0	4	0
Lane Group Flow (vph)	234	214	0	0	56	0	271	1798	0	70	2053	0
Confl. Peds. (#/hr)	3											8
Confl. Bikes (#/hr)									50			50
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	29.3	29.3			28.3		25.3	90.1		9.6	75.4	
Effective Green, g (s)	29.3	29.3			28.3		25.3	90.1		9.6	75.4	
Actuated g/C Ratio	0.21	0.21			0.20		0.18	0.64		0.07	0.54	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	272	339			97		319	3272		121	2703	
v/s Ratio Prot		0.13					c0.15	0.35		0.04	c0.41	
v/s Ratio Perm	c0.18				0.12							
v/c Ratio	0.86	0.63			0.57		0.85	0.55		0.58	0.76	
Uniform Delay, d1	53.4	50.4			50.4		55.5	13.8		63.2	25.2	
Progression Factor	1.00	1.00			1.00		0.82	1.19		0.64	0.30	
Incremental Delay, d2	23.1	3.8			8.0		16.4	0.6		5.8	1.8	
Delay (s)	76.5	54.2			58.4		61.9	16.9		46.0	9.3	
Level of Service	E	D			E		E	B		D	A	
Approach Delay (s)		62.5			58.4			22.8			10.5	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	5	50	4	4	8	41	1752	23	35	1803	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt		0.94			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1817	1544	1770	5072		1770	5068	
Flt Permitted		0.83			0.90	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1458			1684	1544	1770	5072		1770	5068	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	5	54	4	4	9	45	1904	25	38	1960	35
RTOR Reduction (vph)	0	24	0	0	0	8	0	0	0	0	1	0
Lane Group Flow (vph)	0	100	0	0	8	1	45	1929	0	38	1994	0
Confl. Bikes (#/hr)						6			50			50
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		14.7			14.7	14.7	7.8	105.5		7.3	105.0	
Effective Green, g (s)		14.7			14.7	14.7	7.8	105.5		7.3	105.0	
Actuated g/C Ratio		0.10			0.10	0.10	0.06	0.75		0.05	0.75	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		153			176	162	98	3822		92	3801	
v/s Ratio Prot							c0.03	0.38		0.02	c0.39	
v/s Ratio Perm		c0.07			0.00	0.00						
v/c Ratio		0.65			0.05	0.01	0.46	0.50		0.41	0.52	
Uniform Delay, d1		60.2			56.3	56.1	64.1	6.9		64.3	7.2	
Progression Factor		1.00			1.00	1.00	1.27	0.17		1.00	0.96	
Incremental Delay, d2		9.6			0.1	0.0	2.8	0.4		1.6	0.3	
Delay (s)		69.8			56.4	56.1	84.3	1.6		65.7	7.2	
Level of Service		E			E	E	F	A		E	A	
Approach Delay (s)		69.8			56.3			3.4			8.3	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	334	53	532	243	46	118	819	772	170	1275	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3446		3433	1863	1540	1534	3539	1516	1770	3530	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3446		3433	1863	1540	1534	3539	1516	1770	3530	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	355	56	566	259	49	126	871	821	181	1356	13
RTOR Reduction (vph)	0	9	0	0	0	39	0	0	325	0	1	0
Lane Group Flow (vph)	0	421	0	566	259	10	126	871	496	181	1368	0
Confl. Peds. (#/hr)						5			3			14
Confl. Bikes (#/hr)			15			8			50			50
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		19.5		28.0	28.0	28.0	14.0	58.2	58.2	16.8	61.0	
Effective Green, g (s)		19.5		28.0	28.0	28.0	14.0	58.2	58.2	16.8	61.0	
Actuated g/C Ratio		0.14		0.20	0.20	0.20	0.10	0.42	0.42	0.12	0.44	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		479		686	372	308	153	1471	630	212	1538	
v/s Ratio Prot		c0.12		c0.16	0.14		0.08	0.25		c0.10	c0.39	
v/s Ratio Perm						0.01			0.33			
v/c Ratio		0.88		0.83	0.70	0.03	0.82	0.59	0.79	0.85	0.89	
Uniform Delay, d1		59.1		53.7	52.0	45.1	61.8	31.7	35.5	60.4	36.4	
Progression Factor		1.00		1.00	1.00	1.00	1.21	0.70	1.14	1.43	0.39	
Incremental Delay, d2		16.6		8.0	5.6	0.0	26.0	1.6	8.6	18.2	5.3	
Delay (s)		75.7		61.7	57.6	45.1	101.0	23.6	49.2	104.8	19.6	
Level of Service		E		E	E	D	F	C	D	F	B	
Approach Delay (s)		75.7			59.5			40.5			29.5	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	43.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	79	92	65	59	31	0	889	57	0	1380	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00	0.91	1.00	0.97			0.99			1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.95			0.99			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863	1439	1770	1705			3487			3507	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (perm)	1770	1863	1439	1770	1705			3487			3507	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	151	85	99	70	63	33	0	956	61	0	1484	67
RTOR Reduction (vph)	0	0	83	0	13	0	0	3	0	0	2	0
Lane Group Flow (vph)	151	85	16	70	83	0	0	1014	0	0	1549	0
Confl. Peds. (#/hr)			50			58			14			3
Confl. Bikes (#/hr)			9			11			50			50
Turn Type	Split	NA	Perm	Split	NA			NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4									
Actuated Green, G (s)	23.1	23.1	23.1	30.0	30.0			74.4			74.4	
Effective Green, g (s)	23.1	23.1	23.1	30.0	30.0			74.4			74.4	
Actuated g/C Ratio	0.17	0.17	0.17	0.21	0.21			0.53			0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	292	307	237	379	365			1853			1863	
v/s Ratio Prot	c0.09	0.05		0.04	c0.05			0.29			c0.44	
v/s Ratio Perm			0.01									
v/c Ratio	0.52	0.28	0.07	0.18	0.23			0.55			0.83	
Uniform Delay, d1	53.4	51.1	49.4	45.0	45.4			21.7			27.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.24			0.27	
Incremental Delay, d2	1.5	0.5	0.1	0.2	0.3			1.0			3.2	
Delay (s)	54.9	51.6	49.5	45.2	45.7			6.2			10.7	
Level of Service	D	D	D	D	D			A			B	
Approach Delay (s)		52.5			45.5			6.2			10.7	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	139	47	86	298	69	99	917	62	89	1253	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1482	1770	1863	1520	1770	3491		1770	3479	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1482	1770	1863	1520	1770	3491		1770	3479	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	67	149	51	92	320	74	106	986	67	96	1347	123
RTOR Reduction (vph)	0	0	42	0	0	49	0	3	0	0	4	0
Lane Group Flow (vph)	67	149	9	92	320	25	106	1050	0	96	1466	0
Confl. Peds. (#/hr)			29			10			3			
Confl. Bikes (#/hr)			9			13			50			50
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.2	24.6	24.6	10.9	28.3	28.3	12.2	77.9		12.1	77.8	
Effective Green, g (s)	7.2	24.6	24.6	10.9	28.3	28.3	12.2	77.9		12.1	77.8	
Actuated g/C Ratio	0.05	0.18	0.18	0.08	0.20	0.20	0.09	0.56		0.09	0.56	
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	327	260	137	376	307	154	1942		152	1933	
v/s Ratio Prot	c0.04	0.08		c0.05	c0.17		c0.06	0.30		0.05	c0.42	
v/s Ratio Perm			0.01			0.02						
v/c Ratio	0.74	0.46	0.03	0.67	0.85	0.08	0.69	0.54		0.63	0.76	
Uniform Delay, d1	65.5	51.7	47.9	62.8	53.8	45.3	62.1	19.7		61.8	23.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.82		1.36	0.16	
Incremental Delay, d2	26.3	1.0	0.1	12.2	16.7	0.1	10.6	0.9		0.8	0.3	
Delay (s)	91.8	52.7	47.9	75.0	70.5	45.4	75.1	17.0		85.0	4.1	
Level of Service	F	D	D	E	E	D	E	B		F	A	
Approach Delay (s)		61.6			67.5			22.4			9.1	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	294	210	85	59	348	132	110	964	48	121	1316	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1753	1548	1770	1777		1770	3500		1770	3339	
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1753	1548	1770	1777		1770	3500		1770	3339	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	297	212	86	60	352	133	111	974	48	122	1329	452
RTOR Reduction (vph)	0	0	57	0	9	0	0	3	0	0	24	0
Lane Group Flow (vph)	249	260	29	60	476	0	111	1019	0	122	1757	0
Confl. Peds. (#/hr)			8			1			3			2
Confl. Bikes (#/hr)						7			50			50
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	26.1	26.1	26.1	37.9	37.9		7.0	49.5		11.0	53.5	
Effective Green, g (s)	26.1	26.1	26.1	37.9	37.9		7.0	49.5		11.0	53.5	
Actuated g/C Ratio	0.19	0.19	0.19	0.27	0.27		0.05	0.35		0.08	0.38	
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	313	326	288	479	481		88	1237		139	1275	
v/s Ratio Prot	0.15	c0.15		0.03	c0.27		c0.06	0.29		0.07	c0.53	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.80	0.10	0.13	0.99		1.26	0.82		0.88	1.38	
Uniform Delay, d1	54.4	54.4	47.2	38.5	50.8		66.5	41.3		63.8	43.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.94	1.21		1.09	0.98	
Incremental Delay, d2	13.1	12.7	0.2	0.1	37.7		175.2	5.5		34.3	173.9	
Delay (s)	67.5	67.1	47.4	38.7	88.5		237.6	55.4		103.6	216.4	
Level of Service	E	E	D	D	F		F	E		F	F	
Approach Delay (s)		64.4			83.0			73.2			209.2	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	135.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	57	9	132	20	99	14	1279	111	284	1745	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.98	1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		1.00	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1856	1555		1785	1547	1770	3480		1770	3539	1513
Flt Permitted		0.99	1.00		0.67	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1836	1555		1251	1547	1770	3480		1770	3539	1513
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4	58	9	135	20	101	14	1305	113	290	1781	43
RTOR Reduction (vph)	0	0	8	0	0	73	0	4	0	0	0	10
Lane Group Flow (vph)	0	62	1	0	155	28	14	1414	0	290	1781	33
Confl. Peds. (#/hr)	4					4			2			
Confl. Bikes (#/hr)			4			4			50			50
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)		22.2	22.2		22.2	22.2	2.7	80.6		27.2	105.1	105.1
Effective Green, g (s)		22.2	22.2		22.2	22.2	2.7	80.6		27.2	105.1	105.1
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.02	0.58		0.19	0.75	0.75
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		291	246		198	245	34	2003		343	2656	1135
v/s Ratio Prot							0.01	c0.41		c0.16	0.50	
v/s Ratio Perm		0.03	0.00		c0.12	0.02						0.02
v/c Ratio		0.21	0.01		0.78	0.11	0.41	0.71		0.85	0.67	0.03
Uniform Delay, d1		51.3	49.6		56.6	50.5	67.9	21.2		54.4	8.8	4.4
Progression Factor		1.00	1.00		1.00	1.00	1.14	0.40		1.00	1.00	1.00
Incremental Delay, d2		0.4	0.0		18.0	0.2	4.7	1.3		17.1	1.4	0.0
Delay (s)		51.7	49.6		74.6	50.7	82.4	9.8		71.5	10.1	4.5
Level of Service		D	D		E	D	F	A		E	B	A
Approach Delay (s)		51.4			65.2			10.5			18.4	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: El Camino Real & Sand Hill Rd/Alma St

