Project Assessment Form for PM 2.5 Interagency Consultation

RTIP ID# *(required)* 240119

TIP ID# *(required)* SCL110009

Air Quality Conformity Task Force Consideration Date: April 24, 2014

Project Description *(clearly describe project)*
The Santa Clara Valley Transportation Authority (VTA) is proposing to construct and operate the El Camino Real Bus Rapid Transit Project (Project) along 17.6 miles of El Camino Real. Bus rapid transit (BRT) is defined as a high-speed form of bus transit that provides services and amenities similar to light rail but at a much lower cost. The Project would support the development of a balanced multi-modal corridor consistent with local and regional planning.

Four Project alternatives are being analyzed on an equal level of detail with no preferred alternative identified. Specifically, the No Build Alternative (Alternative 1) and three Build Alternatives (Alternatives 2, 3, and 4) (refer to Figure 2 for a description). Alternatives 3 and 4 also include design options. These four alternatives are the result of the Project screening process during conceptual engineering and draw from public input provided during the 2013 Project scoping meetings.

The Project would include mixed-flow lanes (lanes for all vehicular travel) and could include dedicated lanes (lanes for exclusive use of BRT and emergency vehicles). The Project would operate hybrid diesel-electric buses that would allow boarding level with the curb, pedestrian and bicycle enhancements, augmented landscaping, street lighting, and intersection improvements. The Project would also enhance the existing traffic signal system, giving buses priority at signals over general vehicular traffic. Please refer to Figure 1 and 2 for an overview of the Project location and key Project features.

Type of Project: Change to existing regionally significant street (addition of mixed-flow and BRT-dedicated lanes, bus priority signalization at intersections that have not already been modified, and new BRT stations replacing existing bus stops).

County	*Narrative Location/Route & Postmiles*
Santa Clara	The Project is located along El Camino Real (and portions of The Alameda and Santa Clara Street). The Project corridor extends 17.6 miles from east to west, and passes through the cities of San José, Santa Clara, Sunnyvale, Mountain View, Los Altos, and Palo Alto. The eastern terminus is located at the Arena in downtown San José, and the western terminus is located at the Palo Alto Transit Center, in downtown Palo Alto **Caltrans Projects – EA# 04-3G980**

Lead Agency: Valley Transportation Authority

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Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	**EA or Draft EIS**	FONSI or Final EIS	PS&E or Construction	*Other*

Scheduled Date of Federal Action: Spring 2015

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NEPA Delegation – Project Type *(check appropriate box)*

Exempt	Section 6004 – Categorical Exemption	**Section 6005 – Non-Categorical Exemption**

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	11/12	12/14	2/16	2/17
End	3/15	8/16	8/16	8/18

Project Purpose and Need (Summary): *(please be brief)*
The purpose of the El Camino Real BRT Project is to:

- Increase the reliability, frequency, and travel speed of transit along the El Camino Real corridor.
- Improve transit amenities and facilities to provide greater comfort and safety.
- Enhance the multi-modal character of El Camino Real
- Contribute to the transit goals and objectives of the Grand Boulevard Initiative (GBI).
- Contribute to cities' General and Specific Plans that call for a greater role for transit.
- Improve efficiency and cost-effectiveness of transit services in the corridor.

The Project is needed to address substantial population and employment growth over the next 20 years, which will place a heavy demand on existing transportation infrastructure. Within this timeframe, traffic volumes are anticipated to increase and a greater number of intersections along the Project corridor will experience a poor level of service. It will be necessary to provide better transit alternatives to encourage a modal shift from automobile travel to transit on the Project corridor. This modal shift will be consistent with regional and local transportation planning described in the BRT Strategic Plan, GBI Transportation Corridor Plan, and Plan Bay Area, as well as approved plans for the jurisdictions in the Project corridor.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The Project corridor is located along El Camino Real and passes through San José, Santa Clara, Sunnyvale, Mountain View, Los Altos, and Palo Alto. In general, downtown areas and activity centers are located away from the corridor. However, the following downtown areas, shopping malls, and clusters of commercial development are located adjacent to El Camino Real: Commercial District on The Alameda (San José), Castro Street (Mountain View), San Antonio Shopping Center (Mountain View), California Avenue (Palo Alto), Stanford Shopping Center (Palo Alto), and University Avenue (Palo Alto). The Project corridor also includes transit nodes, including the San José Diridon Station, Santa Clara Caltrain Station, and Palo Alto Intermodal Transit Center. The closest sensitive receptors (single-family homes) are located within 50 feet of the Project, with various other receptor locations (including schools, places of worship, parks, and daycares) scattered along 17.6 mile Project right-of-way.

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Brief summary of assumptions and methodology used for conducting analysis

Average daily and truck traffic along El Camino Real under opening (2018) and horizon (2040) year conditions were provided by the traffic engineers, DKS Associates (2014). DKS forecasted future traffic volumes using VTA's countywide travel demand model and existing traffic counts that were collected at several locations along El Camino Real. Transit ridership forecasts were likewise calculated by adding the change in ridership predicted by the travel demand model to ridership counts collected by the VTA Passenger Counting System in November 2013. Please refer to the draft traffic study for additional information on the models and traffic counts used by DKS Associates to estimate ADT, LOS, and truck percentages.

Future truck volumes were evaluated against the EPA's guidance criterion for truck ADT, which is 10,000 vehicles per day (8% of 125,000 total ADT per EPA's March 2006 Final Rule). Diesel particulate matter (DPM) emissions from bus idling at transit stations were quantified using estimated idling times and the California Department of Transportation's (Caltrans') CT-EMFAC emissions model (version 5.0). The potential for the Project to affect intersections that are at level of service (LOS) D, E, or F was evaluated based on LOS data provided by DKS Associates and anticipated truck volumes of local surface streets. Localized impacts from redistributed traffic on intersection operations were also considered in the intersection analysis. Effects on regional traffic patterns were evaluated using vehicle miles travelled (VMT) data from DKS Associates and the CT-EMFAC model.

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Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 1. Opening Year (2018) ADT and Truck Percentages on El Camino Real

1. East of Hedding	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	30,884	30,915	30,885	30,876	30,898	30,861	30,876
Medium Truck	434	435	435	434	435	435	435
Heavy Truck	93	93	94	93	93	93	94
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.97%	2.96%	2.97%	2.97%	2.97%	2.97%	2.97%
2. East of Jefferson	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	24,536	24,527	24,401	24,402	24,369	24,374	24,363
Medium Truck	327	327	326	326	325	325	325
Heavy Truck	55	55	54	54	54	54	54
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	3.14%	3.14%	3.15%	3.15%	3.15%	3.15%	3.15%
3. West of Bowers	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	39,056	39,052	38,231	38,236	38,026	38,052	38,047
Medium Truck	378	378	368	368	364	364	364
Heavy Truck	74	74	72	73	72	72	72
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.15%	2.15%	2.17%	2.17%	2.17%	2.17%	2.17%
4. West of Maria Ln	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	37,704	37,691	37,527	37,523	36,300	36,087	36,083
Medium Truck	359	358	357	357	345	344	343
Heavy Truck	78	78	78	78	78	77	77
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.19%	2.19%	2.19%	2.19%	2.23%	2.24%	2.24%
5. East of Bernardo	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	39,359	39,349	39,264	39,257	35,998	34,858	34,843
Medium Truck	408	408	408	407	382	370	370
Heavy Truck	86	86	86	86	81	79	79
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.24%	2.24%	2.24%	2.25%	2.37%	2.40%	2.40%
6. East of Bush	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	53,974	53,991	53,964	53,962	53,865	48,561	48,364
Medium Truck	677	678	677	677	678	609	603
Heavy Truck	276	276	276	276	277	256	257
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.48%	2.49%	2.49%	2.49%	2.49%	2.58%	2.58%
7. West of Jordan	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	41,849	41,890	41,846	41,838	41,774	39,439	38,876
Medium Truck	463	464	464	463	463	431	423
Heavy Truck	234	234	234	234	236	224	224
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.59%	2.59%	2.60%	2.59%	2.60%	2.65%	2.66%
8. East of Matadero	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	42,345	42,334	42,343	42,350	42,297	41,555	38,788
Medium Truck	518	517	517	518	518	508	458
Heavy Truck	157	156	156	157	157	157	144
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.51%	2.51%	2.51%	2.51%	2.51%	2.53%	2.55%

Attachment A summarizes the LOS and delay at intersections along El Camino Real for the opening year for all Project alternatives. Intersections experiencing an improvement in LOS are indicated in **bold**, while intersections experiencing a decline in LOS are indicated in underline. An asterisk (*) is used to identify affected intersections operating at LOS D, E, or F. Please refer to Attachment B for the analysis of intersections in the surrounding area that may be affected by diverted traffic.

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RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Table 2. Horizon Year (2040) ADT and Truck Percentages on El Camino Real

1. East of Hedding	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	34,954	34,993	34,907	34,860	34,864	34,886	34,838
Medium Truck	541	542	540	539	539	540	539
Heavy Truck	145	145	145	144	144	144	145
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	3.07%	3.07%	3.07%	3.07%	3.07%	3.07%	3.08%
2. East of Jefferson	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	28,393	28,379	27,950	27,957	27,886	27,838	27,849
Medium Truck	391	391	386	386	385	384	384
Heavy Truck	73	73	72	72	72	72	72
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	3.00%	3.00%	3.03%	3.03%	3.03%	3.03%	3.03%
3. West of Bowers	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	48,349	48,314	45,262	45,241	45,008	44,957	44,954
Medium Truck	485	485	450	450	446	445	445
Heavy Truck	98	98	92	92	91	91	91
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.01%	2.01%	2.05%	2.05%	2.06%	2.06%	2.06%
4. West of Maria Ln	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	43,911	43,894	43,139	43,115	40,509	40,195	40,193
Medium Truck	452	452	441	441	412	408	408
Heavy Truck	104	104	105	105	100	99	99
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.15%	2.15%	2.17%	2.17%	2.22%	2.23%	2.23%
5. East of Bernardo	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	46,505	46,492	46,300	46,279	40,922	39,571	39,556
Medium Truck	522	522	518	518	465	449	448
Heavy Truck	100	101	100	100	92	88	88
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.17%	2.17%	2.17%	2.17%	2.31%	2.34%	2.34%
6. East of Bush	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	58,692	58,657	58,529	58,533	58,304	50,875	50,730
Medium Truck	781	779	781	780	781	671	664
Heavy Truck	336	336	337	336	335	301	303
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.56%	2.56%	2.57%	2.57%	2.58%	2.67%	2.67%
7. West of Jordan	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	52,994	52,911	52,838	52,827	52,765	48,086	46,901
Medium Truck	674	673	672	671	673	600	583
Heavy Truck	290	291	290	289	290	276	273
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.55%	2.55%	2.56%	2.55%	2.56%	2.63%	2.65%
8. East of Matadero	**Alt 1**	**Alt 2**	**Alt 3a**	**Alt 3b**	**Alt 4a**	**Alt 4b**	**Alt 4c**
Total ADT	54,774	54,718	54,648	54,680	54,642	53,818	48,073
Medium Truck	809	807	806	807	809	793	700
Heavy Truck	244	243	242	243	242	245	217
Buses	388	388	388	388	388	388	388
Trucks/Bus Percent	2.63%	2.63%	2.63%	2.63%	2.63%	2.65%	2.71%

Attachment C summarizes the LOS and delay at intersections along El Camino Real for the horizon year for all Project alternatives. Intersections experiencing an improvement in LOS are indicated in **bold**, while intersections experiencing a decline in LOS are indicated in underline. An asterisk (*) is used to identify affected intersections operating at LOS D, E, or F. Please refer to Attachment D for the analysis of intersections in the surrounding area that may be affected by diverted traffic.

Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

A total of 92 and 58 bus arrivals are anticipated at each of the BRT stations in the Project corridor on weekdays and weekends, respectively. The number of bus arrivals per station would be identical for the Build and No Build Alternatives. All buses (100%) would be hybrid diesel-electric. The Local 22 bus service would continue under the Project; similar to the BRT service, there would be no difference in bus arrivals for the Local 22 bus under the Build and No Build Alternatives.

RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

The number of bus arrivals is identical to the opening year condition (see above).

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)
The Project will not affect the number of transit vehicles operating on El Camino Real, relative to the No Build. However, the Project would alter existing transit dwell times and idling emissions by upgrading the Rapid 522 service with BRT amenities that would decrease passenger loading times, which would decrease bus idling times. These features are expected to contribute to direct emissions reductions along El Camino Real from reduced transit idling (see Table 3).

Table 3. Annual Emissions from Transit Idling

Alternative	Opening (2018)			Horizon (2040)		
	Idle (hrs/yr)	PM10 (lbs/yr)	PM2.5 (lbs/yr)	Idle (hrs/yr)	PM10 (lbs/yr)	PM2.5 (lbs/yr)
Alternative 1	45,252	41	37	45,252	16	14
Alternative 2	40,732	37	34	40,732	14	13
Alternative 3a	42,478	38	35	42,478	15	14
Alternative 3b	40,424	36	33	40,424	14	13
Alternative 4a	40,013	36	33	40,013	14	13
Alternative 4b	39,705	36	33	39,705	14	13
Alternative 4c	39,396	35	32	39,396	14	13
Comparison to Alternative 1 (No Build)						
Alternative 2	-4,520	-4	-4	-4,520	-2	-1
Alternative 3a	-2,774	-2	-2	-2,774	-1	-1
Alternative 3b	-4,828	-4	-4	-4,828	-2	-2
Alternative 4a	-5,239	-5	-4	-5,239	-2	-2
Alternative 4b	-5,548	-5	-5	-5,548	-2	-2
Alternative 4c	-5,856	-5	-5	-5,856	-2	-2

The Project would also affect regional traffic through potential changes in roadway capacity and increased transit ridership. Traffic data provided by DKS indicates that VMT in the transportation study area would decrease under all Build Alternatives, relative to the No Build, resulting in corresponding reductions in DPM under opening and horizon year conditions (see Table 4).

Table 4. Daily VMT and PM Emissions (pounds/day) in the Transportation Study Area

	Opening (2018)			Horizon (2040)		
Alternative	**VMT**	**PM10**	**PM2.5**	**VMT**	**PM10**	**PM2.5**
Alternative 1	14,684,885	10,990	3,017	17,457,399	13,054	3,578
Alternative 2	14,683,818	10,990	3,017	17,454,085	13,052	3,578
Alternative 3a	14,678,910	10,986	3,016	17,442,935	13,044	3,575
Alternative 3b	14,677,839	10,985	3,016	17,443,303	13,044	3,575
Alternative 4a	14,675,610	10,983	3,016	17,433,491	13,037	3,574
Alternative 4b	14,675,895	10,984	3,016	17,432,365	13,036	3,573
Alternative 4c	14,671,970	10,981	3,015	17,430,347	13,034	3,573
Comparison to Alternative 1 (No Build)						
Alternative 2	-1,067	-1	-0.2	-3,314	-2	-1
Alternative 3a	-5,975	-4	-1	-14,464	-11	-3
Alternative 3b	-7,046	-5	-1	-14,096	-10	-3
Alternative 4a	-9,275	-7	-2	-23,908	-18	-5
Alternative 4b	-8,990	-7	-2	-25,034	-18	-5
Alternative 4c	-12,915	-9	-2	-27,052	-20	-5

Implementation of the dedicated lanes under Alternatives 3a, 3b, 4a, 4b, and 4c could divert some traffic from El Camino Real to surrounding local streets. The majority of diverted traffic is expected to be passenger vehicles that would not represent a significant source of diesel emissions. Moreover, the impacts of diverted El Camino Real traffic on surrounding intersections would be mitigated through signal timing improvements, restriping, and installation of new traffic signals.

Comments/Explanation/Details (please be brief)

The Project is not a Project of Air Quality Concern because the Project does not meet the following criteria (responses provide answers to 40 CFR 93.123(b)(1) criteria for Projects of Air Quality Concern):

New or expanded highway projects that have a significant number of or significant increase in diesel vehicles.

Implementation of the Project would not result in the construction of a new or expanded highway system that would have a significant number of diesel vehicles. In addition, implementation of the Project would not result in a significant increase in diesel vehicles. As shown in Tables 1 and 2, maximum ADT on El Camino Real would not exceed 59,000. Of this, trucks and buses would only comprise 2-3 percent of traffic (ADT ranges from 767 to 1,506), depending on the Alternative. Future truck traffic on El Camino Real therefore would not be considered significant as it is well below the EPA's guidance criteria of 10,000 vehicles per day.

In addition to relatively low truck volumes, Tables 1 and 2 further indicates that implementation of the Build Alternatives would decrease truck ADT, relative to the No Build Alternative, on almost all segments of El Camino Real. As shown in Table 5, the largest increase in truck ADT would not exceed 2 vehicles under 2018 conditions and 1 vehicle under 2040 conditions. The estimated increases are less than 0.01 percent of total ADT on the affected segments. The Build Alternatives, therefore, would not result in a significant increase in diesel vehicles or DPM emissions. Rather, the Build Alternatives are expected to reduce localized DPM concentrations on El Camino Real due to reductions in transit idling time (see discussion below under (iii)). Construction of the dedicated lanes under Alternatives 3a, 3b, 4a, 4b, and 4c would move BRT service away from the roadway edge, which may also reduce DPM concentrations at receptor locations adjacent to El Camino Real.

Table 5. Truck Average Daily Traffic on El Camino Real

Alternative	Roadway Segment (see Tables 1 and 2)							
	1	2	3	4	5	6	7	8
2018 Alternative 1	527	382	452	437	494	953	697	675
2018 Alternative 2	528	382	452	436	494	954	698	673
2018 Alternative 3a	529	380	440	435	494	953	698	673
2018 Alternative 3b	527	380	441	435	493	953	697	675
2018 Alternative 4a	528	379	436	423	463	955	699	675
2018 Alternative 4b	528	379	436	421	449	865	655	665
2018 Alternative 4c	529	379	436	420	449	860	647	602
2040 Alternative 1	686	464	583	556	622	1,117	964	1,053
2040 Alternative 2	687	464	583	556	623	1,115	964	1,050
2040 Alternative 3a	685	458	542	546	618	1,118	962	1,048
2040 Alternative 3b	683	458	542	546	618	1,116	960	1,050
2040 Alternative 4a	683	457	537	512	557	1,116	963	1,051
2040 Alternative 4b	684	456	536	507	537	972	876	1,038
2040 Alternative 4c	684	456	536	507	536	967	856	917
2018 Comparison with Alternative 1—No Build								
Alternative 2	+1	0	0	-1	0	+1	+1	-2
Alternative 3a	+2	-2	-12	-2	0	0	+1	-2
Alternative 3b	0	-2	-11	-2	-1	0	0	0
Alternative 4a	+1	-3	-16	-14	-31	+2	+2	0
Alternative 4b	+1	-3	-16	-16	-45	-88	-42	-10
Alternative 4c	+2	-3	-16	-17	-45	-93	-50	-73
2040 Comparison with Alternative 1—No Build								
Alternative 2	+1	0	0	0	+1	-2	0	-3
Alternative 3a	-1	-6	-41	-10	-4	+1	-2	-5
Alternative 3b	-3	-6	-41	-10	-4	-1	-4	-3
Alternative 4a	-3	-7	-46	-44	-65	-1	-1	-2
Alternative 4b	-2	-8	-47	-49	-85	-145	-88	-15
Alternative 4c	-2	-8	-47	-49	-86	-150	-108	-136

Source: DKS Associates 2014

Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.

As shown in Tables 3 and 4, implementation of the Project would result in a benefit regarding overall diesel emissions through reductions in regional VMT and transit idling times in the Project corridor. Attachments A and C also indicate that the Build Alternatives would have little effect on delay and LOS at intersections on El Camino Real. Within segments that include a dedicated bus only lane, many intersections improve, relative to the No Build Alternative, due to updated signal timing and diversion of vehicles to other routes. The Build Alternatives could affect some intersections on El Camino Real that are expected to operate at LOS D, E, or F during the PM peak hour. However, the number of diesel trucks operating on impacted segments would decrease with implementation of the Project (see Table 5). Accordingly, the Build Alternatives would neither have a significant adverse effect on diesel emissions generated at these intersections nor significantly increase the number of diesel vehicles related to the Project.

As shown in Attachments B and D, diverted traffic to surrounding local streets could affect some intersections that are expected to operate at LOS D, E, or F. However, as noted previously, the impacts of diverted El Camino traffic on surrounding intersections would be mitigated through signal timing improvements, restriping, and installation of new traffic signals.

Comments/Explanation/Details (continued)

New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.

The Build Alternatives would construct up to 16 new BRT stations (including optional stations). Fourteen of the BRT stations would be at the same location as the existing Rapid 522 bus stops. The new BRT stations would include ticket vending machines on the platforms and other BRT station amenities. These features would facilitate passenger boarding and reduce total bus idling time by up to 30 seconds per stop, relative to the existing Rapid 522 bus service. As shown in Table 3, the rapid boarding machines would reduce idling times and associated DPM emissions relative to the No Build Alternative, which could reduce receptor exposure to DPM concentrations adjacent to existing transit stations.

Bus idling at the two optional BRT stations proposed at locations without existing Rapid 522 service would increase localized DPM emissions. While BRT stations at these locations would represent new BRT bus transfer points, total weekday BRT idle time at the stations is expected to be around 55 minutes, which would be less than 8 percent of the 18-hour BRT operational weekday. As noted previously, idling time per platform would be limited to 30 to 36 seconds per vehicle. Based on the idling emissions estimated for the entire Project corridor (up to 32 platforms) (see Table 3), increases in DPM concentrations associated with idling at the new BRT stations would be minor and would not represent a significant source of new diesel exposure.

Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.

As discussed previously, the Project would not result in an increase in the number of diesel buses congregating at existing bus stations. Buses stopping at the two optional BRT stations would represent an increase in the number of diesel vehicles congregating at these locations. Approximately 92 buses would stop at each BRT station per weekday, which would be less than 1 percent of total ADT and would not represent a significant increase in diesel vehicles.

Projects in or affecting locations, areas, or categories of sites which are identified in the PM10 or PM2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The Project corridor is not in or affecting an area or location identified in the 2012 PM2.5 implementation plan. Moreover, the Project is not expected to introduce significant amounts of diesel truck traffic within the Project area that would result in PM hot-spots.

References

DKS Associates. 2014. *El Camino Real Bus Rapid Transit (BRT): Traffic Operations Analysis Report*. Prepared for Santa Clara Valley Transportation Authority. March.
http://131.103.70.39/cma/environmental_public/El_Camino/Traffic/Attachment_E.pdf