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	536	0	373	0	0	744	269	1402	195	397	1487	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0			5.0	5.0	4.5	4.5	5.0	4.5	5.0
Lane Util. Factor	0.97		1.00			1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frpb, ped/bikes	1.00		0.99			1.00	1.00	1.00	0.91	1.00	1.00	0.94
Flpb, ped/bikes	1.00		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00		0.85			0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433		1569			1583	1770	5085	1445	1770	5085	1496
Flt Permitted	0.95		1.00			1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433		1569			1583	1770	5085	1445	1770	5085	1496
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	589	0	410	0	0	818	296	1541	214	436	1634	410
RTOR Reduction (vph)	0	0	279	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	589	0	131	0	0	814	296	1541	214	436	1634	410
Confl. Peds. (#/hr)			9									8
Confl. Bikes (#/hr)									50			50
Turn Type	Prot		pm+ov			custom	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7		5		10		5	2		1	6	7
Permitted Phases			7			1 7 10			2			6
Actuated Green, G (s)	20.0		44.8			92.0	24.8	38.5	38.5	32.8	46.5	66.5
Effective Green, g (s)	20.0		44.8			88.0	24.8	38.5	38.5	32.8	46.5	66.5
Actuated g/C Ratio	0.14		0.32			0.63	0.18	0.28	0.28	0.23	0.33	0.48
Clearance Time (s)	5.0		5.0				5.0	4.5	4.5	5.0	4.5	5.0
Vehicle Extension (s)	3.0		3.0				3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	490		502			995	313	1398	397	414	1688	710
v/s Ratio Prot	c0.17		0.05				0.17	c0.30		c0.25	0.32	0.08
v/s Ratio Perm			0.04			c0.51			0.15			0.19
v/c Ratio	1.20		0.26			0.82	0.95	1.10	0.54	1.05	0.97	0.58
Uniform Delay, d1	60.0		35.3			19.9	56.9	50.8	43.2	53.6	46.0	26.6
Progression Factor	1.00		1.00			1.00	1.00	1.00	1.00	0.93	0.63	1.01
Incremental Delay, d2	109.1		0.3			5.3	36.4	57.2	5.2	53.2	12.9	0.9
Delay (s)	169.1		35.6			25.2	93.3	107.9	48.4	102.8	42.1	27.7
Level of Service	F		D			C	F	F	D	F	D	C
Approach Delay (s)		114.3			25.2			99.6			50.4	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	73.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	99.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
2: El Camino Real & Cambridge Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	5	89	84	16	14	188	2228	11	16	2089	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1779	1583		1762		1770	5080		1770	5068	
Flt Permitted		0.76	1.00		0.76		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1402	1583		1385		1770	5080		1770	5068	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	34	5	95	89	17	15	200	2370	12	17	2222	31
RTOR Reduction (vph)	0	0	83	0	4	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	39	12	0	117	0	200	2382	0	17	2252	0
Confl. Peds. (#/hr)	4					4			5			11
Confl. Bikes (#/hr)									50			50
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)		18.4	18.4		18.4		20.4	106.9		2.7	89.2	
Effective Green, g (s)		18.4	18.4		18.4		20.4	106.9		2.7	89.2	
Actuated g/C Ratio		0.13	0.13		0.13		0.15	0.76		0.02	0.64	
Clearance Time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		184	208		182		257	3878		34	3229	
v/s Ratio Prot							c0.11	0.47		0.01	c0.44	
v/s Ratio Perm		0.03	0.01		c0.08							
v/c Ratio		0.21	0.06		0.64		0.78	0.61		0.50	0.70	
Uniform Delay, d1		54.3	53.2		57.7		57.6	7.4		68.0	16.6	
Progression Factor		1.00	1.00		1.00		1.06	1.07		0.98	0.24	
Incremental Delay, d2		0.6	0.1		7.5		1.4	0.1		7.4	0.8	
Delay (s)		54.9	53.4		65.2		62.2	7.9		74.0	4.7	
Level of Service		D	D		E		E	A		E	A	
Approach Delay (s)		53.8			65.2			12.1			5.3	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: El Camino Real & Middle Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	21	276	33	46	28	348	1985	3	41	1799	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.86			0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1761	1604			1770		1770	5084		1770	5030	
Flt Permitted	0.62	1.00			0.59		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1155	1604			1055		1770	5084		1770	5030	
Peak-hour factor, PHF	0.98	0.92	0.98	0.92	0.92	0.92	0.98	0.98	0.92	0.92	0.98	0.98
Adj. Flow (vph)	266	23	282	36	50	30	355	2026	3	45	1836	87
RTOR Reduction (vph)	0	212	0	0	9	0	0	0	0	0	3	0
Lane Group Flow (vph)	266	94	0	0	107	0	355	2029	0	45	1920	0
Confl. Peds. (#/hr)	3											9
Confl. Bikes (#/hr)									50			50
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	35.0	35.0			34.0		30.9	87.1		6.9	64.1	
Effective Green, g (s)	35.0	35.0			34.0		30.9	87.1		6.9	64.1	
Actuated g/C Ratio	0.25	0.25			0.24		0.22	0.62		0.05	0.46	
Clearance Time (s)	3.0	3.0			4.0		3.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	288	401			256		390	3162		87	2303	
v/s Ratio Prot		0.06					c0.20	0.40		0.03	c0.38	
v/s Ratio Perm	c0.23				0.10							
v/c Ratio	0.92	0.23			0.42		0.91	0.64		0.52	0.83	
Uniform Delay, d1	51.2	41.8			44.7		53.2	16.6		64.9	33.3	
Progression Factor	1.00	1.00			1.00		1.41	0.50		1.06	0.61	
Incremental Delay, d2	33.4	0.3			1.1		21.3	0.8		4.1	3.0	
Delay (s)	84.6	42.1			45.8		96.5	9.2		72.7	23.4	
Level of Service	F	D			D		F	A		E	C	
Approach Delay (s)		61.9			45.8			22.2			24.6	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
4: El Camino Real & Roble Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	3	35	53	10	41	83	2050	16	73	1867	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00	1.00	1.00		1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1689			1760	1583	1770	5076		1770	5063	
Flt Permitted		0.81			0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1406			1333	1583	1770	5076		1770	5063	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	52	3	37	56	11	44	88	2181	17	78	1986	35
RTOR Reduction (vph)	0	18	0	0	0	36	0	0	0	0	1	0
Lane Group Flow (vph)	0	74	0	0	67	8	88	2198	0	78	2020	0
Confl. Peds. (#/hr)			18	18					7			12
Confl. Bikes (#/hr)									50			50
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		25.2			25.2	25.2	11.2	91.2		11.1	91.1	
Effective Green, g (s)		25.2			25.2	25.2	11.2	91.2		11.1	91.1	
Actuated g/C Ratio		0.18			0.18	0.18	0.08	0.65		0.08	0.65	
Clearance Time (s)		4.0			4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		253			239	284	141	3306		140	3294	
v/s Ratio Prot							c0.05	c0.43		0.04	0.40	
v/s Ratio Perm		c0.05			0.05	0.01						
v/c Ratio		0.29			0.28	0.03	0.62	0.66		0.56	0.61	
Uniform Delay, d1		49.7			49.6	47.3	62.4	15.0		62.1	14.2	
Progression Factor		1.00			1.00	1.00	1.10	0.46		0.92	0.72	
Incremental Delay, d2		0.6			0.6	0.0	6.3	0.8		1.2	0.2	
Delay (s)		50.3			50.2	47.3	74.7	7.7		58.6	10.5	
Level of Service		D			D	D	E	A		E	B	
Approach Delay (s)		50.3			49.1			10.3			12.3	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: El Camino Real & Menlo Avenue/Ravenswood Avenue

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	300	134	678	269	80	162	1367	665	211	1260	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	8	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Lane Util. Factor		0.95		0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00	1.00	0.98	1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3375		3433	1863	1551	1534	3539	1484	1770	3503	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3375		3433	1863	1551	1534	3539	1484	1770	3503	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	43	316	141	714	283	84	171	1439	700	222	1326	54
RTOR Reduction (vph)	0	30	0	0	0	64	0	0	262	0	2	0
Lane Group Flow (vph)	0	470	0	714	283	20	171	1439	438	222	1378	0
Confl. Peds. (#/hr)						6			18			13
Confl. Bikes (#/hr)									50			50
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)		20.0		30.0	30.0	30.0	17.1	55.0	55.0	17.5	55.4	
Effective Green, g (s)		20.0		30.0	30.0	30.0	17.1	55.0	55.0	17.5	55.4	
Actuated g/C Ratio		0.14		0.21	0.21	0.21	0.12	0.39	0.39	0.12	0.40	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.5	5.0	5.0	4.5	5.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		482		735	399	332	187	1390	583	221	1386	
v/s Ratio Prot		c0.14		c0.21	0.15		0.11	c0.41		c0.13	0.39	
v/s Ratio Perm						0.01			0.30			
v/c Ratio		0.98		0.97	0.71	0.06	0.91	1.04	0.75	1.00	0.99	
Uniform Delay, d1		59.8		54.6	51.0	43.8	60.7	42.5	36.6	61.2	42.1	
Progression Factor		1.00		1.00	1.00	1.00	1.21	0.89	0.85	1.35	0.47	
Incremental Delay, d2		34.3		26.1	5.7	0.1	35.3	30.9	6.8	52.8	19.4	
Delay (s)		94.0		80.7	56.7	43.8	108.8	68.9	37.9	135.8	39.2	
Level of Service		F		F	E	D	F	E	D	F	D	
Approach Delay (s)		94.0			71.5			62.5			52.6	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	64.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: El Camino Real & Santa Cruz Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	233	153	107	120	66	0	1399	256	0	1221	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00			0.95			0.95	
Frpb, ped/bikes	1.00	1.00	0.87	1.00	0.98			0.99			0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00			1.00			1.00	
Frt	1.00	1.00	0.85	1.00	0.95			0.98			0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863	1375	1770	1733			3407			3479	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			1.00			1.00	
Satd. Flow (perm)	1770	1863	1375	1770	1733			3407			3479	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	183	243	159	111	125	69	0	1457	267	0	1272	100
RTOR Reduction (vph)	0	0	111	0	15	0	0	10	0	0	4	0
Lane Group Flow (vph)	183	243	48	111	179	0	0	1714	0	0	1368	0
Confl. Peds. (#/hr)			87			26			12			9
Confl. Bikes (#/hr)									50			50
Turn Type	Split	NA	Perm	Split	NA			NA			NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases			4									
Actuated Green, G (s)	30.0	30.0	30.0	26.5	26.5			71.0			71.0	
Effective Green, g (s)	30.0	30.0	30.0	26.5	26.5			71.0			71.0	
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19			0.51			0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	379	399	294	335	328			1727			1764	
v/s Ratio Prot	0.10	c0.13		0.06	c0.10			c0.50			0.39	
v/s Ratio Perm			0.04									
v/c Ratio	0.48	0.61	0.16	0.33	0.55			0.99			0.78	
Uniform Delay, d1	48.2	49.7	44.8	49.1	51.3			34.2			28.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00			0.37			0.34	
Incremental Delay, d2	1.0	2.6	0.3	0.6	1.9			12.3			2.6	
Delay (s)	49.2	52.3	45.1	49.7	53.2			24.9			12.1	
Level of Service	D	D	D	D	D			C			B	
Approach Delay (s)		49.4			51.9			24.9			12.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: El Camino Real & Oak Grove Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	303	124	107	256	100	92	1378	96	146	1112	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1522	1770	1863	1515	1770	3484		1770	3437	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1522	1770	1863	1515	1770	3484		1770	3437	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	164	309	127	109	261	102	94	1406	98	149	1135	158
RTOR Reduction (vph)	0	0	62	0	0	58	0	3	0	0	7	0
Lane Group Flow (vph)	164	309	65	109	261	44	94	1501	0	149	1286	0
Confl. Peds. (#/hr)			19			22			10			10
Confl. Bikes (#/hr)									50			50
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.7	28.1	28.1	11.4	24.8	24.8	10.7	71.4		14.6	75.3	
Effective Green, g (s)	14.7	28.1	28.1	11.4	24.8	24.8	10.7	71.4		14.6	75.3	
Actuated g/C Ratio	0.10	0.20	0.20	0.08	0.18	0.18	0.08	0.51		0.10	0.54	
Clearance Time (s)	3.0	3.5	3.5	3.0	3.5	3.5	3.5	4.5		3.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	185	373	305	144	330	268	135	1776		184	1848	
v/s Ratio Prot	c0.09	c0.17		0.06	0.14		0.05	c0.43		c0.08	0.37	
v/s Ratio Perm			0.04			0.03						
v/c Ratio	0.89	0.83	0.21	0.76	0.79	0.16	0.70	0.84		0.81	0.70	
Uniform Delay, d1	61.8	53.6	46.7	62.9	55.1	48.8	63.1	29.5		61.3	23.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.16	0.59		0.59	1.62	
Incremental Delay, d2	36.0	14.0	0.4	20.1	12.2	0.3	5.9	2.1		12.9	1.2	
Delay (s)	97.8	67.7	47.1	83.0	67.3	49.1	78.9	19.4		49.1	39.8	
Level of Service	F	E	D	F	E	D	E	B		D	D	
Approach Delay (s)		71.6			67.0			22.9			40.8	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	41.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
8: El Camino Real & Valparaiso Ave/Glenwood Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	233	124	50	219	49	133	1438	26	142	1035	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00		1.00	0.96	
Flt Protected	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1750	1554	1770	1812		1770	3524		1770	3332	
Flt Permitted	0.95	0.99	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1681	1750	1554	1770	1812		1770	3524		1770	3332	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	367	238	127	51	223	50	136	1467	27	145	1056	388
RTOR Reduction (vph)	0	0	68	0	6	0	0	1	0	0	26	0
Lane Group Flow (vph)	297	308	59	51	267	0	136	1493	0	145	1418	0
Confl. Peds. (#/hr)			5						3			1
Confl. Bikes (#/hr)									50			50
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	28.7	28.7	28.7	25.3	25.3		16.1	53.7		16.8	54.4	
Effective Green, g (s)	28.7	28.7	28.7	25.3	25.3		16.1	53.7		16.8	54.4	
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18		0.12	0.38		0.12	0.39	
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5		4.0	4.5		4.0	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	344	358	318	319	327		203	1351		212	1294	
v/s Ratio Prot	c0.18	0.18		0.03	c0.15		0.08	0.42		c0.08	c0.43	
v/s Ratio Perm			0.04									
v/c Ratio	0.86	0.86	0.19	0.16	0.82		0.67	1.11		0.68	1.10	
Uniform Delay, d1	53.8	53.7	46.0	48.4	55.1		59.4	43.1		59.1	42.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.76		1.26	0.89	
Incremental Delay, d2	19.5	18.6	0.3	0.2	14.6		4.6	54.2		6.9	53.1	
Delay (s)	73.2	72.3	46.3	48.6	69.7		62.1	87.1		81.3	91.1	
Level of Service	E	E	D	D	E		E	F		F	F	
Approach Delay (s)		68.2			66.4			85.0			90.2	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	82.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
9: El Camino Real & Encinal Ave

4/23/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	17	14	81	12	226	36	1648	197	384	1730	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.98	1.00	0.99		1.00	1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected		0.97	1.00		0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1808	1583		1785	1554	1770	3461		1770	3539	1513
Flt Permitted		0.85	1.00		0.73	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1572	1583		1354	1554	1770	3461		1770	3539	1513
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	20	17	14	82	12	228	36	1665	199	388	1747	19
RTOR Reduction (vph)	0	0	12	0	0	201	0	6	0	0	0	5
Lane Group Flow (vph)	0	37	2	0	94	27	36	1858	0	388	1747	14
Confl. Peds. (#/hr)	5					5			1			
Confl. Bikes (#/hr)									50			50
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						6
Actuated Green, G (s)		16.8	16.8		16.8	16.8	6.5	74.2		39.0	106.7	106.7
Effective Green, g (s)		16.8	16.8		16.8	16.8	6.5	74.2		39.0	106.7	106.7
Actuated g/C Ratio		0.12	0.12		0.12	0.12	0.05	0.53		0.28	0.76	0.76
Clearance Time (s)		3.0	3.0		3.0	3.0	3.0	4.0		3.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		188	189		162	186	82	1834		493	2697	1153
v/s Ratio Prot							0.02	c0.54		c0.22	0.49	
v/s Ratio Perm		0.02	0.00		c0.07	0.02						0.01
v/c Ratio		0.20	0.01		0.58	0.15	0.44	1.01		0.79	0.65	0.01
Uniform Delay, d1		55.5	54.3		58.3	55.2	65.0	32.9		46.7	7.8	4.0
Progression Factor		1.00	1.00		1.00	1.00	0.91	0.44		1.00	1.00	1.00
Incremental Delay, d2		0.5	0.0		5.2	0.4	0.3	9.9		8.1	1.2	0.0
Delay (s)		56.0	54.3		63.5	55.5	59.1	24.4		54.8	9.0	4.0
Level of Service		E	D		E	E	E	C		D	A	A
Approach Delay (s)		55.6			57.9			25.0			17.2	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	L	R	R	L	T	T	T	L	T	T	T
Maximum Queue (ft)	87	134	118	86	200	236	192	88	326	286	291	344
Average Queue (ft)	34	79	66	27	124	150	112	28	236	134	160	181
95th Queue (ft)	88	141	122	89	202	253	206	93	351	322	342	381
Link Distance (ft)		349		329		525	525	525		746	746	746
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	235		235		190				535			
Storage Blk Time (%)					2	5		0				5
Queuing Penalty (veh)					3	7		0				12

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB
Directions Served	R
Maximum Queue (ft)	236
Average Queue (ft)	80
95th Queue (ft)	230
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	240
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	58	48	78	112	107	110	40	109	154	170
Average Queue (ft)	17	23	36	40	38	42	13	40	49	76
95th Queue (ft)	54	49	82	116	117	121	41	110	139	167
Link Distance (ft)	284			269	269	269		284	284	284
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		100	200				100			
Storage Blk Time (%)	0							2		
Queuing Penalty (veh)	0							0		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	222	196	164	105	94	78	203	184	232
Average Queue (ft)	151	127	112	38	47	34	105	103	128
95th Queue (ft)	239	212	172	102	101	76	211	198	240
Link Distance (ft)	251			310	310	310	382	382	382
Upstream Blk Time (%)	1								
Queuing Penalty (veh)	0								
Storage Bay Dist (ft)		100	270						
Storage Blk Time (%)	27	15							
Queuing Penalty (veh)	83	31							

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	TR
Maximum Queue (ft)	151	31	24	86	137	166	214	97	208	248
Average Queue (ft)	88	10	7	44	73	78	91	40	102	122
95th Queue (ft)	156	31	28	89	150	167	198	103	219	244
Link Distance (ft)	238	182	182		432	432	432		196	196
Upstream Blk Time (%)	0								1	2
Queuing Penalty (veh)	0								8	20
Storage Bay Dist (ft)				200				119		
Storage Blk Time (%)					0				4	
Queuing Penalty (veh)					0				1	

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	298	235	281	333	229	118	159	210	232	156	194	281
Average Queue (ft)	227	161	182	235	156	44	88	140	155	82	122	133
95th Queue (ft)	312	244	282	332	234	121	158	224	245	155	225	281
Link Distance (ft)	315			397	397			332	332	332		359
Upstream Blk Time (%)	1			1								0
Queuing Penalty (veh)	0			0								0
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	6	0	0	2	17							2
Queuing Penalty (veh)	12	0	0	6	8							3

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	292	2
Average Queue (ft)	134	0
95th Queue (ft)	285	3
Link Distance (ft)	359	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	2	
Storage Bay Dist (ft)		75
Storage Blk Time (%)	34	
Queuing Penalty (veh)	4	

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	R	T	T	R
Maximum Queue (ft)	110	73	85	74	106	166	146	49	398	392	124
Average Queue (ft)	60	34	41	36	51	91	79	17	334	338	51
95th Queue (ft)	119	80	91	69	113	166	144	47	490	484	155
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)									4	3	
Queuing Penalty (veh)									31	24	
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	1				0					59	
Queuing Penalty (veh)	1				0					36	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	98	129	48	162	226	139	101	104	97	26	173	320
Average Queue (ft)	55	88	24	91	143	35	73	53	57	10	116	136
95th Queue (ft)	102	138	52	169	239	124	123	103	110	30	222	358
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)					1							
Queuing Penalty (veh)					0							
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	3	12		5	13				0			7
Queuing Penalty (veh)	5	13		15	16				0			6

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	325	103
Average Queue (ft)	143	38
95th Queue (ft)	351	140
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	16	
Queuing Penalty (veh)	14	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	179	328	180	149	202	234	339	353	155	230	727	742
Average Queue (ft)	120	237	88	59	131	141	237	261	45	115	557	559
95th Queue (ft)	237	353	212	140	236	272	357	373	152	239	979	982
Link Distance (ft)		374			226		988	988			1026	1026
Upstream Blk Time (%)		3			2						1	1
Queuing Penalty (veh)		0			0						6	5
Storage Bay Dist (ft)	130		130	115		190			105	180		
Storage Blk Time (%)	1	40			11	1	19	36			53	
Queuing Penalty (veh)	4	77			5	4	21	13			34	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	398
Average Queue (ft)	138
95th Queue (ft)	397
Link Distance (ft)	1026
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	TR
Maximum Queue (ft)	77	32	173	100	40	130	148	64	150	280	218	168
Average Queue (ft)	32	5	102	53	21	81	91	20	99	164	106	99
95th Queue (ft)	73	29	189	115	46	154	162	76	168	275	216	181
Link Distance (ft)	235		193			1026	1026			638	638	638
Upstream Blk Time (%)			1									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)		30		75	150			150	130			
Storage Blk Time (%)	32	1	19	1		2	1		5	10		
Queuing Penalty (veh)	3	1	17	1		0	1		27	11		

Intersection: 10: El Camino Real & College Avenue

Movement	EB	NB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T	TR
Maximum Queue (ft)	43	19	25	18	56	53	70
Average Queue (ft)	30	6	8	3	8	5	9
95th Queue (ft)	53	36	36	19	40	34	47
Link Distance (ft)	306	377	377	377	310	310	310
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 24: El Camino Real & Safeway Driveway

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	30	35
Average Queue (ft)	5	12
95th Queue (ft)	24	38
Link Distance (ft)	145	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		225
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 25: El Camino Real & Partridge Avenue