Figure 1. Project Location

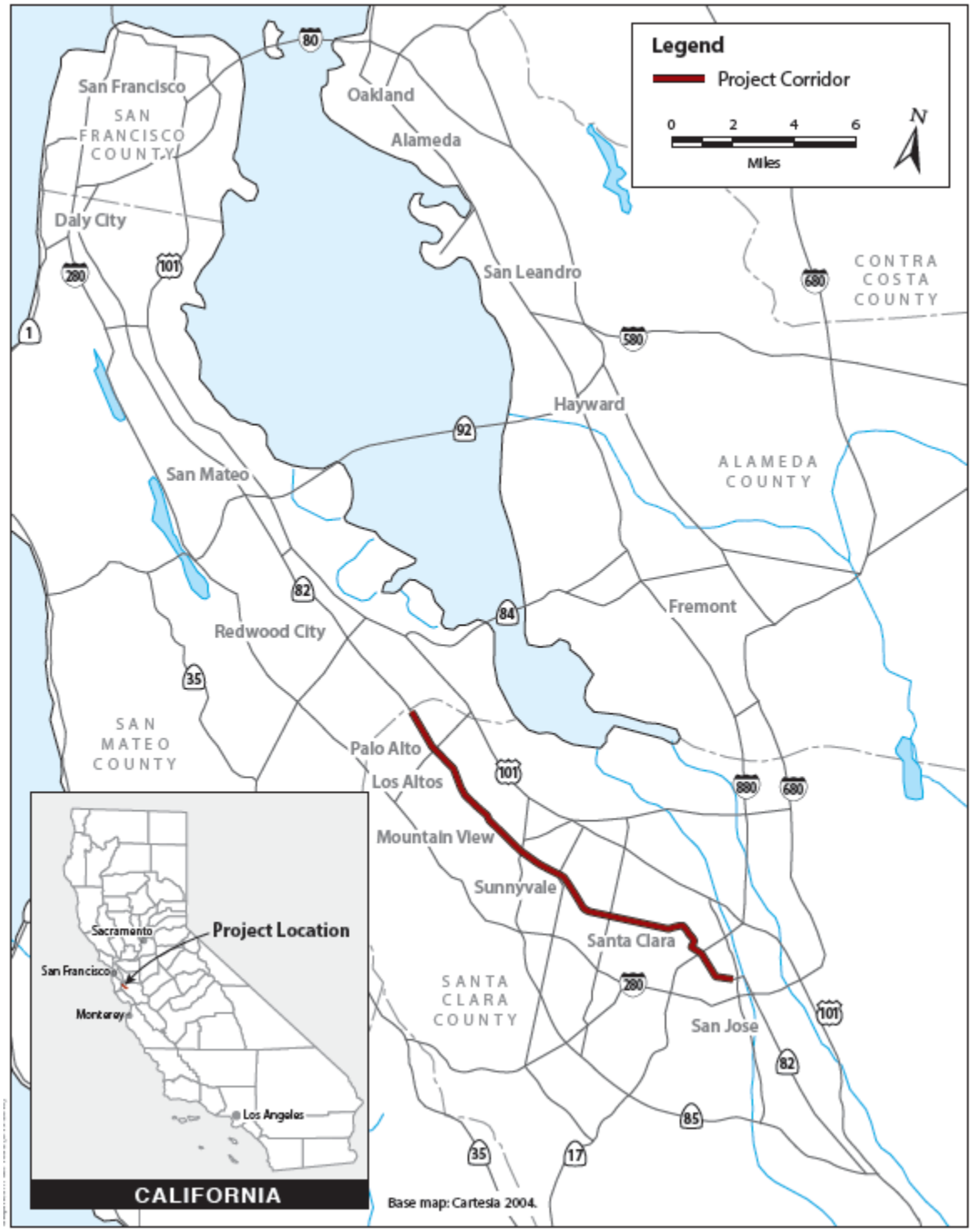
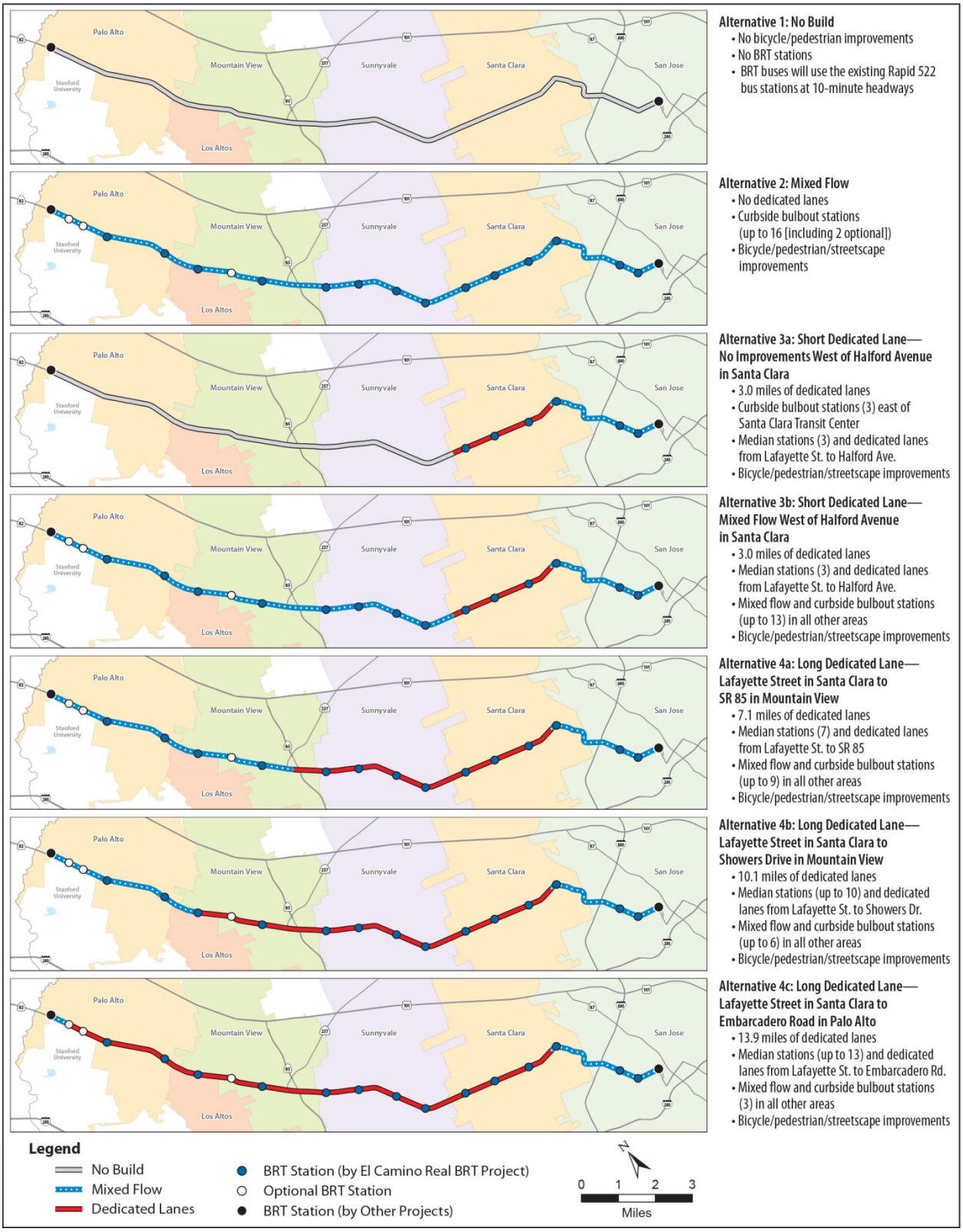


Figure 2. Project Alternatives



Alternative 1: No Build
- No bicycle/pedestrian improvements
- No BRT stations
- BRT buses will use the existing Rapid 522 bus stations at 10-minute headways

Alternative 2: Mixed Flow
- No dedicated lanes
- Curbside bulbout stations (up to 16 [including 2 optional])
- Bicycle/pedestrian/streetscape improvements

Alternative 3a: Short Dedicated Lane—No Improvements West of Halford Avenue in Santa Clara
- 3.0 miles of dedicated lanes
- Curbside bulbout stations (3) east of Santa Clara Transit Center
- Median stations (3) and dedicated lanes from Lafayette St. to Halford Ave.
- Bicycle/pedestrian/streetscape improvements

Alternative 3b: Short Dedicated Lane—Mixed Flow West of Halford Avenue in Santa Clara
- 3.0 miles of dedicated lanes
- Median stations (3) and dedicated lanes from Lafayette St. to Halford Ave.
- Mixed flow and curbside bulbout stations (up to 13) in all other areas
- Bicycle/pedestrian/streetscape improvements

Alternative 4a: Long Dedicated Lane—Lafayette Street in Santa Clara to SR 85 in Mountain View
- 7.1 miles of dedicated lanes
- Median stations (7) and dedicated lanes from Lafayette St. to SR 85
- Mixed flow and curbside bulbout stations (up to 9) in all other areas
- Bicycle/pedestrian/streetscape improvements

Alternative 4b: Long Dedicated Lane—Lafayette Street in Santa Clara to Showers Drive in Mountain View
- 10.1 miles of dedicated lanes
- Median stations (up to 10) and dedicated lanes from Lafayette St. to Showers Dr.
- Mixed flow and curbside bulbout stations (up to 6) in all other areas
- Bicycle/pedestrian/streetscape improvements

Alternative 4c: Long Dedicated Lane—Lafayette Street in Santa Clara to Embarcadero Road in Palo Alto
- 13.9 miles of dedicated lanes
- Median stations (up to 13) and dedicated lanes from Lafayette St. to Embarcadero Rd.
- Mixed flow and curbside bulbout stations (3) in all other areas
- Bicycle/pedestrian/streetscape improvements

Attachment A. El Camino Real Intersection Delay and LOS (opening year, 2018 PM)

Location	#	Intersection	Alt 1		Alt 2		Alt 3a		Alt 3b		Alt 4a		Alt 4b		Alt 4c	
Palo Alto	1	Palm Dr.	27.9	C	27.9	C	27.9	C	27.9	C	27.9	C	26.9	C	26.1	C
	2	University Av.	26.1	C	26.1	C	26.1	C	26.1	C	26	C	25.4	C	25	C
	3	Homer Av. (Medical Foundation)	27.1	C	27.1	C	27.1	C	27.1	C	27	C	27.1	C	26.9	C
	4	Embarcadero Rd./Galvez St.	66.7	E	66.7	E	66.5	E	66.7	E	66.4	E	63.8	E	72.5	E
	5	Churchill Av.	16.4	B	16.3	B	16.4	B	16.4	B	16.3	B	16	B	15.1	B
	6	Park Bl./Serra St.	19.6	B	19.6	B	19.6	B	19.6	B	19.6	B	19.5	B	24.9	C
	7	Stanford Av.	32.7	C	32.3	C	32.8	C	32.7	C	32.6	C	32.8	C	30.3	C
	76	College Ave.	-	-	-	-	-	-	-	-	-	-	-	-	8.5	A
	8	Cambridge Av.	13.9	B	13.9	B	13.9	B	13.9	B	13.9	B	13.9	B	-	-
	9	California Av.	24.1	C	25.6	C	24.1	C	24.4	C	24.4	C	24.8	C	35	C
	10	Page Mill Rd./Oregon Exp.	63.2	E	63.1	E	63.3	E	63.3	E	62.8	E	60.7	E	82.7	F*
	11	Portage Av.	20.6	C	20.6	C	20.7	C	20.6	C	20.6	C	20.4	C	18.6	**B**
	75	Hansen Way	17.8	B	18.1	B	18.2	B	17.7	B	18.2	B	17.3	B	21.7	C
	12	Matadero Av./Margarita Av.	15.3	B	15.3	B	15.4	B	15.3	B	15.3	B	15.3	B	15	B
	77	Wilton Ave.	-	-	-	-	-	-	-	-	-	-	-	-	6.9	A
	78	Barron Ave.	-	-	-	-	-	-	-	-	-	-	-	-	6	A

	13	Curtner Av.	3.3	A	3.3	A	3.3	A	3.3	A	3.3	A	3.4	A	-	-
	14	Ventura Av.	11.4	B	11.4	B	11.4	B	11.4	B	11.5	B	11.7	B	15.9	B
	15	Los Robles Av.	15.1	B	15.1	B	15.2	B	15.2	B	15	B	16.2	B	14.9	B
	79	Vista Ave.	-	-	-	-	-	-	-	-	-	-	-	-	4	A
	16	Maybell Av./El Camino Wy.	10.5	B	10.5	B	10.5	B	10.5	B	10.6	B	11.2	B	14.1	B
	17	Charleston Rd./Arastadero Rd.	38.6	D	38.6	D	38.7	D	38.6	D	38.5	D	40.6	D	40.6	D
	80	Deodar St.	-	-	-	-	-	-	-	-	-	-	-	-	4.3	A
	18	Dinahs Ct.	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A	9.4	A	5.9	A
	19	Los Altos Av./Cesano Ct.	12.4	B	12.4	B	12.4	B	12.4	B	12.3	B	12.2	B	14.2	B
	20	Del Medio Av.	10.4	B	10.4	B	10.4	B	10.4	B	10.4	B	10.8	B	12.9	B
Los Altos	21	San Antonio Rd.	57	E	57.7	E	57.1	E	57.6	E	57.7	E	51.5	**D***	57.1	E
Mountain View	22	Showers Dr./Los Altos Sq.	32	C	32	C	31.9	C	32	C	32.2	C	37.6	D*	36.5	D*
	23	Jordan Av.	8.2	A	8.2	A	8.1	A	8.2	A	8.1	A	8.1	A	9.6	A
	24	Ortega Av.	6.2	A	6.2	A	6.3	A	6.3	A	6.4	A	-	-	-	-
	81	Distel Cir.	-	-	-	-	-	-	-	-	-	-	4.4	A	5	A
	25	Distel Dr.	4.2	A	4.2	A	4.4	A	4.4	A	4.4	A	-	-	-	-
	26	Rengstorff Av.	21.2	C	21.2	C	18.4	**B**	18.4	**B**	17.7	**B**	22.3	C	23.8	C

	82	Clark Ave.	5.7	A	5.7	A	6.5	A	6.5	A	6.6	A	7.5	A	7.2	A
	27	Escuela Av.	14.7	B	14.7	B	15.2	B	15.2	B	15.3	B	22.3	C	22.2	C
	28	El Monte Av.	24.8	C	25	C	23.6	C	23.4	C	23.3	C	24.2	C	24.6	C
	29	Shoreline Bl. /Miramonte Av.	47.9	D	47.9	D	47.9	D	47.9	D	47.7	D	52.8	D	52.8	D
	30	Castro St.	49.9	D	51.5	D	50	D	51.5	D	50.4	D	52.1	D	52.7	D
	83	Bonita Ave.	-	-	-	-	-	-	-	-	-	-	4.3	A	4.6	A
	31	Calderon Av./Phyllis Av.	67.2	E	67.1	E	66.8	E	67	E	64.7	E	41	**D***	39.7	**D***
	32	Hwy 237/Grant Rd.	58.6	E	58.6	E	58.2	E	58.2	E	55.8	E	53.7	**D***	53.3	**D***
	33	The Americana / Sylvan Av.	30.9	C	30.9	C	30.9	C	30.9	C	30.9	C	31.4	C	31.3	C
Sunnyvale	34	Bernardo Av.	39.1	D	39.2	D	39.2	D	39.4	D	44.5	D	43.1	D	43.1	D
	35	Grape Av.	12.2	B	12.2	B	12.2	B	12.2	B	13.7	B	13.7	B	13.7	B
	36	Mary Av.	46.1	D	46.4	D	45.4	D	45.6	D	50.1	D	48.9	D	48.9	D
	37	Hollenbeck Av.	31.1	C	31.1	C	31	C	31.1	C	33.7	C	33.8	C	33.8	C
	38	Mathilda Av.	58.9	E	58.9	E	54.9	**D***	54.9	**D***	44.1	**D***	42.3	**D***	43.2	**D***
	39	Murphy Av.	1.6	A	1.6	A	1.6	A	1.6	A	n/a	n/a	n/a	n/a	n/a	n/a
	40	Sunnyvale Av./Sunnyvale Saratoga Rd.	42.7	D	42.7	D	41	D	41.1	D	48.5	D	47.8	D	48.7	D
	41	Cezanne Dr.	14.4	B	14.4	B	14.1	B	14.1	B	16.4	B	16.3	B	16.3	B
	42	Fair Oaks Av./Remington	55.5	E	56	E	53.9	**D***	54.2	**D***	57.5	E	57.2	E	57.2	E

		Dr.														
	43	Maria Ln	14.9	B	14.9	B	14.1	B	14.1	B	18.7	B	18.5	B	18.6	B
	44	Wolfe Rd.	49.3	D	49.5	D	40.7	D	40.8	D	41.4	D	41.4	D	41.3	D
	45	Poplar Av.	14.3	B	14.3	B	13.4	B	13.4	B	15	B	15	B	15	B
	46	Henderson Av.	17.2	B	17.2	B	17	B	17	B	18.9	B	18.8	B	18.9	B
Santa Clara	47	Halford Av.	21.4	C	21.4	C	24.5	C	24.5	C	24.6	C	24.6	C	24.6	C
	48	Lawrence Exp. SB Ramp	18.1	B	18	B	21.7	C	21.7	C	21.5	C	21.6	C	21.6	C
	49	Lawrence Exp. NB Ramp	15	B	15	B	17.7	B	17.6	B	17.8	B	18.1	B	18.1	B
	50	Lawrence Square	2.5	A	2.5	A	1.8	A	1.7	A	1.8	A	2.1	A	2.2	A
	51	Flora Vista Av.	14.5	B	14.5	B	19.7	B	19.8	B	19.4	B	19.3	B	19.4	B
	52	Nobili Av.	4.2	A	4.2	A	4.9	A	4.9	A	4.9	A	4.9	A	4.9	A
	53	Pomeroy Av.	16.5	B	16.5	B	17.5	B	17.5	B	17.6	B	17.7	B	17.7	B
	54	Calabazas Blvd.	19	B	19	B	21.3	C	21.3	C	21.2	C	21.1	C	21.1	C
	55	Kiely Blvd./Bowers Av.	42.5	D	43.5	D	61.5	E*	61.7	E*	61.8	E*	61.6	E*	60.8	E*
	56	Bowe Av.	7.5	A	7.5	A	12	B	12	B	11.9	B	11.9	B	11.9	B
	57	San Tomas Exp.	55.4	E	55.4	E	67.5	E	67.6	E	67.6	E	67.3	E	67.4	E
	58	Los Padres Blvd.	27.5	C	27.5	C	30.3	C	30.6	C	31.2	C	30.3	C	30.3	C
	84	McCormick Dr.	13.4	B	13.5	B	21.4	C	21.4	C	22.2	C	25	C	24.9	C
	59	Scott Blvd.	47.2	D	47.4	D	63.1	E*	63.9	E*	63.3	E*	61.7	E*	61.3	E*

	60	Lincoln St.	22	C	22	C	25.7	C	25.8	C	25.8	C	25.7	C	25.8	C
	61	Monroe St.	35.3	D	35.3	D	41	D	41.1	D	40.8	D	40.7	D	40.8	D
	62	Lafayette St.	46.4	D	46.4	D	56.6	E*	56.7	E*	57.4	E*	57.1	E*	57.3	E*
	63	Benton St.	26.2	C	26.2	C	26.4	C	26.2	C	26.4	C	26.4	C	26.2	C
	64	Palm Dr.	17.2	B	17.2	B	17.4	B	17.4	B	17.4	B	17.4	B	17.4	B
	65	Campbell Av. (Accolti Wy.)	19.2	B	19.3	B	19.3	B	19.3	B	19.3	B	19.3	B	19.3	B
	66	The Alameda (Rte 82)	18.5	B	18.4	B	18.3	B	18.3	B	18.2	B	18.3	B	18.2	B
San Jose	67	Newhall St.	18.6	B	18.6	B	18.5	B	18.5	B	18.5	B	18.4	B	18.4	B
	68	Hwy 880 (S)	12	B	12	B	11.9	B	11.9	B	11.9	B	11.9	B	11.8	B
	69	Hwy 880 (N)	16	B	16.1	B	16.2	B	16.2	B	16.2	B	16.2	B	16.3	B
	70	Hedding St.	45.9	D	46.3	D	45.8	D	46.1	D	46.2	D	46.2	D	46.1	D
	71	Naglee Av.	56.2	E	55.8	E	56	E	56.1	E	56	E	55.9	E	55.9	E
	72	Lenzen Av.	9.8	A	9.8	A	9.8	A	9.9	A	9.8	A	9.8	A	9.8	A
	73	Julian St.	16.7	B	16.7	B	16.7	B	16.7	B	16.7	B	16.7	B	16.8	B
	74	Martin and Race St.	31.9	C	32.1	C	31.8	C	31.9	C	31.9	C	31.9	C	31.9	C

Notes

Intersections experiencing an improvement in LOS are indicated in **bold**, while intersections experiencing a decline in LOS are indicated in underline. An asterisk (*) is used to identify affected intersections operating at LOS D, E, or F.

Source: DKS Associates 2014

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2018 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2018) OPTIMIZED TIMING		Alt 2 (2018) OPTIMIZED TIMING		Alt 3a (2018) OPTIMIZED TIMING		Alt 3b (2018) OPTIMIZED TIMING		Alt 4a (2018) OPTIMIZED TIMING		Alt 4b (2018) OPTIMIZED TIMING		Alt 4c (2018) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	Alma St at Lytton Ave	Palo Alto	13.7	B	13.6	B	13.7	B	14.1	B	14.1	B	14.1	B	14.1	B	14.2	B	14.1	B	14.2	B
2	Alma St at Hamilton Ave		18.4	B	18.2	B	17.4	B	17.7	B	18.0	B	17.7	B	18.0	B	17.7	B	16.8	B	15.7	B
3	Alma St at Homer Ave		9.8	A	9.8	A	9.8	A	9.8	A	9.8	A	9.8	A	9.8	A	9.8	A	9.8	A	9.8	A
4	Alma St at Addison Ave*		40.9	E	40.7	E	46.2	E	47.7	E	47.6	E	47.5	E	47.6	E	47.2	E	47.2	E	58.1	F
5	Alma St at Lincoln Ave*		41.9	E	41.8	E	36.9	E	46.4	E	45.0	E	44.9	E	46.3	E	43.9	E	45.2	E	35.0	D
6	Alma St at Kingsley Ave*		36.0	E	36.6	E	339.6	F	65.7	F	65.3	F	65.7	F	65.7	F	62.1	F	35.2	E	375.5	F
7	Alma St at Melville Ave*		18.4	C	18.4	C	20.9	C	19.9	C	19.8	C	19.8	C	19.8	C	19.6	C	19.2	C	21.8	C
8	Alma St at Churchill Ave		56.2	E	56.2	E	62.5	E	57.6	E	57.6	E	57.6	E	57.5	E	57.0	E	55.6	E	63.4	E
9	Alma St at California Ave*		21.1	C	21.1	C	25.8	D	21.6	C	21.6	C	21.6	C	21.6	C	21.6	C	21.5	C	26.0	D
10	Alma St at Colorado Ave*		25.8	D	25.8	D	33.1	D	25.5	D	25.5	D	25.5	D	25.5	D	25.3	D	23.5	C	32.4	D
11	Alma St at Loma Verde Ave*		139.3	F	139.2	F	271.5	F	129.7	F	129.6	F	129.7	F	129.7	F	127.4	F	104.3	F	262.2	F
12	Alma St at Meadow Dr		44.8	D	44.9	D	70.2	E	45.4	D	45.4	D	45.4	D	45.3	D	44.7	D	43.7	D	70.1	E
13	Alma St at Charleston Rd		108.3	F	108.3	F	132.8	F	90.7	F	90.2	F	90.3	F	90.1	F	88.9	F	120.4	F	94.3	F
14	Cowper St at Lincoln Ave*		10.1	B	10.1	B	9.9	A	10.1	B	10.1	B	10.1	B	10.1	B	10.1	B	10.1	B	10.6	B
15	Cowper St at Embarcadero Rd*		28.2	D	28.1	D	38.3	E	31.5	D	31.6	D	31.6	D	31.7	D	31.5	D	32.4	D	40.9	E
16	Cowper St at Churchill Ave*		7.9	A	7.9	A	8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	7.9	A	8.1	A
17	Cowper St at California Ave*		10.8	B	10.8	B	11.0	B	10.8	B	10.8	B	10.8	B	10.8	B	10.8	B	10.8	B	11.2	B
18	Cowper St at Oregon Expy		12.7	B	12.7	B	13.1	B	13.2	B	13.2	B	13.2	B	13.2	B	13.2	B	13.2	B	14.3	B
19	Waverley St at Lincoln Ave*		8.3	A	8.3	A	8.3	A	8.3	A	8.3	A	8.3	A	8.3	A	8.3	A	8.3	A	8.3	A
20	Waverley St at Embarcadero Rd		6.8	A	6.8	A	7.2	A	6.8	A	6.8	A	6.8	A	6.8	A	6.8	A	6.9	A	7.2	A
21	Waverley St at Churchill Ave*		8.7	A	8.7	A	8.9	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A	8.8	A
22	Waverley St at Colorado Ave*		7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A
23	Waverley St at Loma Verde Ave*		12.4	B	12.4	B	12.4	B	12.4	B	12.4	B	12.4	B	12.4	B	12.4	B	12.4	B	12.4	B
24	Waverley St at Meadow Dr		5.2	A	5.2	A	5.2	A	5.2	A	5.2	A	5.2	A	5.2	A	5.2	A	5.2	A	5.2	A
25	Bryant St at Lincoln Ave*		10.1	B	10.1	B	9.9	A	10.2	B	10.2	B	10.2	B	10.2	B	10.2	B	10.3	B	10.0	A
26	Bryant St at Embarcadero Rd		2.8	A	2.8	A	2.8	A	2.9	A	2.9	A	2.9	A	2.9	A	2.9	A	2.9	A	2.9	A
27	Bryant St at Churchill Ave*		10.6	B	10.6	B	10.6	B	10.8	B	10.8	B	10.8	B	10.8	B	10.8	B	10.8	B	10.7	B
28	Bryant St at California Ave*		8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	8.0	A	8.1	A
29	Hanover St at California Ave*		12.2	B	12.2	B	13.4	B	12.7	B	12.6	B	12.7	B	12.6	B	12.6	B	12.6	B	13.7	B
30	Hanover St at Oregon/Page Mill Rd		48.6	D	48.6	D	54.6	D	50.7	D	50.8	D	50.9	D	50.8	D	50.7	D	50.8	D	56.6	E
31	Alma St at the Circle East*		18.9	C	18.7	C	23.7	C	19.4	C	19.3	C	19.4	C	19.3	C	19.4	C	21.9	C	28.0	D
32	The Circle at University Ave*		13.6	B	13.6	B	14.0	B	13.7	B	13.7	B	13.7	B	13.7	B	13.7	B	13.9	B	14.2	B
33	Alma St at Channing Ave*		0.7	A	0.7	A	0.8	A	0.8	A	0.8	A	0.8	A	0.8	A	0.8	A	0.7	A	0.8	A
34	Alma St at Embarcadero Rd*		15.1	C	15.0	B	15.3	C	15.4	C	15.4	C	15.4	C	15.4	C	15.3	C	15.2	C	15.7	C
35	Bryant St at Addison Ave*		10.2	B	10.2	B	10.1	B	10.5	B	10.5	B	10.5	B	10.5	B	10.5	B	10.6	B	10.1	B
36	Bryant St at Channing Ave*		8.6	A	8.6	A	8.7	A	8.7	A	8.7	A	8.7	A	8.7	A	8.7	A	8.6	A	8.8	A
37	Birch St at California Ave*		10.2	B	10.2	B	10.4	B	10.3	B	10.3	B	10.3	B	10.3	B	10.3	B	10.3	B	10.6	B
38	Wilkie Way at Charleston Rd		4.3	A	4.3	A	4.3	A	4.5	A	4.5	A	4.5	A	4.5	A	4.4	A	4.5	A	4.5	A
39	El Camino Way at James Rd*		10.8	B	10.8	B	10.7	B	10.9	B	10.9	B	10.9	B	10.9	B	10.9	B	10.8	B	10.7	B
40	Amaranta Ave at Georgia Ave*		7.6	A	7.6	A	7.7	A	7.6	A	7.6	A	7.6	A	7.6	A	7.6	A	7.7	A	7.8	A
41	Stanford Ave at Park Blvd*		7.1	A	7.1	A	7.1	A	7.1	A	7.1	A	7.1	A	7.1	A	7.1	A	7.1	A	7.2	A