Movement	EB	NB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T	T
Maximum Queue (ft)	34	18	25	46	50	23	37
Average Queue (ft)	20	3	4	7	9	3	6
95th Queue (ft)	41	16	22	41	45	22	33
Link Distance (ft)	258	284	284	284	377	377	377
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							0
Queuing Penalty (veh)							0

Intersection: 28: El Camino Real & Live Oak Avenue

Movement	EB	NB	NB	NB	SB	SB
Directions Served	R	T	T	T	T	TR
Maximum Queue (ft)	77	24	23	10	147	120
Average Queue (ft)	31	3	3	2	27	24
95th Queue (ft)	81	17	22	16	127	102
Link Distance (ft)	249	196	196	196	332	332
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 31: El Camino Real & Harvard Ave

Movement	EB	NB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T	TR
Maximum Queue (ft)	56	23	23	18	66	42	47
Average Queue (ft)	24	7	5	3	12	8	9
95th Queue (ft)	62	32	26	19	54	44	46
Link Distance (ft)	250	746	746	746	269	269	269
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 591

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	260	381	260	129	312	250	522	451	329	149	352	154
Average Queue (ft)	246	348	202	9	209	209	384	315	212	39	245	63
95th Queue (ft)	292	432	362	97	374	297	584	508	369	160	403	146
Link Distance (ft)		349		329	329		525	525	525			746
Upstream Blk Time (%)		46		1	5		5	1				
Queuing Penalty (veh)		0		0	0		0	0				
Storage Bay Dist (ft)	235		235			190				100	535	
Storage Blk Time (%)	15	53	0			5	39		17	3	0	
Queuing Penalty (veh)	75	265	2			23	71		23	14	0	

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	174	182	218
Average Queue (ft)	81	86	94
95th Queue (ft)	182	193	212
Link Distance (ft)	746	746	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)			1
Queuing Penalty (veh)			2

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	58	55	35	227	297	279	250	34	199	209	245
Average Queue (ft)	23	31	7	138	156	147	142	12	140	149	200
95th Queue (ft)	63	55	31	238	325	299	285	35	203	229	270
Link Distance (ft)	284		139		269	269	269		284	284	284
Upstream Blk Time (%)				0	1	1	1				0
Queuing Penalty (veh)				0	11	8	4				1
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	0			1	3				17		
Queuing Penalty (veh)	0			8	5				2		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	266	192	299	352	241	179	230	242	278
Average Queue (ft)	181	116	241	170	110	74	124	137	176
95th Queue (ft)	292	223	321	353	226	158	233	239	288
Link Distance (ft)	251			310	310	310	382	382	382
Upstream Blk Time (%)	5		2	3	0				0
Queuing Penalty (veh)	0		0	25	0				0
Storage Bay Dist (ft)		100	270						
Storage Blk Time (%)	34	6	10	5					
Queuing Penalty (veh)	67	14	68	16					

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	115	103	47	188	379	388	378	128	165	181	188
Average Queue (ft)	65	50	30	92	265	288	247	71	101	111	122
95th Queue (ft)	121	102	58	220	494	499	461	131	178	198	210
Link Distance (ft)	241	182	182		432	432	432		197	197	197
Upstream Blk Time (%)					14	16	8		0	1	1
Queuing Penalty (veh)					95	113	55		1	3	5
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)					25			2	3		
Queuing Penalty (veh)					20			10	2		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	267	216	224	284	311	170	296	420	415	332	239	266
Average Queue (ft)	217	162	147	206	186	69	146	352	360	206	163	190
95th Queue (ft)	318	266	263	298	330	171	348	479	482	364	258	274
Link Distance (ft)	315			397	397			332	332	332		359
Upstream Blk Time (%)	3			0	1		0	37	41	3		
Queuing Penalty (veh)	0			0	0		0	252	283	17		
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	11	3		1	22		0	38			4	0
Queuing Penalty (veh)	24	6		2	17		1	51			22	1

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	268	82
Average Queue (ft)	211	25
95th Queue (ft)	299	92
Link Distance (ft)	359	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		75
Storage Blk Time (%)	49	0
Queuing Penalty (veh)	25	0

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	R	T	T	R
Maximum Queue (ft)	177	171	123	80	135	215	177	39	229	257	133
Average Queue (ft)	114	59	52	34	76	124	121	16	136	151	39
95th Queue (ft)	188	160	121	93	172	220	187	41	244	266	117
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)		0			0						
Queuing Penalty (veh)		0			0						
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	7		0		4					21	
Queuing Penalty (veh)	15		1		2					20	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	139	264	165	149	219	149	118	163	167	110	219	537
Average Queue (ft)	110	181	90	110	137	66	63	112	119	35	157	388
95th Queue (ft)	161	304	197	177	267	157	127	173	179	112	287	533
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)		10			5							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	37	32	0	25	9	1			13			25
Queuing Penalty (veh)	123	83	0	75	19	2			12			27

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	546	185
Average Queue (ft)	408	99
95th Queue (ft)	537	235
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	29	
Queuing Penalty (veh)	27	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	180	354	179	145	234	239	462	472	96	129	323	319
Average Queue (ft)	133	277	105	59	158	158	316	318	18	48	227	217
95th Queue (ft)	238	393	224	154	240	275	580	594	87	134	332	321
Link Distance (ft)		374			226		988	988			1026	1026
Upstream Blk Time (%)		2			2							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	130		130	115		190			105	180		
Storage Blk Time (%)	1	41	1		20	5	14	31			26	
Queuing Penalty (veh)	5	108	3		10	34	19	7			11	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	105
Average Queue (ft)	55
95th Queue (ft)	105
Link Distance (ft)	1026
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	TR
Maximum Queue (ft)	60	43	186	100	64	115	130	32	158	234	216	110
Average Queue (ft)	30	13	93	75	31	56	66	10	68	132	102	45
95th Queue (ft)	69	47	181	116	77	113	130	33	148	231	222	124
Link Distance (ft)	235		193			1026	1026			638	638	638
Upstream Blk Time (%)			2									
Queuing Penalty (veh)			0									
Storage Bay Dist (ft)		30		75	150			150	130			
Storage Blk Time (%)	28	1	6	12		0	0		1	7		
Queuing Penalty (veh)	4	1	9	11		0	0		6	5		

Intersection: 10: El Camino Real & College Avenue

Movement	EB	NB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T	TR
Maximum Queue (ft)	46	98	93	38	60	72	63
Average Queue (ft)	20	17	12	8	9	10	10
95th Queue (ft)	51	97	65	37	53	63	54
Link Distance (ft)	306	377	377	377	310	310	310
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 24: El Camino Real & Safeway Driveway

Movement	EB	NB	NB	NB	NB	SB
Directions Served	R	L	T	T	T	TR
Maximum Queue (ft)	23	43	91	104	76	11
Average Queue (ft)	8	16	30	28	21	2
95th Queue (ft)	32	46	154	150	124	16
Link Distance (ft)	145		382	382	382	432
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		225				
Storage Blk Time (%)			1			
Queuing Penalty (veh)			0			

Intersection: 25: El Camino Real & Partridge Avenue

Movement	EB	NB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T	T
Maximum Queue (ft)	34	103	83	43	59	35	25
Average Queue (ft)	15	21	15	9	10	6	7
95th Queue (ft)	40	82	76	41	52	34	46
Link Distance (ft)	258	284	284	284	377	377	377
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							0
Queuing Penalty (veh)							0

Intersection: 28: El Camino Real & Live Oak Avenue

Movement	EB	NB	NB	NB	SB	SB
Directions Served	R	T	T	T	T	TR
Maximum Queue (ft)	60	240	262	153	78	89
Average Queue (ft)	29	139	143	55	18	24
95th Queue (ft)	63	341	338	218	84	99
Link Distance (ft)	237	197	197	197	332	332
Upstream Blk Time (%)		17	18	3		
Queuing Penalty (veh)		117	119	21		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 31: El Camino Real & Harvard

Movement	EB	NB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T	TR
Maximum Queue (ft)	33	76	59	54	39	33	55
Average Queue (ft)	19	15	6	7	6	5	8
95th Queue (ft)	40	65	38	49	36	27	47
Link Distance (ft)	250	746	746	746	269	269	269
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 2609

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	R	L	T	T	T	R	L	T	T
Maximum Queue (ft)	176	311	257	299	250	557	533	315	80	547	595	555
Average Queue (ft)	90	170	172	155	246	533	370	129	11	396	303	303
95th Queue (ft)	196	336	299	304	254	577	679	324	88	645	673	606
Link Distance (ft)		348		329		525	525	525			1071	1071
Upstream Blk Time (%)		4		4		68	2					
Queuing Penalty (veh)		0		0		0	0					
Storage Bay Dist (ft)	235		235		190				100	535		
Storage Blk Time (%)	0	2	8		74	4		10		10	1	
Queuing Penalty (veh)	0	10	14		263	15		3		60	4	

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	487	265
Average Queue (ft)	262	116
95th Queue (ft)	548	303
Link Distance (ft)	1071	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		240
Storage Blk Time (%)	11	0
Queuing Penalty (veh)	26	1

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	61	84	56	96	284	301	312	114	158	131	176
Average Queue (ft)	27	46	28	48	168	184	194	60	60	63	93
95th Queue (ft)	67	88	63	99	321	356	358	120	155	151	193
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	0	0			5			7	1		
Queuing Penalty (veh)	0	0			3			48	1		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	222	260	77	301	332	341	362	99	199	234	263
Average Queue (ft)	153	183	43	158	177	201	215	56	114	121	149
95th Queue (ft)	244	279	82	282	335	366	389	105	221	229	262
Link Distance (ft)	250	250	124		1085	1085	1085		871	871	871
Upstream Blk Time (%)	0	5									
Queuing Penalty (veh)	0	0									
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				2	3			7	17		
Queuing Penalty (veh)				11	7			44	11		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	165	33	24	64	65	97	121	75	142	141	172
Average Queue (ft)	89	11	6	33	25	34	52	40	72	69	83
95th Queue (ft)	166	40	25	76	66	93	136	80	149	151	176
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)								0	2		
Queuing Penalty (veh)								1	1		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	314	252	284	365	329	145	145	204	266	400	194	175
Average Queue (ft)	265	201	220	274	206	54	100	117	131	207	129	91
95th Queue (ft)	357	307	310	388	332	151	163	206	223	435	220	170
Link Distance (ft)	316			397	397			586	586	586		359
Upstream Blk Time (%)	11			1	0							
Queuing Penalty (veh)	0			0	0							
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	30	11	0	8	27			0			3	
Queuing Penalty (veh)	66	21	0	20	12			0			20	

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	197	22
Average Queue (ft)	109	9
95th Queue (ft)	190	55
Link Distance (ft)	359	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		75
Storage Blk Time (%)	26	
Queuing Penalty (veh)	3	

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	R	T	T	R
Maximum Queue (ft)	155	120	83	99	104	146	139	26	195	199	54
Average Queue (ft)	107	45	39	40	52	73	74	8	137	132	13
95th Queue (ft)	165	128	82	97	104	142	143	30	205	206	58
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	4	0								29	
Queuing Penalty (veh)	7	1								18	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	122	198	90	164	265	135	135	163	169	96	133	84
Average Queue (ft)	62	118	32	101	226	41	83	125	127	26	75	48
95th Queue (ft)	120	207	89	184	317	137	143	172	172	100	133	92
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)		0			21							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	7	18	0	5	40				21			
Queuing Penalty (veh)	13	20	0	17	63				13			