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2018 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2018) OPTIMIZED TIMING		Alt 2 (2018) OPTIMIZED TIMING		Alt 3a (2018) OPTIMIZED TIMING		Alt 3b (2018) OPTIMIZED TIMING		Alt 4a (2018) OPTIMIZED TIMING		Alt 4b (2018) OPTIMIZED TIMING		Alt 4c (2018) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
42	San Antonio Rd at California St	Mountain View	39.6	D	39.6	D	42.1	D	43.6	D	43.6	D	43.7	D	43.6	D	43.5	D	45.4	D	46.6	D
43	Jordan Ave at Marich Way*		9.5	A	9.5	A	9.5	A	9.6	A	9.6	A	9.6	A	9.6	A	9.6	A	9.4	A	9.5	A
44	Showers Dr at California St		23.2	C	23.2	C	24.1	C	23.7	C	23.7	C	23.7	C	23.7	C	23.7	C	24.1	C	24.4	C
45	Showers Dr at Latham St*		13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B
46	Ortega Ave at California St		5.1	A	5.1	A	5.3	A	5.1	A	5.1	A	5.1	A	5.1	A	5.1	A	7.1	A	5.5	A
47	Ortega Ave at Latham St*		8.7	A	8.7	A	8.7	A	8.5	A	8.5	A	8.5	A	8.5	A	8.4	A	11.1	B	9.2	A
48	Escuela Ave at Latham St*		11.6	B	11.6	B	12.2	B	11.9	B	11.9	B	11.9	B	11.9	B	11.9	B	12.9	B	12.5	B
49	Rengstorff Ave at Central Expy		38.5	D	38.5	D	42.0	D	40.0	D	40.0	D	39.7	D	39.7	D	39.6	D	46.7	D	45.5	D
50	Rengstorff Ave at California St		29.8	C	29.8	C	31.7	C	29.7	C	29.7	C	29.7	C	29.7	C	29.9	C	33.0	C	32.2	C
51	Rengstorff Ave at Latham St		21.0	C	21.0	C	22.5	C	20.7	C	20.8	C	20.7	C	20.7	C	20.7	C	22.7	C	23.4	C
52	Escuela Ave at California St		20.8	C	20.8	C	21.2	C	21.1	C	21.1	C	21.1	C	21.1	C	20.9	C	21.7	C	21.3	C
53	Shoreline Blvd at Villa St		25.2	C	25.2	C	25.4	C	25.6	C	25.6	C	25.6	C	25.6	C	25.6	C	25.5	C	25.8	C
54	Shoreline Blvd at Dana St*		8.8	A	8.8	A	8.8	A	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A
55	Shoreline Blvd at California St		33.9	C	33.9	C	36.2	D	34.6	C	34.5	C	34.5	C	34.5	C	33.8	C	46.3	D	40.1	D
56	Shoreline Blvd at Latham St		38.4	D	38.4	D	38.1	D	34.2	C	34.2	C	34.2	C	34.2	C	34.2	C	33.4	C	32.9	C
57	Miramonte Ave at Castro St		11.0	B	11.0	B	11.0	B	11.0	B	11.1	B	11.1	B	11.0	B	11.1	B	11.2	B	11.2	B
58	Miramonte Ave at Cuesta Dr		10.7	B	10.7	B	11.6	B	11.0	B	11.0	B	11.0	B	11.0	B	10.8	B	13.1	B	12.9	B
59	Castro St at Central Expy		40.9	D	40.9	D	44.0	D	45.1	D	45.2	D	45.0	D	45.0	D	44.3	D	50.5	D	49.6	D
60	Castro St at Evelyn Ave*		14.7	B	14.7	B	15.8	C	14.7	B	14.7	B	14.6	B	14.6	B	14.8	B	17.2	C	16.5	C
61	Castro St at Villa St		36.9	D	36.9	D	39.6	D	34.5	C	34.4	C	34.4	C	34.4	C	34.8	C	40.4	D	39.1	D
62	Castro St at Dana St		11.8	B	11.7	B	12.2	B	11.5	B	11.5	B	11.5	B	11.5	B	11.6	B	12.4	B	12.1	B
63	Castro St at California St		44.9	D	44.9	D	46.0	D	45.2	D	45.2	D	45.2	D	45.2	D	45.2	D	51.9	D	46.7	D
64	Calderon Ave at Evelyn St		11.6	B	11.6	B	12.0	B	11.4	B	11.4	B	11.5	B	11.4	B	11.9	B	12.1	B	12.1	B
65	Calderon Ave at Dana St		10.9	B	10.9	B	12.1	B	11.4	B	11.4	B	11.5	B	11.5	B	11.4	B	12.9	B	12.7	B
66	Evelyn St at SR 85 NB Ramp		8.1	A	8.1	A	9.1	A	8.4	A	8.4	A	8.4	A	8.4	A	8.7	A	9.5	A	9.5	A
67	Evelyn St at Ferry Morse Way		10.5	B	10.4	B	11.7	B	10.9	B	10.9	B	10.9	B	10.9	B	11.4	B	11.7	B	11.7	B
68	San Antonio Rd at Fayette Dr		17.1	B	17.1	B	17.2	B	17.4	B	17.4	B	17.4	B	17.4	B	17.4	B	17.6	B	17.5	B
69	Shoreline Blvd at Mercy St*		9.1	A	9.1	A	9.1	A	9.2	A	9.2	A	9.2	A	9.2	A	9.2	A	9.1	A	9.2	A
70	Grant Rd at Cuesta Dr		30.6	C	30.5	C	33.1	C	31.4	C	31.4	C	31.3	C	31.3	C	31.0	C	34.9	C	34.4	C
71	Grant Rd at Phyllis Ave		29.7	C	29.6	C	29.3	C	30.3	C	30.2	C	30.1	C	30.2	C	30.9	C	30.4	C	29.9	C
72	Central Expy and Whisman Station Dr		16.9	B	16.9	B	18.0	B	19.1	B	19.1	B	19.3	B	19.3	B	19.4	B	22.6	C	22.0	C
73	North Whisman Rd and Whisman Station Dr		17.3	B	17.3	B	17.5	B	18.2	B	18.2	B	18.2	B	18.2	B	18.1	B	18.5	B	18.4	B
74	237 ramps and S Whisman Rd/Ferry Morse Way		25.2	C	25.2	C	25.6	C	26.7	C	26.7	C	26.7	C	26.7	C	29.9	C	31.9	C	31.6	C
75	Mayfield Ave at Central Exwy		4.5	A	4.5	A	4.7	A	4.6	A	4.6	A	4.6	A	4.6	A	4.6	A	4.8	A	4.8	A
76	High School Way at Shoreline Blvd*		10.7	B	10.7	B	10.8	B	10.9	B	10.9	B	10.9	B	10.9	B	10.9	B	10.7	B	10.8	B
77	Cuesta Dr at Springer Rd*		68.2	F	67.8	F	77.7	F	71.8	F	71.5	F	71.3	F	71.5	F	67.0	F	81.3	F	81.0	F
78	Bernardo Ave at Knickerbocker Dr*		15.2	C	15.1	C	15.7	C	15.4	C	15.4	C	15.5	C	15.3	C	17.5	C	16.6	C	16.5	C
79	Miramonte and Sonia		3.6	A	3.6	A	3.7	A	3.7	A	3.7	A	3.7	A	3.7	A	3.7	A	3.9	A	3.9	A
80	Miramonte and Hans*		17.9	C	17.8	C	19.3	C	18.1	C	18.3	C	18.0	C	18.1	C	18.1	C	17.8	C	18.0	C
81	Miramonte and Barbara		7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.8	A	7.8	A

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			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
82	El Monte at Cuesta	Los Altos	8.8	A	8.8	A	9.0	A	8.9	A	9.0	A	8.9	A	9.0	A	9.0	A	9.0	A	9.1	A
83	El Monte at Covington		21.8	C	21.8	C	22.1	C	21.7	C	21.7	C	21.7	C	21.7	C	21.7	C	21.9	C	21.9	C
84	San Antonio at Cuesta		30.4	C	30.4	C	31.4	C	31.7	C	32.0	C	31.6	C	32.0	C	31.9	C	33.7	C	32.5	C
85	Los Altos Ave and First Street		21.0	C	21.0	C	22.0	C	21.0	C	20.9	C	21.0	C	21.0	C	20.9	C	21.6	C	21.5	C
86	San Antonio Rd at Jordan Ave*		32.8	D	32.7	D	31.8	D	39.7	E	39.6	E	39.5	E	39.5	E	38.7	E	35.7	E	34.9	D

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			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
87	Evelyn Ave at Bernardo Ave	Sunnyvale	19.7	B	19.4	B	20.5	C	20.7	C	20.7	C	20.7	C	20.7	C	21.6	C	21.8	C	21.7	C
88	Evelyn Ave at Mary Ave		36.1	D	35.6	D	37.5	D	38.4	D	38.4	D	38.4	D	38.4	D	39.2	D	39.4	D	39.3	D
89	Evelyn Ave at Sunnyvale Ave		30.4	C	30.4	C	30.6	C	32.5	C	32.5	C	33.5	C	33.5	C	33.9	C	34.1	C	34.0	C
90	Washington Ave at Bernardo Ave		6.2	A	6.1	A	6.3	A	6.4	A	6.4	A	6.4	A	6.4	A	6.5	A	6.5	A	6.5	A
91	Washington Ave at Mary Ave		14.1	B	14.1	B	14.8	B	14.9	B	14.9	B	14.9	B	14.9	B	15.0	B	15.1	B	15.1	B
92	Iowa Ave at Bernardo Ave*		18.3	C	18.3	C	13.2	B	17.5	C	17.5	C	18.3	C	18.3	C	15.8	C	14.4	B	14.6	B
93	Iowa Ave at Mary Ave		8.5	A	8.5	A	9.2	A	9.3	A	8.9	A	8.8	A	8.8	A	9.3	A	9.3	A	9.3	A
94	Iowa Ave at Pastoria Ave		7.2	A	7.2	A	7.2	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A	7.3	A
95	Olive Ave at Mary Ave*		19.6	C	19.4	C	19.1	C	20.5	C	20.7	C	20.3	C	20.3	C	21.1	C	20.0	C	20.0	C
96	Olive Ave at Pastoria Ave*		11.9	B	12.0	B	12.3	B	12.2	B	12.2	B	12.2	B	12.2	B	12.8	B	12.7	B	12.8	B
97	Evelyn Ave at Fair Oaks Ave		31.8	C	31.8	C	32.5	C	34.1	C	34.1	C	35.1	D	35.1	D	36.0	D	35.5	D	35.3	D
98	Evelyn Ave at Wolfe Rd		34.5	C	34.5	C	35.6	D	37.2	D	37.3	D	37.8	D	37.8	D	38.2	D	38.1	D	38.4	D
99	Evelyn Ave at Reed Ave		9.1	A	9.1	A	9.5	A	9.8	A	9.8	A	10.1	B	10.1	B	10.2	B	10.2	B	10.2	B
100	Reed Ave at Wolfe Rd		43.8	D	43.8	D	43.7	D	43.8	D	43.8	D	43.7	D	43.7	D	43.8	D	43.8	D	43.8	D
101	Iris Ave at Fair Oaks Ave		9.2	A	9.2	A	9.1	A	9.3	A	9.3	A	9.3	A	9.3	A	9.2	A	9.2	A	9.1	A
102	Iris Ave at Wolfe Rd		19.0	B	18.9	B	19.0	B	19.4	B	19.4	B	19.4	B	19.4	B	19.6	B	19.6	B	19.6	B
103	Iris Ave at Sequoia Dr*		11.8	B	11.7	B	12.4	B	12.0	B	12.0	B	12.1	B	12.0	B	12.8	B	12.8	B	12.8	B
104	Maria Ln at Wolfe Rd		15.9	B	15.9	B	16.2	B	15.9	B	15.9	B	16.3	B	16.3	B	16.2	B	16.2	B	16.2	B
105	Heatherstone Ave at Knickerbocker Dr*		10.3	B	10.3	B	10.4	B	10.3	B	10.3	B	10.3	B	10.3	B	11.7	B	10.5	B	10.5	B
106	Heatherstone Ave at Bernardo Ave		4.5	A	4.5	A	4.5	A	4.6	A	4.6	A	4.7	A	4.7	A	4.9	A	4.7	A	4.7	A
107	Heatherstone Ave at Mary Ave		3.2	A	3.2	A	3.2	A	3.2	A	3.2	A	3.2	A	3.2	A	3.2	A	3.2	A	3.2	A
108	Remington Dr at Bernardo Ave*		16.3	C	16.0	C	18.4	C	17.0	C	17.0	C	16.9	C	16.9	C	31.8	D	21.6	C	21.4	C
109	Remington Dr at Mary Ave		28.4	C	28.3	C	28.2	C	28.4	C	28.4	C	28.3	C	28.3	C	28.3	C	28.5	C	28.5	C
110	Remington Dr at Hollenbeck Ave		21.6	C	21.5	C	21.6	C	21.6	C	21.6	C	21.6	C	21.6	C	21.9	C	21.8	C	21.9	C
111	Remington Dr at Sunnyvale Saratoga Rd		64.3	E	63.9	E	66.4	E	68.4	E	68.4	E	68.9	E	68.9	E	69.1	E	69.2	E	69.3	E
112	Remington Dr at Manet Dr		12.7	B	12.8	B	13.0	B	12.9	B	12.9	B	13.2	B	13.2	B	13.2	B	13.2	B	13.2	B
113	Fremont Ave at Sunnyvale Saratoga Rd		73.5	E	73.7	E	97.9	F	75.3	E	75.3	E	96.3	F	95.9	F	107.8	F	106.0	F	105.9	F
114	Fremont Ave at Manet Dr		18.0	B	18.0	B	16.5	B	18.8	B	18.8	B	16.6	B	16.5	B	17.1	B	16.8	B	16.8	B
115	Fremont Ave at Wolfe Rd		33.4	C	33.4	C	26.6	C	35.3	D	35.3	D	30.4	C	30.3	C	27.6	C	27.7	C	27.7	C
116	Dartshire Way at Wolfe Rd*		30.4	D	30.1	D	26.2	D	38.8	E	39.0	E	44.6	E	44.6	E	30.8	D	30.5	D	30.3	D
117	Marion Way at Wolfe Rd		12.7	B	12.7	B	12.8	B	13.0	B	13.0	B	13.8	B	13.8	B	14.3	B	14.1	B	14.1	B
118	Iowa Ave/Sunnyvale Ave		11.9	B	11.9	B	11.9	B	12.0	B	12.0	B	12.0	B	12.0	B	12.0	B	12.0	B	12.0	B
119	Olive Ave/Sunnyvale Ave		13.3	B	13.3	B	13.4	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.6	B	13.6	B
120	Reed Ave/Timberpine Ave		13.6	B	13.6	B	13.7	B	13.9	B	13.9	B	14.1	B	14.1	B	13.9	B	13.9	B	13.9	B
121	Old San Francisco Rd at Fair Oaks Ave		36.5	D	36.3	D	36.3	D	36.7	D	36.7	D	36.8	D	36.8	D	36.7	D	36.8	D	36.8	D
122	Olive Ave at Fair Oaks Ave		12.7	B	12.7	B	12.7	B	13.1	B	13.1	B	13.1	B	13.1	B	13.1	B	13.2	B	13.2	B
123	Pastoria Ave at Evelyn Ave*		19.2	C	19.2	C	19.8	C	18.9	C	18.9	C	18.9	C	18.9	C	20.1	C	20.0	C	20.1	C
124	Sunset Ave at Evelyn Ave*		19.0	C	19.1	C	19.8	C	19.4	C	19.4	C	19.4	C	19.4	C	19.5	C	20.5	C	20.8	C
125	Crescent Ave at Sunnvale Saratoga Rd*		13.3	B	13.3	B	13.4	B	13.3	B	13.3	B	13.5	B	13.5	B	13.4	B	13.5	B	13.5	B
126	Dunford Way at Quail Ave*		13.3	B	13.3	B	13.2	B	13.2	B	13.2	B	13.4	B	13.4	B	13.1	B	13.1	B	13.1	B
127	Dunford Way at Lochinvar Ave*		15.9	C	15.9	C	16.6	C	16.5	C	16.5	C	16.4	C	16.4	C	15.6	C	15.9	C	16.0	C
128	S Frances St at Evelyn Ave		12.5	B	12.4	B	12.6	B	13.0	B	13.0	B	13.2	B	13.2	B	13.5	B	13.3	B	13.3	B