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	91	27
Average Queue (ft)	55	6
95th Queue (ft)	100	30
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	180	390	180	163	249	240	579	593	155	230	993	1004
Average Queue (ft)	158	334	99	86	243	224	460	457	63	173	879	865
95th Queue (ft)	230	447	224	205	253	279	690	693	175	289	1116	1117
Link Distance (ft)		374			226		988	988			1026	1026
Upstream Blk Time (%)		15			78						3	4
Queuing Penalty (veh)		0			0						22	28
Storage Bay Dist (ft)	130		130	115		190			105	180		
Storage Blk Time (%)	6	61			78	72	29	51		16	60	
Queuing Penalty (veh)	28	142			46	364	31	24		113	72	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	672
Average Queue (ft)	372
95th Queue (ft)	911
Link Distance (ft)	1026
Upstream Blk Time (%)	1
Queuing Penalty (veh)	7
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	TR
Maximum Queue (ft)	78	43	213	100	65	235	259	138	179	625	564	326
Average Queue (ft)	43	11	146	65	17	149	166	30	167	442	360	163
95th Queue (ft)	79	44	238	131	73	232	254	121	220	711	665	377
Link Distance (ft)	235		193			1026	1026			638	638	638
Upstream Blk Time (%)			6							5	0	
Queuing Penalty (veh)			0							0	0	
Storage Bay Dist (ft)		30		75	150			150	130			
Storage Blk Time (%)	43	1	33	1		11	14		46	9		
Queuing Penalty (veh)	4	1	33	1		2	16		278	26		

Network Summary

Network wide Queuing Penalty: 2051

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	R	L	T	T	T	R	L	T	T
Maximum Queue (ft)	260	374	260	352	250	544	541	520	200	362	269	306
Average Queue (ft)	253	365	249	294	242	526	480	400	134	262	145	165
95th Queue (ft)	269	375	322	421	275	602	612	577	277	428	310	335
Link Distance (ft)		348		329		525	525	525			1071	1071
Upstream Blk Time (%)		54		21		38	10	4				
Queuing Penalty (veh)		0		0		0	0	0				
Storage Bay Dist (ft)	235		235		190				100	535		
Storage Blk Time (%)	13	59	2		18	50		45	9			
Queuing Penalty (veh)	85	381	9		87	135		87	44			

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	320	215
Average Queue (ft)	174	122
95th Queue (ft)	376	257
Link Distance (ft)	1071	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		240
Storage Blk Time (%)	4	0
Queuing Penalty (veh)	13	0

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	66	107	151	240	518	642	620	66	170	199	218
Average Queue (ft)	29	50	103	170	191	242	183	25	94	122	159
95th Queue (ft)	69	96	159	271	605	770	569	65	177	211	246
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)			6		0	0	0				
Queuing Penalty (veh)			0		0	4	0				
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	0	2		14	2			0	9		
Queuing Penalty (veh)	0	1		106	4			0	1		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	247	222	148	344	406	309	241	87	342	384	406
Average Queue (ft)	205	133	82	285	181	166	142	53	219	249	259
95th Queue (ft)	304	232	154	357	365	284	219	100	379	412	426
Link Distance (ft)	250	250	210		1085	1085	1085		871	871	871
Upstream Blk Time (%)	12	0	0								
Queuing Penalty (veh)	0	0	0								
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				24	0			9	50		
Queuing Penalty (veh)				164	0			58	21		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	123	112	67	151	229	238	222	139	224	240	259
Average Queue (ft)	74	43	33	82	142	162	119	79	161	178	205
95th Queue (ft)	140	108	71	150	269	284	247	150	252	259	292
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)		0									
Queuing Penalty (veh)		0									
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)					3			5	10		
Queuing Penalty (veh)					3			31	7		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	328	262	325	422	416	170	327	539	550	353	257	318
Average Queue (ft)	270	217	321	406	304	101	194	374	394	200	170	233
95th Queue (ft)	374	316	339	442	495	209	354	588	593	325	277	365
Link Distance (ft)	316			397	397			586	586	586		359
Upstream Blk Time (%)	21			36	11			2	3	0		2
Queuing Penalty (veh)	0			0	0			11	22	0		12
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	33	9	19	56	40		1	20			3	12
Queuing Penalty (veh)	94	18	64	191	32		5	32			19	25

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	324	98
Average Queue (ft)	243	21
95th Queue (ft)	382	84
Link Distance (ft)	359	
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	18	
Storage Bay Dist (ft)		75
Storage Blk Time (%)	51	0
Queuing Penalty (veh)	26	0

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	LT	T	R	T	T	R
Maximum Queue (ft)	188	290	168	146	174	203	210	78	155	165	86
Average Queue (ft)	135	187	95	88	102	108	109	33	98	108	31
95th Queue (ft)	214	331	209	148	180	186	183	81	173	192	112
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)		5			1						
Queuing Penalty (veh)		0			0						
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	9	15	7	0	5					16	
Queuing Penalty (veh)	34	48	28	0	5					15	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	140	266	165	164	258	165	174	339	332	164	244	550
Average Queue (ft)	126	261	96	105	194	103	97	210	226	63	194	488
95th Queue (ft)	164	285	217	186	284	212	208	354	375	177	311	589
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)		59			6			0	1			
Queuing Penalty (veh)		0			0			2	11			
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	62	42	1	15	26	1		7	45		4	28
Queuing Penalty (veh)	264	119	6	54	54	4		6	44		24	41

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	579	185
Average Queue (ft)	504	144
95th Queue (ft)	607	253
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	34	0
Queuing Penalty (veh)	53	0

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	180	406	180	144	238	239	917	922	103	215	404	408
Average Queue (ft)	161	391	119	60	176	163	697	719	23	162	272	274
95th Queue (ft)	237	411	242	156	265	279	1103	1102	111	269	459	443
Link Distance (ft)		374			226		988	988			1026	1026
Upstream Blk Time (%)		64			4		1	2				
Queuing Penalty (veh)		0			0		12	14				
Storage Bay Dist (ft)	130		130	115		190			105	180		
Storage Blk Time (%)	3	74		0	27	4	40	49		21	20	
Queuing Penalty (veh)	18	225		1	14	31	53	13		113	28	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	134
Average Queue (ft)	81
95th Queue (ft)	136
Link Distance (ft)	1026
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	TR
Maximum Queue (ft)	68	41	200	100	56	269	272	199	180	674	653	648
Average Queue (ft)	33	9	107	83	28	201	207	85	177	653	619	366
95th Queue (ft)	72	37	212	117	70	296	304	213	184	701	699	777
Link Distance (ft)	235		193			1026	1026			638	638	638
Upstream Blk Time (%)			2							50	7	1
Queuing Penalty (veh)			0							0	0	0
Storage Bay Dist (ft)		30		75	150			150	130			
Storage Blk Time (%)	38	3	10	17		26	26		69	1		
Queuing Penalty (veh)	5	1	22	16		9	51		406	4		

Network Summary

Network wide Queuing Penalty: 3663

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	185	343	259	64	344	250	552	538	515	80	595	776
Average Queue (ft)	111	171	178	9	228	246	541	436	272	11	476	467
95th Queue (ft)	227	295	285	98	390	255	559	700	591	86	727	1122
Link Distance (ft)		348		329	329		525	525	525			1071
Upstream Blk Time (%)		1		0	12		64	8	1			9
Queuing Penalty (veh)		0		0	0		0	0	0			68
Storage Bay Dist (ft)	235		235			190				100	535	
Storage Blk Time (%)	0	3	6			68	9		19		31	0
Queuing Penalty (veh)	0	13	9			293	32		14		175	0

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	613	556	226
Average Queue (ft)	293	237	84
95th Queue (ft)	813	580	253
Link Distance (ft)	1071	1071	
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			240
Storage Blk Time (%)		6	0
Queuing Penalty (veh)		14	0

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	110	98	57	236	328	344	366	86	194	172	178
Average Queue (ft)	46	53	17	74	179	166	201	46	77	65	69
95th Queue (ft)	138	113	50	205	341	352	385	111	268	221	160
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)	1										
Queuing Penalty (veh)	0										
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)		12			5			0	9		
Queuing Penalty (veh)		5			3			0	5		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	248	269	116	344	598	564	575	95	222	211	230
Average Queue (ft)	174	215	57	263	276	271	291	63	127	132	157
95th Queue (ft)	283	325	120	380	585	546	561	107	229	223	242
Link Distance (ft)	250	250	124		1085	1085	1085		871	871	871
Upstream Blk Time (%)	3	26	1								
Queuing Penalty (veh)	0	0	0								
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				16	4			6	12		
Queuing Penalty (veh)				94	11			39	7		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	170	28	30	215	564	580	607	71	131	141	145
Average Queue (ft)	104	5	9	63	294	317	364	36	73	74	79
95th Queue (ft)	196	26	30	199	614	618	687	76	152	162	170
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)	2				0						
Queuing Penalty (veh)	0				0						
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)					21				1		
Queuing Penalty (veh)					9				0		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	T	R	L
Maximum Queue (ft)	317	257	261	307	264	170	368	613	608	610	225	315
Average Queue (ft)	235	174	169	203	162	67	183	563	565	579	214	314
95th Queue (ft)	325	289	259	305	268	163	422	700	692	666	270	316
Link Distance (ft)	316			385	385			586	586	586		
Upstream Blk Time (%)	1			0				22	20	24		
Queuing Penalty (veh)	0			0				154	137	169		
Storage Bay Dist (ft)		225	275			135	319				200	240
Storage Blk Time (%)	13	0	0	2	17			58		64	4	75
Queuing Penalty (veh)	28	1	1	3	16			54		245	20	393

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	413	192	171
Average Queue (ft)	394	111	121
95th Queue (ft)	417	208	181
Link Distance (ft)	360	360	360
Upstream Blk Time (%)	65	0	
Queuing Penalty (veh)	530	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	TR	T	T	TR
Maximum Queue (ft)	165	308	190	184	214	121	138	160	427	420	356
Average Queue (ft)	113	291	170	144	108	85	100	121	400	344	240
95th Queue (ft)	242	366	229	233	246	129	144	162	466	468	401
Link Distance (ft)		293			222	360	360	360	417	417	417
Upstream Blk Time (%)		80			15				19	0	0
Queuing Penalty (veh)		0			0				148	4	1
Storage Bay Dist (ft)	140		140	150							
Storage Blk Time (%)	28	4	76	50	0						
Queuing Penalty (veh)	49	9	170	45	0						

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	TR	L	T
Maximum Queue (ft)	104	211	151	164	269	137	180	229	212	232	123	208
Average Queue (ft)	57	101	52	121	221	51	106	165	165	180	73	120
95th Queue (ft)	106	192	134	191	324	147	206	245	230	252	128	236
Link Distance (ft)		248			246			417	417	417		989
Upstream Blk Time (%)		0			29							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	90		115	115		115	280				195	
Storage Blk Time (%)	6	16	0	49	29		1	1				3
Queuing Penalty (veh)	11	19	0	161	51		5	1				2