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2018 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2018) OPTIMIZED TIMING		Alt 2 (2018) OPTIMIZED TIMING		Alt 3a (2018) OPTIMIZED TIMING		Alt 3b (2018) OPTIMIZED TIMING		Alt 4a (2018) OPTIMIZED TIMING		Alt 4b (2018) OPTIMIZED TIMING		Alt 4c (2018) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
129	Lawrence Expy at Cabrillo Ave	Santa Clara	92.6	F	92.5	F	107.0	F	50.4	D	50.4	D	56.4	E	56.4	E	62.2	E	61.6	E	61.8	E
130	Bowers Ave at Cabrillo Ave		27.1	C	27.1	C	27.2	C	27.1	C	27.1	C	27.2	C	27.1	C	27.0	C	27.0	C	27.1	C
131	Los Padres Blvd at Cabrillo Ave*		8.5	A	8.5	A	8.5	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A
132	Monroe St at Cabrillo Ave*		16.2	C	16.2	C	16.2	C	17.0	C	17.0	C	17.0	C	17.0	C	17.0	C	17.0	C	17.0	C
133	Bowers Ave at Monroe St		51.4	D	51.4	D	51.0	D	54.5	D	55.0	D	55.2	E	55.3	E	55.7	E	55.8	E	55.4	E
134	Los Padres Blvd at Monroe St		4.6	A	4.6	A	4.6	A	5.1	A	5.1	A	5.1	A	5.1	A	5.1	A	5.1	A	5.1	A
135	Scott Blvd at Monroe St		34.0	C	34.0	C	34.3	C	35.1	D	35.1	D	35.3	D	35.3	D	35.4	D	35.4	D	35.4	D
136	Los Padres Blvd at Warburton Ave*		8.5	A	8.5	A	8.5	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A	8.6	A
137	Scott Blvd at Warburton Ave		13.1	B	13.1	B	13.2	B	13.3	B	13.3	B	13.4	B	13.4	B	13.4	B	13.4	B	13.4	B
138	Lincoln St at Warburton Ave*		9.5	A	9.5	A	9.5	A	9.5	A	9.5	A	9.5	A	9.5	A	9.5	A	9.5	A	9.5	A
139	Monroe St at Warburton Ave*		15.8	C	15.8	C	15.8	C	15.9	C	15.9	C	15.9	C	15.9	C	15.9	C	15.9	C	15.9	C
140	Lafayette St at Warburton Ave*		20.3	C	20.2	C	20.6	C	21.0	C	21.0	C	21.0	C	21.0	C	21.3	C	21.2	C	21.4	C
141	Flora Vista Ave at Granada Ave*		8.4	A	8.4	A	8.1	A	8.5	A	8.5	A	8.3	A	8.3	A	8.2	A	8.2	A	8.2	A
142	Pomeroy Ave at Granada Ave/Calabazas Blvd*		28.3	D	28.3	D	29.0	D	29.4	D	29.4	D	30.3	D	30.3	D	30.1	D	30.3	D	30.5	D
143	Lincoln St at Lewis St*		11.9	B	11.9	B	12.0	B	12.3	B	12.3	B	12.3	B	12.3	B	12.3	B	12.3	B	12.3	B
144	Monroe St at Lewis St		9.9	A	9.9	A	9.9	A	11.2	B	11.2	B	11.2	B	11.2	B	11.3	B	11.3	B	11.2	B
145	Lawrence Expy at Benton St		64.2	E	63.7	E	66.6	E	56.5	E	56.4	E	55.3	E	55.2	E	57.4	E	56.9	E	56.9	E
146	Pomeroy Ave at Benton St		9.8	A	9.8	A	10.0	A	9.8	A	9.8	A	10.1	B	10.1	B	10.1	B	10.1	B	10.1	B
147	Kiely Blvd at Benton St		31.4	C	31.3	C	33.5	C	31.9	C	31.9	C	34.4	C	34.4	C	34.3	C	34.2	C	34.2	C
148	San Tomas Expy at Benton St		80.9	F	80.9	F	86.0	F	86.4	F	86.5	F	94.9	F	94.1	F	94.2	F	94.1	F	94.2	F
149	Los Padres Blvd at Benton St*		13.6	B	13.6	B	13.6	B	13.8	B	13.8	B	13.6	B	13.6	B	13.6	B	13.7	B	13.6	B
150	Scott Blvd at Benton St		20.8	C	20.8	C	20.7	C	21.4	C	21.4	C	21.4	C	21.4	C	21.4	C	21.4	C	21.4	C
151	Lincoln St at Benton St		14.4	B	14.4	B	14.3	B	14.5	B	14.5	B	14.4	B	14.4	B	14.4	B	14.4	B	14.4	B
152	Monroe St at Benton St		13.2	B	13.2	B	13.1	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B	13.5	B
153	Poinciana Dr at Halford Ave*		9.1	A	9.1	A	9.5	A	9.3	A	9.3	A	10.2	B	10.2	B	10.1	B	10.1	B	10.1	B
154	Flora Vista Ave at Benton St*		30.0	D	30.0	D	27.8	D	31.4	D	31.4	D	28.1	D	28.1	D	27.4	D	27.6	D	27.6	D
155	Calabazas Blvd at Barkley Ave*		9.1	A	9.1	A	9.1	A	9.1	A	9.1	A	9.1	A	9.1	A	9.1	A	9.1	A	9.1	A
156	Scott Blvd at Cabrillo Ave*		35.3	E	35.2	E	38.0	E	57.6	F	57.8	F	60.4	F	60.5	F	63.1	F	62.9	F	62.2	F
157	Lewis St at Lafayette St		75.0	E	75.0	E	75.7	E	59.4	E	59.3	E	60.1	E	60.1	E	61.4	E	61.5	E	61.7	E
158	Lafayette St at Benton St		57.7	E	57.8	E	58.4	E	56.3	E	56.1	E	56.9	E	56.9	E	57.9	E	57.9	E	58.2	E
159	De La Cruz Blvd at Matthew St*		57.2	F	57.6	F	55.7	F	77.1	F	77.3	F	76.9	F	76.8	F	77.3	F	76.9	F	75.5	F
160	De La Cruz Blvd at Reed St		23.1	C	23.1	C	22.9	C	26.8	C	26.6	C	26.7	C	26.7	C	26.7	C	26.7	C	26.4	C
161	Cabrillo Ave at San Tomas Expy		23.0	C	23.0	C	22.7	C	23.3	C	23.3	C	23.0	C	22.9	C	23.1	C	23.1	C	23.1	C
162	Halford Ave at Tamarack Ln*		9.2	A	9.2	A	9.4	A	9.3	A	9.3	A	9.8	A	9.8	A	9.6	A	9.5	A	9.6	A
163	Halford Ave at Lillick Dr*		8.5	A	8.5	A	8.3	A	8.6	A	8.6	A	8.7	A	8.7	A	8.5	A	8.4	A	8.4	A
164	Benton and Wood Duck*		9.2	A	9.2	A	9.2	A	9.4	A	9.4	A	9.5	A	9.5	A	9.4	A	9.4	A	9.4	A

HCM 2000 Capacity Analysis procedures are reported for all intersections. Overall intersection Delay/LOS is reported for signalized intersections.
* HCM Unsignalized Capacity Analysis displays the intersection approach with the greatest average delay (in seconds) and corresponding level of service

Attachment C. El Camino Real Intersection Delay and LOS (horizon year, 2040 PM)

Location	#	Intersection	Alt 1		Alt 2		Alt 3a		Alt 3b		Alt 4a		Alt 4b		Alt 4c	
Palo Alto	1	Palm Dr.	29.6	C	29.8	C	29.7	C	29.7	C	29.8	C	29.7	C	23.7	C
	2	University Av.	26.9	C	27	C	26.9	C	27	C	27	C	26.3	C	23.1	C
	3	Homer Av. (Medical Foundation)	25.6	C	25.7	C	25.7	C	25.7	C	25.7	C	25.9	C	27.5	C
	4	Embarcadero Rd./Galvez St.	109.2	F	110.3	F	109.5	F	109.2	F	109.1	F	104.9	F	117	F
	5	Churchill Av.	18.5	B	18.5	B	18.5	B	18.5	B	18.5	B	18.4	B	25.8	C
	6	Park Bl./Serra St.	20.6	C	20.7	C	20.6	C	20.7	C	20.6	C	20.5	C	27.4	C
	7	Stanford Av.	60.9	E	60.6	E	60.9	E	60.8	E	60.6	E	60.8	E	49.8	**D***
	76	College Ave.	-	-	-	-	-	-	-	-	-	-	-	-	9.8	A
	8	Cambridge Av.	14	B	14	B	13.9	B	14.1	B	14	B	13.8	B	-	-
	9	California Av.	21.1	C	21.7	C	21.1	C	21.4	C	21.5	C	21.5	C	39.1	D*
	10	Page Mill Rd./Oregon Exp.	117	F	117.9	F	116.4	F	117.1	F	115.5	F	108.7	F	143.9	F
	11	Portage Av.	21.2	C	21.1	C	21.2	C	21.1	C	21.2	C	21.8	C	18.9	**B**
	75	Hansen Way	25.7	C	25.8	C	25.7	C	25.7	C	25.6	C	24	C	27.4	C
	12	Matadero Av./Margarita Av.	20.3	C	20.5	C	20.3	C	20.3	C	20.2	C	19.9	**B**	22.2	C
	77	Wilton Ave.	-	-	-	-	-	-	-	-	-	-	-	-	6.6	A
	78	Barron Ave.	-	-	-	-	-	-	-	-	-	-	-	-	6.6	A
	13	Curtner Av.	3.8	A	3.8	A	3.8	A	3.8	A	3.7	A	3.5	A	n/a	n/a
	14	Ventura Av.	11	B	11	B	11	B	11.1	B	11	B	11.3	B	17.3	B

	15	Los Robles Av.	19.9	B	20.6	C	20.1	C	20.1	C	20.3	C	21	C	21.5	C
	79	Vista Ave.	-	-	-	-	-	-	-	-	-	-	-	-	5.1	A
	16	Maybell Av./El Camino Wy.	14.9	B	15	B	15.2	B	15	B	14.6	B	14.8	B	19.4	B
	17	Charleston Rd./Arastadero Rd.	65.7	E	67	E	62	E	62.3	E	61.9	E	64.1	E	59.6	E
	80	Deodar St.	-	-	-	-	-	-	-	-	-	-	-	-	4.3	A
	18	Dinahs Ct.	9.5	A	9.4	A	9.2	A	9.2	A	9.2	A	8.7	A	9.5	A
	19	Los Altos Av./Cesano Ct.	15.1	B	15.2	B	15.2	B	15.2	B	14.8	B	14.2	B	15.4	B
	20	Del Medio Av.	20.5	C	20.5	C	20.7	C	20.8	C	20.1	C	16.8	**B**	22.6	C
Los Altos	21	San Antonio Rd.	86.2	F	87.4	F	87.1	F	87.2	F	85.4	F	70.2	**E***	77.6	**E***
Mountain View	22	Showers Dr./Los Altos Sq.	29.1	C	29	C	29	C	29.1	C	29	C	71.1	E*	46.6	D*
	23	Jordan Av.	6.1	A	6.1	A	6.1	A	6.1	A	6.2	A	8.4	A	8.4	A
	24	Ortega Av.	11.7	B	11.5	B	11.6	B	11.7	B	11.5	B	n/a	n/a	n/a	n/a
	81	Distel Cir.	-	-	-	-	-	-	-	-	-	-	7.4	A	9	A
	25	Distel Dr.	7.1	A	7	A	7	A	7.1	A	7	A	n/a	n/a	n/a	n/a
	26	Rengstorff Av.	20.7	C	19.5	**B**	19.5	**B**	19.6	**B**	19.1	**B**	25.1	C	25.1	C
	82	Clark Ave.	8.3	A	6.9	A	6.8	A	6.9	A	7	A	6.6	A	9.9	A
	27	Escuela Av.	22.6	C	21.6	C	21.4	C	21.3	C	21.8	C	23.5	C	24.1	C
	28	El Monte Av.	24.8	C	19.8	**B**	20	C	20.1	C	20.3	C	23.4	C	24.3	C
	29	Shoreline Bl. /Miramonte Av.	79.1	E	78.9	E	79	E	79.6	E	76.7	E	69.9	E	71	E
	30	Castro St.	71.9	E	75	E	71	E	75.4	E	74.4	E	53.9	**D***	54.2	**D***

	83	Bonita Ave.	-	-	-	-	-	-	-	-	-	-	5.7	A	5.1	A
	31	Calderon Av./Phyllis Av.	49.8	D	48.1	D	49.4	D	48.4	D	48.5	D	53.3	D	52.8	D
	32	Hwy 237/Grant Rd.	72.7	E	72.5	E	71.7	E	71.9	E	68.2	E	54.9	**D***	54.7	**D***
	33	The Americana / Sylvan Av.	35.6	D	35.7	D	35.4	D	35.5	D	34	C	35.3	D	37.3	D
Sunnyvale	34	Bernardo Av.	41.3	D	41.7	D	40.9	D	41.3	D	47	D	45.9	D	45.7	D
	35	Grape Av.	13.8	B	13.8	B	13.9	B	14	B	15.7	B	15.6	B	15.7	B
	36	Mary Av.	86.6	F	88.9	F	85.4	F	87.9	F	79.6	**E***	76.8	**E***	76.8	**E***
	37	Hollenbeck Av.	32.2	C	32.3	C	32.2	C	32.3	C	33.6	C	33.6	C	33.5	C
	38	Mathilda Av.	100	F	99.9	F	96.7	F	96.8	F	78.1	**E***	76.9	**E***	76.5	**E***
	39	Murphy Av.	1.7	A	1.7	A	1.7	A	1.7	A	-	-	-	-	-	-
	40	Sunnyvale Av./Sunnyvale Saratoga Rd.	59.8	E	59.7	E	59.4	E	59.6	E	55.9	E	55.8	E	56	E
	41	Cezanne Dr.	17.4	B	17.4	B	17	B	17	B	19.1	B	19.1	B	19.1	B
	42	Fair Oaks Av./Remington Dr.	82.6	F	84.3	F	83	F	84.3	F	78.6	**E***	80	**E***	79.7	**E***
	43	Maria Ln	20.2	C	20.3	C	19.5	**B**	19.5	**B**	27.7	C	27.4	C	27.5	C
	44	Wolfe Rd.	58	E	58.3	E	49	**D***	49.2	**D***	46.9	**D***	47.3	**D***	47.1	**D***
	45	Poplar Av.	20.1	C	20	C	15	**B**	15	**B**	19.5	**B**	19.4	**B**	19.5	**B**
	46	Henderson Av.	14	B	14	B	15.5	B	15.3	B	20.5	C	20.4	C	20.5	C
Santa Clara	47	Halford Av.	24	C	24	C	29.1	C	29.1	C	26.2	C	26.4	C	26.2	C
	48	Lawrence Exp. SB Ramp	17	B	16.9	B	14.1	B	14.1	B	15.3	B	14.9	B	15.1	B
	49	Lawrence Exp. NB Ramp	21.8	C	21.8	C	25.5	C	25.6	C	24.7	C	24.8	C	25.3	C

	50	Lawrence Square	3.2	A	3.2	A	1.7	A	1.7	A	1.8	A	1.8	A	1.7	A
	51	Flora Vista Av.	17.2	B	17.7	B	27.9	C	28	C	26.8	C	30	C	27.4	C
	52	Nobili Av.	4.8	A	4.8	A	6.1	A	6.1	A	5.7	A	5.7	A	5.7	A
	53	Pomeroy Av.	17.3	B	17.4	B	15.4	B	15.4	B	15.3	B	15.4	B	15.6	B
	54	Calabazas Blvd.	26	C	26	C	25.5	C	25.6	C	25.4	C	25.5	C	25.5	C
	55	Kiely Blvd./Bowers Av.	101.9	F	104.7	F	107.3	F	107.7	F	105.1	F	104.1	F	104.1	F
	56	Bowe Av.	12.1	B	12	B	15.9	B	15.8	B	15.9	B	15.9	B	15.9	B
	57	San Tomas Exp.	100.9	F	99.3	F	127.4	F	127.2	F	126.9	F	126.6	F	127.1	F
	58	Los Padres Blvd.	31.7	C	31.8	C	37.7	D*	38.2	D*	36.1	D*	35.9	D*	36.4	D*
	84	McCormick Dr.	9.1	A	9.1	A	15.8	B	14.7	B	15.4	B	15.9	B	15.3	B
	59	Scott Blvd.	87.6	F	89.2	F	104.7	F	104	F	104.2	F	102	F	102.2	F
	60	Lincoln St.	29.3	C	29.3	C	31.5	C	31.1	C	31.2	C	31.5	C	31.5	C
	61	Monroe St.	39.1	D	39.2	D	73.4	E*	74.6	E*	74.8	E*	74.2	E*	74	E*
	62	Lafayette St.	93.9	F	93.9	F	88.6	F	89.4	F	87.5	F	87	F	87.5	F
	63	Benton St.	37.4	D	36.5	D	38.5	D	36.7	D	39.1	D	36.7	D	39.2	D
	64	Palm Dr.	18.3	B	18.3	B	18.2	B	18.2	B	18.3	B	18.2	B	18.3	B
	65	Campbell Av. (Accolti Wy.)	20.4	C	20.5	C	20.5	C	20.5	C	20.5	C	20.4	C	20.4	C
	66	The Alameda (Rte 82)	42.8	D	43.8	D	40.7	D	40.5	D	39.6	D	39.2	D	38.9	D
San Jose	67	Newhall St.	65.5	E	66.8	E	64.8	E	65.2	E	63.9	E	63.5	E	63.7	E
	68	Hwy 880 (S)	21	C	21	C	20.3	C	20.2	C	19.6	**B**	20.4	C	19.5	**B**
	69	Hwy 880 (N)	13.9	B	14	B	14	B	13.9	B	13.8	B	14	B	13.9	B

	70	Hedding St.	131.5	F	130.6	F	130.4	F	131.3	F	130.1	F	129.7	F	129.9	F
	71	Naglee Av.	135.5	F	136.1	F	133.8	F	134.4	F	133.3	F	132.8	F	133.1	F
	72	Lenzen Av.	9.5	A	9.5	A	9.6	A	9.7	A	9.7	A	9.6	A	9.6	A
	73	Julian St.	21.1	C	21	C	21	C	21.1	C	21.1	C	20.9	C	21.2	C
	74	Martin and Race St.	33.8	C	33.8	C	33.9	C	33.9	C	33.9	C	33.9	C	33.9	C

Notes

Intersections experiencing an improvement in LOS are indicated in **bold**, while intersections experiencing a decline in LOS are indicated in <u>underline</u>. An asterisk (*) is used to identify affected intersections operating at LOS D, E, or F.

Source: DKS Associates 2014

Attachment C. El Camino Real Intersection Delay and LOS (horizon year, 2040 PM)

Location	#	Intersection	Alt 1		Alt 2		Alt 3a		Alt 3b		Alt 4a		Alt 4b		Alt 4c	
Palo Alto	1	Palm Dr.	29.6	C	29.8	C	29.7	C	29.7	C	29.8	C	29.7	C	23.7	C
	2	University Av.	26.9	C	27	C	26.9	C	27	C	27	C	26.3	C	23.1	C
	3	Homer Av. (Medical Foundation)	25.6	C	25.7	C	25.7	C	25.7	C	25.7	C	25.9	C	27.5	C
	4	Embarcadero Rd./Galvez St.	109.2	F	110.3	F	109.5	F	109.2	F	109.1	F	104.9	F	117	F
	5	Churchill Av.	18.5	B	18.5	B	18.5	B	18.5	B	18.5	B	18.4	B	25.8	C
	6	Park Bl./Serra St.	20.6	C	20.7	C	20.6	C	20.7	C	20.6	C	20.5	C	27.4	C
	7	Stanford Av.	60.9	E	60.6	E	60.9	E	60.8	E	60.6	E	60.8	E	49.8	**D***
	76	College Ave.	-	-	-	-	-	-	-	-	-	-	-	-	9.8	A
	8	Cambridge Av.	14	B	14	B	13.9	B	14.1	B	14	B	13.8	B	-	-
	9	California Av.	21.1	C	21.7	C	21.1	C	21.4	C	21.5	C	21.5	C	39.1	D*
	10	Page Mill Rd./Oregon Exp.	117	F	117.9	F	116.4	F	117.1	F	115.5	F	108.7	F	143.9	F
	11	Portage Av.	21.2	C	21.1	C	21.2	C	21.1	C	21.2	C	21.8	C	18.9	**B**
	75	Hansen Way	25.7	C	25.8	C	25.7	C	25.7	C	25.6	C	24	C	27.4	C
	12	Matadero Av./Margarita Av.	20.3	C	20.5	C	20.3	C	20.3	C	20.2	C	19.9	**B**	22.2	C
	77	Wilton Ave.	-	-	-	-	-	-	-	-	-	-	-	-	6.6	A
	78	Barron Ave.	-	-	-	-	-	-	-	-	-	-	-	-	6.6	A
	13	Curtner Av.	3.8	A	3.8	A	3.8	A	3.8	A	3.7	A	3.5	A	n/a	n/a
	14	Ventura Av.	11	B	11	B	11	B	11.1	B	11	B	11.3	B	17.3	B