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	337	170
Average Queue (ft)	131	124
95th Queue (ft)	393	182
Link Distance (ft)	989	989
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	TR	L	T	T
Maximum Queue (ft)	180	407	180	165	239	240	386	399	397	197	1051	1066
Average Queue (ft)	166	375	158	121	190	163	278	305	321	66	1037	1042
95th Queue (ft)	221	460	228	209	279	260	390	406	411	182	1056	1065
Link Distance (ft)		374			227		989	989	989		1026	1026
Upstream Blk Time (%)		47			9						17	17
Queuing Penalty (veh)		0			0						142	141
Storage Bay Dist (ft)	130		130	115		190				180		
Storage Blk Time (%)	6	65	1	13	31	8	24				65	
Queuing Penalty (veh)	35	242	3	29	45	44	40				42	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	1054
Average Queue (ft)	1037
95th Queue (ft)	1058
Link Distance (ft)	1026
Upstream Blk Time (%)	20
Queuing Penalty (veh)	171
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	93	38	233	100	34	107	107	133	180	665	678	677
Average Queue (ft)	43	9	190	62	16	61	60	79	137	611	599	590
95th Queue (ft)	97	39	267	130	45	120	110	142	237	764	786	822
Link Distance (ft)	235		194			1026	1026	1026		638	638	638
Upstream Blk Time (%)			41							50	49	53
Queuing Penalty (veh)			0							0	0	0
Storage Bay Dist (ft)		30		75	150				130			
Storage Blk Time (%)	41	7	68	1		0			5	72		
Queuing Penalty (veh)	5	4	63	1		0			38	77		

Network Summary

Network wide Queuing Penalty: 4343

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	R	L	T	T	T	R	L	T	T
Maximum Queue (ft)	260	384	260	355	250	573	548	552	200	438	325	240
Average Queue (ft)	253	367	242	307	234	546	527	509	143	289	133	139
95th Queue (ft)	272	381	337	418	309	567	583	605	286	528	350	263
Link Distance (ft)		348		329		525	525	525			1071	1071
Upstream Blk Time (%)		63		29		57	29	24				
Queuing Penalty (veh)		0		0		0	0	0				
Storage Bay Dist (ft)	235		235		190				100	535		
Storage Blk Time (%)	9	61	0		7	62		62	8	3		
Queuing Penalty (veh)	57	403	3		36	125		111	43	14		

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	262	246
Average Queue (ft)	144	113
95th Queue (ft)	266	254
Link Distance (ft)	1071	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		240
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	3	1

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	64	89	147	229	438	420	271	43	125	156	189
Average Queue (ft)	32	46	95	151	147	133	137	15	85	108	130
95th Queue (ft)	90	94	165	243	445	432	276	47	139	168	205
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)			7		0	0					
Queuing Penalty (veh)			0		0	0					
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	1	2		6	2				5		
Queuing Penalty (veh)	1	1		47	3				1		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	270	231	135	330	500	429	375	82	373	364	403
Average Queue (ft)	217	141	72	292	290	224	187	44	253	260	299
95th Queue (ft)	306	250	136	382	649	521	362	91	388	391	431
Link Distance (ft)	250	250	210		1085	1085	1085		871	871	871
Upstream Blk Time (%)	17	1									
Queuing Penalty (veh)	0	0									
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				37	0			7	49		
Queuing Penalty (veh)				265	1			43	20		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	126	100	77	136	300	320	354	115	146	166	190
Average Queue (ft)	62	51	34	81	141	193	249	51	82	84	103
95th Queue (ft)	123	104	81	155	251	344	410	105	158	160	186
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)				1	5			3	2		
Queuing Penalty (veh)				10	4			17	1		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	T	R	L
Maximum Queue (ft)	340	260	245	346	376	170	368	514	509	570	325	287
Average Queue (ft)	298	232	151	213	253	158	194	406	438	468	311	236
95th Queue (ft)	373	301	238	333	428	203	374	573	594	653	384	337
Link Distance (ft)	316			385	385			586	586	586		
Upstream Blk Time (%)	31			0	5			1	2	5		
Queuing Penalty (veh)	0			0	0			11	15	38		
Storage Bay Dist (ft)		225	275			135	319				300	240
Storage Blk Time (%)	47	17	0	2	22	23		25		34	3	33
Queuing Penalty (veh)	105	42	0	5	69	57		34		209	21	192

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	316	274	275
Average Queue (ft)	216	184	211
95th Queue (ft)	383	284	301
Link Distance (ft)	360	360	360
Upstream Blk Time (%)	12		0
Queuing Penalty (veh)	91		1
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	1		

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	LT	T	TR	T	T	TR
Maximum Queue (ft)	188	310	188	102	168	333	348	383	188	210	250
Average Queue (ft)	164	223	111	43	104	235	267	291	112	128	155
95th Queue (ft)	235	404	203	112	194	334	364	394	217	213	259
Link Distance (ft)		293			222	360	360	360	417	417	417
Upstream Blk Time (%)		24			3	0	0	5			
Queuing Penalty (veh)		0			0	1	3	37			
Storage Bay Dist (ft)	140		140	150							
Storage Blk Time (%)	41	0	17	2	10						
Queuing Penalty (veh)	121	0	58	3	6						

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	TR	L	T
Maximum Queue (ft)	140	272	165	164	261	163	294	412	439	421	216	231
Average Queue (ft)	130	265	107	110	161	104	139	346	355	369	167	129
95th Queue (ft)	162	273	216	174	287	191	306	450	453	463	241	252
Link Distance (ft)		248			246			417	417	417		989
Upstream Blk Time (%)		71			5			6	5	10		
Queuing Penalty (veh)		0			0			54	40	88		
Storage Bay Dist (ft)	90		115	115		115	280				195	
Storage Blk Time (%)	63	45		12	20	5		41			13	0
Queuing Penalty (veh)	269	150		38	47	16		46			86	1

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	213	199
Average Queue (ft)	129	158
95th Queue (ft)	213	229
Link Distance (ft)	989	989
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	TR	L	T	T
Maximum Queue (ft)	180	408	180	164	246	224	944	968	974	230	1044	1033
Average Queue (ft)	162	394	124	92	204	156	794	821	839	191	857	838
95th Queue (ft)	239	409	249	179	301	281	1023	1050	1063	282	1164	1158
Link Distance (ft)		374			227		989	989	989		1026	1026
Upstream Blk Time (%)		74			17		0	0	1		4	3
Queuing Penalty (veh)		0			0		2	2	12		29	22
Storage Bay Dist (ft)	130		130	115		190				180		
Storage Blk Time (%)	3	75	0	3	38	7	58			36	57	
Queuing Penalty (veh)	16	253	0	10	40	54	82			213	70	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	TR
Maximum Queue (ft)	995
Average Queue (ft)	855
95th Queue (ft)	1165
Link Distance (ft)	1026
Upstream Blk Time (%)	4
Queuing Penalty (veh)	29
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	53	42	213	100	47	75	80	100	166	466	405	323
Average Queue (ft)	28	21	169	87	18	35	40	54	92	308	265	220
95th Queue (ft)	69	53	250	125	48	75	75	96	187	486	433	346
Link Distance (ft)	235		194			1026	1026	1026		638	638	638
Upstream Blk Time (%)			14							0		
Queuing Penalty (veh)			0							0		
Storage Bay Dist (ft)		30		75	150				130			
Storage Blk Time (%)	28	9	40	7					2	30		
Queuing Penalty (veh)	4	3	82	12					15	20		

Network Summary

Network wide Queuing Penalty: 4134

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	219	310	258	64	308	250	557	517	419	40	564	537
Average Queue (ft)	119	207	180	9	210	247	542	301	139	6	377	268
95th Queue (ft)	239	349	300	97	381	251	567	648	392	61	618	627
Link Distance (ft)		348		329	329		525	525	525			1071
Upstream Blk Time (%)		2		0	6		81	1				
Queuing Penalty (veh)		0		0	0		0	0				
Storage Bay Dist (ft)	235		235			190				100	535	
Storage Blk Time (%)	0	4	8			77	3		7		12	0
Queuing Penalty (veh)	0	16	13			272	15		2		68	2

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	527	488	265
Average Queue (ft)	226	244	103
95th Queue (ft)	479	528	278
Link Distance (ft)	1071	1071	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)		9	0
Queuing Penalty (veh)		22	1

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	53	77	43	164	289	320	330	86	137	114	124
Average Queue (ft)	34	42	16	56	129	123	156	56	51	39	56
95th Queue (ft)	61	87	46	157	293	295	331	102	139	111	135
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)		2			3			4	1		
Queuing Penalty (veh)		1			2			26	1		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	221	252	90	264	277	306	359	83	227	229	274
Average Queue (ft)	156	194	47	184	132	180	229	53	132	134	155
95th Queue (ft)	246	300	91	289	281	330	374	95	238	235	281
Link Distance (ft)	250	250	124		1085	1085	1085		871	871	871
Upstream Blk Time (%)	3	5	0								
Queuing Penalty (veh)	0	0	0								
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				4	2			8	13		
Queuing Penalty (veh)				23	4			47	8		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	150	22	26	95	56	48	105	47	143	162	179
Average Queue (ft)	83	6	6	35	18	13	32	18	79	73	85
95th Queue (ft)	164	26	26	85	64	65	112	48	151	168	200
Link Distance (ft)	241	170	170		871	871	871		586	586	586
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)									1		
Queuing Penalty (veh)									1		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	T	R	L
Maximum Queue (ft)	309	237	300	370	320	118	155	240	267	39	319	191
Average Queue (ft)	224	171	202	255	178	26	82	125	149	19	187	106
95th Queue (ft)	316	253	294	377	319	89	137	241	280	51	341	201
Link Distance (ft)	316			385	385			586	586	586	586	
Upstream Blk Time (%)	1			2	0							
Queuing Penalty (veh)	0			0	0							
Storage Bay Dist (ft)		225	275			135	319					240
Storage Blk Time (%)	8	0	0	7	20			0				
Queuing Penalty (veh)	19	1	1	18	9			0				

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	231	246	41
Average Queue (ft)	108	131	6
95th Queue (ft)	250	276	44
Link Distance (ft)	359	359	
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	0	2	
Storage Bay Dist (ft)			75
Storage Blk Time (%)	2	20	
Queuing Penalty (veh)	3	2	

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	T	T	R	T	T	R
Maximum Queue (ft)	156	140	98	79	104	130	139	31	186	185	100
Average Queue (ft)	93	66	41	39	50	67	68	9	123	121	22
95th Queue (ft)	159	141	100	84	103	139	145	31	186	187	88
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	4	1								22	
Queuing Penalty (veh)	7	3								13	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	98	201	99	164	264	165	137	155	168	67	98	74
Average Queue (ft)	59	101	35	109	226	54	76	98	100	24	61	39
95th Queue (ft)	106	193	103	198	306	163	146	161	169	71	107	75
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)					25							
Queuing Penalty (veh)					0							
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	5	17		10	42				11			
Queuing Penalty (veh)	9	19		37	65				7			

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	86	18
Average Queue (ft)	47	5
95th Queue (ft)	93	23
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	180	412	180	164	256	223	407	416	155	229	1043	1046
Average Queue (ft)	170	385	95	80	243	160	288	295	47	136	1032	1037
95th Queue (ft)	198	442	229	196	254	270	427	438	153	270	1045	1050
Link Distance (ft)		374			226		988	988			1025	1025
Upstream Blk Time (%)		47			74						14	19
Queuing Penalty (veh)		0			0						139	182
Storage Bay Dist (ft)	130		130	115		190			105	180		
Storage Blk Time (%)	5	72		0	73	11	34	52		4	61	60
Queuing Penalty (veh)	22	166		0	43	57	38	25		26	74	267

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	125
Average Queue (ft)	118
95th Queue (ft)	151
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	9
Queuing Penalty (veh)	64

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	108	35	210	100	43	114	148	36	180	678	669	653
Average Queue (ft)	45	8	136	54	18	78	94	14	176	658	658	643
95th Queue (ft)	105	35	237	122	50	133	154	37	200	675	672	692
Link Distance (ft)	234		193			1025	1025			638	638	638
Upstream Blk Time (%)			15							57	74	28
Queuing Penalty (veh)			0							0	0	0
Storage Bay Dist (ft)		30		75	150			150	130			
Storage Blk Time (%)	21	0	36	2		0	1		38	47		
Queuing Penalty (veh)	2	0	35	3		0	1		344	135		

Network Summary

Network wide Queuing Penalty: 2363

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	260	389	260	65	357	250	548	530	480	200	433	222
Average Queue (ft)	253	363	244	9	301	230	489	414	340	103	264	105
95th Queue (ft)	276	408	325	99	436	291	657	588	547	260	473	204
Link Distance (ft)		348		329	329		525	525	525			1071
Upstream Blk Time (%)		55		0	32		20	2	3			
Queuing Penalty (veh)		0		0	0		0	0	0			
Storage Bay Dist (ft)	235		235			190				100	535	
Storage Blk Time (%)	20	56	1			20	47		41	6	1	
Queuing Penalty (veh)	128	360	3			95	127		79	30	3	

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	262	301	260
Average Queue (ft)	137	144	129
95th Queue (ft)	250	265	253
Link Distance (ft)	1071	1071	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)		2	0
Queuing Penalty (veh)		8	2

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	48	82	151	238	515	510	482	45	124	157	203
Average Queue (ft)	25	50	93	149	178	200	188	19	81	109	148
95th Queue (ft)	58	93	162	234	510	629	492	48	146	178	216
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)			7		0	0	0				
Queuing Penalty (veh)			0		0	1	0				
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	0	1		7	4				4		
Queuing Penalty (veh)	0	1		56	8				1		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	265	223	122	336	340	295	268	75	241	275	286
Average Queue (ft)	199	136	73	284	222	200	183	43	176	198	217
95th Queue (ft)	301	239	130	380	504	408	277	82	281	302	341
Link Distance (ft)	250	250	210		1085	1085	1085		871	871	871
Upstream Blk Time (%)	11	0									
Queuing Penalty (veh)	0	0									
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				28				6	42		
Queuing Penalty (veh)				187				36	17		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	108	98	67	144	157	168	251	117	215	220	250
Average Queue (ft)	56	47	31	77	109	116	154	67	137	145	174
95th Queue (ft)	115	97	69	149	171	180	249	128	238	258	298
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)				0				4	9		
Queuing Penalty (veh)				0				27	6		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	T	R	L
Maximum Queue (ft)	290	242	324	412	359	145	330	432	467	378	315	256
Average Queue (ft)	225	173	292	367	233	53	177	289	312	180	221	186
95th Queue (ft)	319	280	352	451	397	152	311	459	478	404	342	307
Link Distance (ft)	316			385	385			586	586	586		
Upstream Blk Time (%)	2			14	2							
Queuing Penalty (veh)	0			0	0							
Storage Bay Dist (ft)		225	275			135	319				300	240
Storage Blk Time (%)	8	2	2	33	25			11		0	4	15
Queuing Penalty (veh)	22	3	7	112	20			19		1	18	98

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	301	306	64
Average Queue (ft)	224	211	22
95th Queue (ft)	358	323	85
Link Distance (ft)	359	359	
Upstream Blk Time (%)	2	0	
Queuing Penalty (veh)	11	1	
Storage Bay Dist (ft)			75
Storage Blk Time (%)	5	51	0
Queuing Penalty (veh)	10	26	0

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	TR	LT	T	R	T	T	R
Maximum Queue (ft)	178	278	176	162	209	217	209	59	155	157	76
Average Queue (ft)	112	179	82	90	130	133	124	22	99	101	22
95th Queue (ft)	199	312	172	183	218	231	217	61	165	171	77
Link Distance (ft)		292			220	359	359	359	416	416	
Upstream Blk Time (%)		3			1	0					
Queuing Penalty (veh)		0			0	0					
Storage Bay Dist (ft)	140		140	150							100
Storage Blk Time (%)	5	16	1	3	10					13	
Queuing Penalty (veh)	21	51	6	6	11					13	

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	140	282	165	145	264	165	222	327	355	165	244	526
Average Queue (ft)	126	258	86	94	196	92	118	241	260	61	162	426
95th Queue (ft)	171	310	209	170	299	190	249	370	389	177	273	566
Link Distance (ft)		248			245			416	416			988
Upstream Blk Time (%)		53			9			0	0			
Queuing Penalty (veh)		0			0			1	0			
Storage Bay Dist (ft)	90		115	115		115	280			115	195	
Storage Blk Time (%)	61	40	0	8	27	2		9	50		1	25
Queuing Penalty (veh)	262	115	1	29	56	7		8	48		5	37

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	514	185
Average Queue (ft)	436	110
95th Queue (ft)	564	245
Link Distance (ft)	988	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		135
Storage Blk Time (%)	32	
Queuing Penalty (veh)	49	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	T	R	L	T	T
Maximum Queue (ft)	180	402	180	164	238	239	973	971	127	218	603	659
Average Queue (ft)	159	391	117	56	179	162	785	801	15	135	316	380
95th Queue (ft)	231	401	244	153	282	283	1186	1190	87	221	688	765
Link Distance (ft)		374			226		988	988			1025	1025
Upstream Blk Time (%)		75			11		3	3				0
Queuing Penalty (veh)		0			0		22	25				1
Storage Bay Dist (ft)	130		130	115		190			105	180		
Storage Blk Time (%)	5	75			30	4	46	53		8	22	44
Queuing Penalty (veh)	29	228			15	26	61	14		42	31	168

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	SB
Directions Served	R
Maximum Queue (ft)	125
Average Queue (ft)	101
95th Queue (ft)	167
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	1
Queuing Penalty (veh)	3

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	82	51	205	100	120	380	410	199	180	672	661	14
Average Queue (ft)	36	16	122	77	40	242	252	85	178	658	653	2
95th Queue (ft)	84	50	236	121	116	394	424	223	183	676	664	16
Link Distance (ft)	234		193			1025	1025			638	638	
Upstream Blk Time (%)			7							59	20	
Queuing Penalty (veh)			0							0	0	
Storage Bay Dist (ft)		30		75	150			150	130			100
Storage Blk Time (%)	17	1	14	18		30	29		69	2	16	
Queuing Penalty (veh)	2	0	31	17		11	57		605	7	3	

Network Summary

Network wide Queuing Penalty: 3655

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	R	R	L	T	T	T	R	L	T	T
Maximum Queue (ft)	188	324	247	348	250	544	526	430	80	601	608	534
Average Queue (ft)	124	190	161	193	247	535	398	181	17	453	234	236
95th Queue (ft)	227	349	290	388	254	562	698	471	109	692	589	510
Link Distance (ft)		348		329		525	525	525			1071	1071
Upstream Blk Time (%)		4		8		75	10	0				
Queuing Penalty (veh)		0		0		0	0	0				
Storage Bay Dist (ft)	235		235		190				100	535		
Storage Blk Time (%)	0	4	9		77	3		11		17		
Queuing Penalty (veh)	0	17	15		263	14		3		94		

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	425	265
Average Queue (ft)	222	96
95th Queue (ft)	447	263
Link Distance (ft)	1071	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		240
Storage Blk Time (%)	6	0
Queuing Penalty (veh)	15	0

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	84	91	44	91	449	329	372	104	92	101	122
Average Queue (ft)	40	39	20	50	195	188	209	62	48	55	79
95th Queue (ft)	89	91	51	98	463	346	380	112	95	112	142
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	0	1			6			6	0		
Queuing Penalty (veh)	0	0			4			39	0		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	232	269	93	268	365	344	359	77	166	153	179
Average Queue (ft)	149	206	48	176	201	202	213	49	72	69	91
95th Queue (ft)	256	314	97	298	385	373	378	86	180	160	202
Link Distance (ft)	250	250	124		1085	1085	1085		871	871	871
Upstream Blk Time (%)	3	16	0								
Queuing Penalty (veh)	0	0	0								
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				4	3			5	8		
Queuing Penalty (veh)				20	7			31	5		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	138	39	31	77	66	61	116	67	156	176	206
Average Queue (ft)	84	12	8	38	26	21	38	31	118	114	143
95th Queue (ft)	160	39	30	75	87	80	138	72	188	192	241
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)	0										
Queuing Penalty (veh)	0										
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)									5		
Queuing Penalty (veh)									2		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	278	217	295	362	303	108	167	279	279	409	159	224
Average Queue (ft)	219	165	218	276	174	19	112	159	163	236	124	114
95th Queue (ft)	311	248	306	369	292	66	196	281	286	448	189	220
Link Distance (ft)	316			397	397			586	586	586		358
Upstream Blk Time (%)	1			0								
Queuing Penalty (veh)	0			0								
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	11	1	0	7	25			1				0
Queuing Penalty (veh)	23	2	1	19	12			1				1

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB
Directions Served	TR
Maximum Queue (ft)	222
Average Queue (ft)	124
95th Queue (ft)	232
Link Distance (ft)	358
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	T	TR	T	TR
Maximum Queue (ft)	154	123	75	84	108	121	142	148	160
Average Queue (ft)	89	60	40	42	57	69	72	90	95
95th Queue (ft)	158	128	81	92	112	144	155	165	172
Link Distance (ft)		305			234	358	358	416	416
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	140		140	150					
Storage Blk Time (%)	3	0			0				
Queuing Penalty (veh)	6	0			0				

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	114	174	98	165	285	165	123	191	208	113	84	96
Average Queue (ft)	59	97	35	112	233	83	80	122	127	70	40	54
95th Queue (ft)	117	192	98	200	312	204	129	202	207	127	97	110
Link Distance (ft)		261			258			416	416		988	988
Upstream Blk Time (%)		0			16							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	90		115	115		115	280			195		
Storage Blk Time (%)	6	16		14	47	0						
Queuing Penalty (veh)	11	18		51	72	0						

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	180	417	180	164	267	232	428	426	230	1053	1052
Average Queue (ft)	169	388	86	69	257	188	306	302	150	1039	1039
95th Queue (ft)	221	462	222	183	269	276	470	465	275	1055	1053
Link Distance (ft)		386			239		988	988		1026	1026
Upstream Blk Time (%)		37			77					27	34
Queuing Penalty (veh)		0			0					259	318
Storage Bay Dist (ft)	130		130	115		190			180		
Storage Blk Time (%)	3	67			76	38	28		6	63	
Queuing Penalty (veh)	13	156			45	185	31		43	77	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	78	40	221	100	20	148	184	180	675	673	665
Average Queue (ft)	40	9	210	67	6	88	115	177	658	656	632
95th Queue (ft)	80	38	249	143	23	149	184	192	677	668	806
Link Distance (ft)	234		206			1026	1026		638	638	638
Upstream Blk Time (%)			74						72	79	29
Queuing Penalty (veh)			0						0	0	0
Storage Bay Dist (ft)		30		75	150			130			
Storage Blk Time (%)	19	2	87	1		0		40	55		
Queuing Penalty (veh)	2	1	86	1		0		345	157		

Network Summary

Network wide Queuing Penalty: 2465

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	L	R	T	R	L	T	T	T	R	L	T
Maximum Queue (ft)	260	372	260	64	355	250	544	531	459	200	402	224
Average Queue (ft)	248	350	232	9	286	238	499	461	350	101	253	99
95th Queue (ft)	287	412	339	97	421	288	623	620	549	259	429	238
Link Distance (ft)		348		329	329		525	525	525			1071
Upstream Blk Time (%)		53		0	17		31	6	3			
Queuing Penalty (veh)		0		0	0		0	0	0			
Storage Bay Dist (ft)	235		235			190				100	535	
Storage Blk Time (%)	20	56	1			23	48		38	3		
Queuing Penalty (veh)	131	360	3			108	128		73	16		

Intersection: 1: El Camino Real & Sand Hill Rd/Alma St

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	236	266	251
Average Queue (ft)	126	155	118
95th Queue (ft)	258	307	269
Link Distance (ft)	1071	1071	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)		2	1
Queuing Penalty (veh)		6	3

Intersection: 2: El Camino Real & Cambridge Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	66	78	146	238	443	481	459	51	145	181	212
Average Queue (ft)	32	41	92	162	181	169	184	19	90	113	140
95th Queue (ft)	69	77	165	253	458	486	474	53	154	194	231
Link Distance (ft)	284		139		1071	1071	1071		1085	1085	1085
Upstream Blk Time (%)			8			0	0				
Queuing Penalty (veh)			0			1	0				
Storage Bay Dist (ft)		100		200				100			
Storage Blk Time (%)	1	0		5	3				5		
Queuing Penalty (veh)	0	0		34	5				1		

Intersection: 3: El Camino Real & Middle Avenue

Movement	EB	EB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LTR	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	268	257	150	344	458	317	256	63	279	276	323
Average Queue (ft)	202	157	80	286	230	161	137	33	170	177	193
95th Queue (ft)	292	276	143	383	468	306	246	71	279	288	318
Link Distance (ft)	250	250	210		1085	1085	1085		871	871	871
Upstream Blk Time (%)	11	5	0								
Queuing Penalty (veh)	0	0	0								
Storage Bay Dist (ft)				270				75			
Storage Blk Time (%)				29	0			2	47		
Queuing Penalty (veh)				194	1			10	19		

Intersection: 4: El Camino Real & Roble Avenue

Movement	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LTR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	101	97	79	152	318	325	334	149	202	228	262
Average Queue (ft)	59	54	38	99	222	238	217	69	131	150	176
95th Queue (ft)	106	101	88	209	422	419	408	147	217	248	297
Link Distance (ft)	241	182	182		871	871	871		586	586	586
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)				200				119			
Storage Blk Time (%)					20			5	9		
Queuing Penalty (veh)					16			29	6		

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	329	275	318	410	380	132	368	601	604	491	219	273
Average Queue (ft)	249	206	266	339	234	54	264	523	533	334	158	179
95th Queue (ft)	362	310	369	462	427	154	437	709	695	628	259	291
Link Distance (ft)	316			397	397			586	586	586		358
Upstream Blk Time (%)	4			11	2			7	10	3		0
Queuing Penalty (veh)	0			0	0			53	72	22		1
Storage Bay Dist (ft)		225	275			135	319				240	
Storage Blk Time (%)	20	6	3	31	23			47			7	1
Queuing Penalty (veh)	57	11	10	104	19			76			43	2

Intersection: 5: El Camino Real & Menlo Avenue/Ravenswood Avenue

Movement	SB
Directions Served	TR
Maximum Queue (ft)	282
Average Queue (ft)	187
95th Queue (ft)	279
Link Distance (ft)	358
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: El Camino Real & Santa Cruz Ave

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	T	TR	T	TR
Maximum Queue (ft)	178	280	170	162	201	223	244	132	150
Average Queue (ft)	127	181	92	95	146	186	198	98	102
95th Queue (ft)	204	301	197	170	234	228	250	142	153
Link Distance (ft)		305			234	358	358	416	416
Upstream Blk Time (%)		1			3				
Queuing Penalty (veh)		0			0				
Storage Bay Dist (ft)	140		140	150					
Storage Blk Time (%)	11	16	1	0	15				
Queuing Penalty (veh)	44	54	3	1	16				

Intersection: 7: El Camino Real & Oak Grove Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	TR
Maximum Queue (ft)	140	276	165	163	274	165	122	296	294	244	504	515
Average Queue (ft)	126	266	95	115	215	100	82	203	217	149	412	425
95th Queue (ft)	164	318	206	187	313	210	138	295	303	285	547	556
Link Distance (ft)		261			258			416	416		988	988
Upstream Blk Time (%)		51			12			0	0			
Queuing Penalty (veh)		0			0			0	3			
Storage Bay Dist (ft)	90		115	115		115	280			195		
Storage Blk Time (%)	58	43		14	40			3		3	24	
Queuing Penalty (veh)	248	123		49	82			2		16	35	

Intersection: 8: El Camino Real & Valparaiso Ave/Glenwood Ave

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	180	405	180	146	258	240	903	905	220	756	776
Average Queue (ft)	164	392	134	73	226	168	727	739	174	463	503
95th Queue (ft)	230	442	249	172	293	273	977	988	264	812	851
Link Distance (ft)		386			239		988	988		1026	1026
Upstream Blk Time (%)		63			19		1	0		0	0
Queuing Penalty (veh)		0			0		4	3		2	2
Storage Bay Dist (ft)	130		130	115		190			180		
Storage Blk Time (%)	10	72		0	47	9	46		12	44	
Queuing Penalty (veh)	51	218		1	24	63	62		62	62	

Intersection: 9: El Camino Real & Encinal Ave

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	T	R
Maximum Queue (ft)	57	42	216	100	65	339	360	180	686	666	664
Average Queue (ft)	29	15	122	87	28	249	272	178	658	653	448
95th Queue (ft)	60	48	243	120	64	364	393	183	678	674	944
Link Distance (ft)	234		206			1026	1026		638	638	638
Upstream Blk Time (%)			4						60	41	10
Queuing Penalty (veh)			0						0	0	0
Storage Bay Dist (ft)		30		75	150			130			
Storage Blk Time (%)	11	4	12	25		35		68	3		
Queuing Penalty (veh)	2	2	27	23		13		592	10		

Network Summary

Network wide Queuing Penalty: 3510

APPENDIX G

Input Received at Third Workshop

Additional Public Comment Received at February 2015 Workshop

The alternative that the participants responded most favorably to was Alternative 3 (Separated Bike Lanes). The respondents highly agreed that the widening on El Camino Real approaching Ravenswood is acceptable. They also felt strongly about parking, as a large number of participants responded that the amount of on-street parking along El Camino Real is acceptable and the loss of parking to accommodate a bike lane is acceptable. For bicycle facilities, 22 out of 33 participants felt that a separated bicycle facility on El Camino Real is acceptable.

For the four different alternatives, almost all of the respondents agreed that existing transit access is acceptable. Respondents also felt that the opportunity for aesthetic improvements is acceptable for each alternative.

For the "Do Nothing" Alternative, the existing pedestrian experience on the El Camino Real Corridor is unacceptable with 15 out of the 24 respondents disagreeing that the existing crossing opportunities and delay for pedestrians are acceptable.

For Alternative 1 (Continuous 6 Lanes) on El Camino Real, the survey participants disagreed that the bicycle facilities and pedestrian experience is acceptable, but they agreed that the vehicle travel experience is acceptable.

For Alternative 2 (Buffered Bike Lanes), 19 out of 29 participants agreed that the addition of bike lanes (with a striped buffer) on El Camino Real is acceptable. For pedestrian experience, 21 out of 22 people agreed that the sidewalk location adjacent to the bike lanes and added crossings opportunities are acceptable. Also, all 20 respondents on parking agreed that the loss of parking to accommodate a bike lane is acceptable.

For Alternative 3 (Separated Bike Lanes), 23 out of 28 participants agreed that the widening of ECR approaching Ravenswood is acceptable. For pedestrian experience, 22 out of 24 participants agreed that the sidewalk location adjacent to the bike lanes and added crossings opportunities are acceptable. For parking, 25 out of 31 participants agreed that the loss of parking to accommodate a separated bike facility is acceptable. 18 out of 20 participants agreed that the opportunity for aesthetic improvements is acceptable.

Table 1
El Camino Real Corridor –
Do Nothing

	Agree	Disagree
1. *Vehicle Travel Experience* – The existing vehicle lane alignment and vehicle delay are acceptable.	8	9
2. *Bicycle Facilities* – The absence of bicycle lanes on El Camino Real is acceptable.	10	11
3. *Pedestrian Experience* – The existing crossing opportunities and delay for pedestrians are acceptable.	9	15
4. *Transit Access* – Existing transit access is acceptable.	13	1
5. *Parking* – The amount of on-street parking along El Camino Real is acceptable.	8	4
6. *Aesthetics* – The opportunity for aesthetic improvements is acceptable.	8	3

Table 2
El Camino Real Corridor –
Alternative 1 Continuous 6 Lanes

	Agree	Disagree
1. *Vehicle Travel Experience* – The continuous six lane alignment and resulting vehicle delay is acceptable.	9	8
2. *Widening on El Camino Real at Ravenswood* – The widening of ECR approaching Ravenswood is acceptable.	15	8
3. *Bicycle Facilities* – The absence of bicycle lanes on El Camino Real and designation of a parallel route is acceptable.	14	15
4. *Pedestrian Experience* – The sidewalk location adjacent to the travel lane and added crossings opportunities are acceptable.	13	14
5. *Transit Access* – Transit access is acceptable.	15	2
6. *Parking* – The loss of parking to accommodate travel lane north of Roble Avenue is acceptable.	21	4
7. *Aesthetics* – The opportunity for aesthetic improvements is acceptable.	12	8

Table 3
El Camino Real Corridor –
Alternative 2 Buffered Bike Lanes

	Agree	Disagree
1. *Vehicle Travel Experience* – The vehicle lane alignment and resulting vehicle delay is acceptable.	20	8
2. *Widening on El Camino Real at Ravenswood* – The widening of ECR approaching Ravenswood is acceptable.	14	3
3. *Bicycle Facilities* – The addition of bike lanes (with a striped buffer) on El Camino Real is acceptable.	19	10
4. *Right-turn Lane Mixing Zones* – The short right-turn pockets mixing with the bike lane at intersections are acceptable.	13	9
5. *Pedestrian Experience* – The sidewalk location adjacent to the bike lanes and added crossings opportunities are acceptable.	21	1
6. *Transit Access* – Transit access is acceptable.	14	0
7. *Parking* – The loss of parking to accommodate a bike lane is acceptable.	20	0
8. *Aesthetics* – The opportunity for aesthetic improvements is acceptable.	15	1

Table 4
El Camino Real Corridor –
Alternative 3 Separated Bicycle Facility

	Agree	Disagree
1. *Vehicle Travel Experience* – The vehicle lane alignment and resulting vehicle delay is acceptable.	22	13
2. *Widening on El Camino Real at Ravenswood* – The widening of ECR approaching Ravenswood is acceptable.	23	5
3. *Bicycle Facilities* – The separated bicycle facility on El Camino Real is acceptable.	22	11
4. *Protected Intersection Design* – The bicycle and pedestrian crossings at intersections are acceptable.	16	14
5. *Pedestrian Experience* – The sidewalk location adjacent to the bike lanes and added crossings opportunities are acceptable.	22	2
6. *Transit Access* – Transit access is acceptable.	14	0
7. *Parking* – The loss of parking to accommodate a separated bike facility is acceptable.	25	6
8. *Aesthetics* – The opportunity for aesthetic improvements is acceptable.	18	2