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2040 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2040) OPTIMIZED TIMING		Alt 2 (2040) OPTIMIZED TIMING		Alt 3a (2040) OPTIMIZED TIMING		Alt 3b (2040) OPTIMIZED TIMING		Alt 4a (2040) OPTIMIZED TIMING		Alt 4b (2040) OPTIMIZED TIMING		Alt 4c (2040) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	Alma St at Lytton Ave	Palo Alto	13.7	B	13.6	B	13.7	B	16.1	B	16.2	B	16.2	B	16.2	B	16.3	B	16.1	B	16.1	B
2	Alma St at Hamilton Ave		18.4	B	18.2	B	17.4	B	28.8	C	29.2	C	28.2	C	28.3	C	28.2	C	28.7	C	29.9	C
3	Alma St at Homer Ave		9.8	A	9.8	A	9.8	A	10.1	B	10.1	B	10.1	B	10.1	B	10.1	B	10.1	B	11.3	B
4	Alma St at Addison Ave*		40.9	E	40.7	E	46.2	E	311.7	F	313.9	F	309.0	F	305.2	F	294.5	F	323.8	F	692.8	F
5	Alma St at Lincoln Ave*		41.9	E	41.8	E	36.9	E	69.8	F	72.0	F	70.9	F	69.8	F	70.6	F	73.3	F	110.6	F
6	Alma St at Kingsley Ave*		36.0	E	36.6	E	339.6	F	972.3	F	971.1	F	971.3	F	964.8	F	n/a	F	n/a	F	n/a	F
7	Alma St at Melville Ave*		18.4	C	18.4	C	20.9	C	42.1	E	39.0	E	37.9	E	37.7	E	38.1	E	40.3	E	65.8	F
8	Alma St at Churchill Ave		56.2	E	56.2	E	62.5	E	82.4	F	84.5	F	83.8	F	83.5	F	83.0	F	84.4	F	115.9	F
9	Alma St at California Ave*		21.1	C	21.1	C	25.8	D	30.5	D	30.7	D	30.4	D	30.2	D	30.2	D	31.4	D	46.1	E
10	Alma St at Colorado Ave*		25.8	D	25.8	D	33.1	D	45.7	E	45.6	E	46.0	E	46.0	E	45.3	E	44.4	E	58.6	F
11	Alma St at Loma Verde Ave*		139.3	F	139.2	F	271.5	F	487.7	F	486.9	F	484.7	F	487.7	F	481.5	F	466.6	F	646.0	F
12	Alma St at Meadow Dr		44.8	D	44.9	D	70.2	E	116.0	F	117.5	F	114.0	F	115.8	F	116.0	F	116.0	F	113.6	F
13	Alma St at Charleston Rd		108.3	F	108.3	F	132.8	F	242.2	F	243.6	F	243.3	F	243.1	F	244.9	F	266.9	F	245.0	F
14	Cowper St at Lincoln Ave*		10.1	B	10.1	B	9.9	A	13.6	B	13.6	B	13.6	B	13.6	B	13.6	B	13.7	B	15.1	C
15	Cowper St at Embarcadero Rd*		28.2	D	28.1	D	38.3	E	122.3	F	122.2	F	113.7	F	120.1	F	112.2	F	129.2	F	235.6	F
16	Cowper St at Churchill Ave*		7.9	A	7.9	A	8.0	A	8.4	A	8.4	A	8.4	A	8.4	A	8.4	A	8.4	A	9.1	A
17	Cowper St at California Ave*		10.8	B	10.8	B	11.0	B	12.3	B	12.4	B	12.3	B	12.3	B	12.3	B	12.4	B	14.0	B
18	Cowper St at Oregon Expy		12.7	B	12.7	B	13.1	B	31.0	C	31.2	C	30.1	C	30.6	C	29.0	C	28.1	C	47.7	D
19	Waverley St at Lincoln Ave*		8.3	A	8.3	A	8.3	A	8.7	A	8.7	A	8.7	A	8.8	A	8.7	A	8.7	A	8.9	A
20	Waverley St at Embarcadero Rd		6.8	A	6.8	A	7.2	A	7.3	A	7.2	A	7.3	A	7.3	A	7.3	A	7.2	A	7.1	A
21	Waverley St at Churchill Ave*		8.7	A	8.7	A	8.9	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0	A	10.0	A
22	Waverley St at Colorado Ave*		7.5	A	7.5	A	7.5	A	7.7	A	7.6	A	7.6	A	7.7	A	7.6	A	7.6	A	7.8	A
23	Waverley St at Loma Verde Ave*		12.4	B	12.4	B	12.4	B	13.0	B	12.9	B	12.9	B	12.8	B	12.8	B	12.8	B	13.4	B
24	Waverley St at Meadow Dr		5.2	A	5.2	A	5.2	A	5.6	A	5.6	A	5.6	A	5.6	A	5.6	A	5.5	A	5.9	A
25	Bryant St at Lincoln Ave*		10.1	B	10.1	B	9.9	A	11.6	B	11.6	B	11.7	B	11.7	B	11.6	B	11.8	B	11.6	B
26	Bryant St at Embarcadero Rd		2.8	A	2.8	A	2.8	A	3.8	A	3.8	A	3.8	A	3.8	A	3.9	A	3.8	A	4.7	A
27	Bryant St at Churchill Ave*		10.6	B	10.6	B	10.6	B	11.0	B	11.0	B	11.0	B	11.0	B	11.0	B	11.0	B	11.5	B
28	Bryant St at California Ave*		8.0	A	8.0	A	8.0	A	8.2	A	8.2	A	8.2	A	8.2	A	8.2	A	8.2	A	8.3	A
29	Hanover St at California Ave*		12.2	B	12.2	B	13.4	B	14.7	B	14.6	B	14.5	B	14.5	B	14.6	B	14.6	B	15.3	C
30	Hanover St at Oregon/Page Mill Rd		48.6	D	48.6	D	54.6	D	67.7	E	67.4	E	67.6	E	67.5	E	66.6	E	68.5	E	79.0	E
31	Alma St at the Circle East*		18.9	C	18.7	C	23.7	C	40.3	E	40.2	E	39.4	E	41.3	E	39.9	E	33.4	D	596.3	F
32	The Circle at University Ave*		13.6	B	13.6	B	14.0	B	14.1	B	14.1	B	14.1	B	14.1	B	14.1	B	13.9	B	15.6	C
33	Alma St at Channing Ave*		0.7	A	0.7	A	0.8	A	1.2	A	1.2	A	1.2	A	1.2	A	1.2	A	1.2	A	1.4	A
34	Alma St at Embarcadero Rd*		15.1	C	15.0	B	15.3	C	17.9	C	17.8	C	17.8	C	17.8	C	17.8	C	18.6	C	18.8	C
35	Bryant St at Addison Ave*		10.2	B	10.2	B	10.1	B	11.6	B	11.6	B	11.5	B	11.6	B	11.6	B	11.6	B	11.6	B
36	Bryant St at Channing Ave*		8.6	A	8.6	A	8.7	A	9.9	A	9.9	A	9.9	A	9.9	A	9.9	A	9.9	A	10.0	A
37	Birch St at California Ave*		10.2	B	10.2	B	10.4	B	11.7	B	11.8	B	11.8	B	11.8	B	11.8	B	11.8	B	12.0	B
38	Wilkie Way at Charleston Rd		4.3	A	4.3	A	4.3	A	6.0	A	6.1	A	6.0	A	6.1	A	6.0	A	5.9	A	6.7	A
39	El Camino Way at James Rd*		10.8	B	10.8	B	10.7	B	11.1	B	11.1	B	11.2	B	11.1	B	11.1	B	11.0	B	11.0	B
40	Amaranta Ave at Georgia Ave*		7.6	A	7.6	A	7.7	A	8.1	A	8.0	A	8.0	A	8.1	A	8.1	A	8.0	A	8.4	A
41	Stanford Ave at Park Blvd*		7.1	A	7.1	A	7.1	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.2	A	7.4	A

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2040 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2040) OPTIMIZED TIMING		Alt 2 (2040) OPTIMIZED TIMING		Alt 3a (2040) OPTIMIZED TIMING		Alt 3b (2040) OPTIMIZED TIMING		Alt 4a (2040) OPTIMIZED TIMING		Alt 4b (2040) OPTIMIZED TIMING		Alt 4c (2040) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
42	San Antonio Rd at California St	Mountain View	39.6	D	39.6	D	42.1	D	91.0	F	90.7	F	90.4	F	90.0	F	89.8	F	90.4	F	92.7	F
43	Jordan Ave at Marich Way*		9.5	A	9.5	A	9.5	A	9.8	A	9.8	A	9.8	A	9.8	A	9.8	A	9.4	A	9.7	A
44	Showers Dr at California St		23.2	C	23.2	C	24.1	C	27.7	C	27.9	C	27.8	C	27.8	C	27.5	C	32.3	C	30.1	C
45	Showers Dr at Latham St*		13.5	B	13.5	B	13.5	B	14.0	B	14.0	B	13.9	B	14.0	B	13.9	B	17.2	C	15.0	B
46	Ortega Ave at California St		5.1	A	5.1	A	5.3	A	7.6	A	7.8	A	7.5	A	7.5	A	7.4	A	15.0	B	10.1	B
47	Ortega Ave at Latham St*		8.7	A	8.7	A	8.7	A	9.7	A	9.8	A	9.7	A	9.7	A	9.7	A	14.3	B	10.6	B
48	Escuela Ave at Latham St*		11.6	B	11.6	B	12.2	B	15.7	C	15.7	C	15.8	C	15.6	C	15.7	C	16.1	C	16.0	C
49	Rengstorff Ave at Central Expy		38.5	D	38.5	D	42.0	D	151.9	F	148.5	F	153.9	F	152.3	F	148.2	F	205.9	F	195.9	F
50	Rengstorff Ave at California St		29.8	C	29.8	C	31.7	C	63.0	E	63.3	E	63.1	E	63.4	E	62.7	E	72.5	E	66.5	E
51	Rengstorff Ave at Latham St		21.0	C	21.0	C	22.5	C	32.3	C	32.0	C	31.1	C	31.9	C	31.8	C	30.4	C	32.0	C
52	Escuela Ave at California St		20.8	C	20.8	C	21.2	C	36.3	D	37.0	D	35.6	D	36.3	D	35.6	D	50.4	D	44.0	D
53	Shoreline Blvd at Villa St		25.2	C	25.2	C	25.4	C	26.3	C	27.3	C	26.6	C	26.7	C	25.6	C	36.4	D	35.4	D
54	Shoreline Blvd at Dana St*		8.8	A	8.8	A	8.8	A	9.3	A	9.3	A	9.3	A	9.3	A	9.2	A	9.5	A	9.4	A
55	Shoreline Blvd at California St		33.9	C	33.9	C	36.2	D	114.7	F	115.1	F	110.5	F	115.7	F	111.5	F	139.3	F	128.2	F
56	Shoreline Blvd at Latham St		38.4	D	38.4	D	38.1	D	32.1	C	32.3	C	32.1	C	32.3	C	32.1	C	32.5	C	32.2	C
57	Miramonte Ave at Castro St		11.0	B	11.0	B	11.0	B	12.2	B	12.2	B	12.1	B	12.1	B	12.1	B	12.6	B	12.4	B
58	Miramonte Ave at Cuesta Dr		10.7	B	10.7	B	11.6	B	39.4	D	41.8	D	37.6	D	39.1	D	33.4	C	56.2	E	54.9	D
59	Castro St at Central Expy		40.9	D	40.9	D	44.0	D	155.5	F	151.5	F	154.3	F	155.9	F	153.1	F	191.1	F	207.2	F
60	Castro St at Evelyn Ave*		14.7	B	14.7	B	15.8	C	103.0	F	95.7	F	85.0	F	105.0	F	88.1	F	291.5	F	280.7	F
61	Castro St at Villa St		36.9	D	36.9	D	39.6	D	107.9	F	108.2	F	107.1	F	108.4	F	107.5	F	115.3	F	111.9	F
62	Castro St at Dana St		11.8	B	11.7	B	12.2	B	15.7	B	15.7	B	15.9	B	15.9	B	15.4	B	17.6	B	17.2	B
63	Castro St at California St		44.9	D	44.9	D	46.0	D	45.2	D	45.2	D	45.5	D	45.7	D	44.9	D	50.6	D	48.5	D
64	Calderon Ave at Evelyn St		11.6	B	11.6	B	12.0	B	15.2	B	15.3	B	15.3	B	15.4	B	15.1	B	16.9	B	16.9	B
65	Calderon Ave at Dana St		10.9	B	10.9	B	12.1	B	34.0	C	34.4	C	33.8	C	32.5	C	33.4	C	54.2	D	51.5	D
66	Evelyn St at SR 85 NB Ramp		8.1	A	8.1	A	9.1	A	13.7	B	13.7	B	13.3	B	13.0	B	15.6	B	35.6	D	32.6	C
67	Evelyn St at Ferry Morse Way		10.5	B	10.4	B	11.7	B	27.9	C	28.0	C	28.3	C	28.0	C	32.4	C	32.3	C	31.3	C
68	San Antonio Rd at Fayette Dr		17.1	B	17.1	B	17.2	B	40.3	D	40.1	D	40.4	D	37.7	D	39.3	D	46.9	D	40.5	D
69	Shoreline Blvd at Mercy St*		9.1	A	9.1	A	9.1	A	9.5	A	9.5	A	9.5	A	9.4	A	9.5	A	9.4	A	9.4	A
70	Grant Rd at Cuesta Dr		30.6	C	30.5	C	33.1	C	49.1	D	49.3	D	49.0	D	49.0	D	48.4	D	61.8	E	58.6	E
71	Grant Rd at Phyllis Ave		29.7	C	29.6	C	29.3	C	33.9	C	33.8	C	33.9	C	33.3	C	34.5	C	39.3	D	39.0	D
72	Central Expy and Whisman Station Dr		16.9	B	16.9	B	18.0	B	52.0	D	52.5	D	52.4	D	53.4	D	52.2	D	68.3	E	65.2	E
73	North Whisman Rd and Whisman Station Dr		17.3	B	17.3	B	17.5	B	30.3	C	30.2	C	30.9	C	30.3	C	28.3	C	32.9	C	32.7	C
74	237 ramps and S Whisman Rd/Ferry Morse Way		25.2	C	25.2	C	25.6	C	55.5	E	55.2	E	54.7	D	55.3	E	55.8	E	62.8	E	62.0	E
75	Mayfield Ave at Central Exwy		4.5	A	4.5	A	4.7	A	6.7	A	6.6	A	6.7	A	6.7	A	6.7	A	9.1	A	8.9	A
76	High School Way at Shoreline Blvd*		10.7	B	10.7	B	10.8	B	12.2	B	12.2	B	12.1	B	12.2	B	12.0	B	12.2	B	12.2	B
77	Cuesta Dr at Springer Rd*		68.2	F	67.8	F	77.7	F	104.5	F	104.0	F	104.2	F	103.4	F	103.0	F	134.7	F	126.4	F
78	Bernardo Ave at Knickerbocker Dr*		15.2	C	15.1	C	15.7	C	16.4	C	16.4	C	16.5	C	16.5	C	17.0	C	17.5	C	17.4	C
79	Miramonte and Sonia		3.6	A	3.6	A	3.7	A	7.6	A	7.9	A	7.6	A	7.7	A	7.3	A	8.4	A	8.6	A
80	Miramonte and Hans*		17.9	C	17.8	C	19.3	C	19.4	C	19.4	C	19.3	C	19.1	C	19.3	C	19.5	C	19.4	C
81	Miramonte and Barbara		7.2	A	7.2	A	7.2	A	8.1	A	8.1	A	8.0	A	8.0	A	8.0	A	8.1	A	8.1	A

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2040 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2040) OPTIMIZED TIMING		Alt 2 (2040) OPTIMIZED TIMING		Alt 3a (2040) OPTIMIZED TIMING		Alt 3b (2040) OPTIMIZED TIMING		Alt 4a (2040) OPTIMIZED TIMING		Alt 4b (2040) OPTIMIZED TIMING		Alt 4c (2040) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
82	El Monte at Cuesta	Los Altos	8.8	A	8.8	A	9.0	A	10.5	B	10.5	B	10.5	B	10.4	B	10.4	B	10.7	B	11.1	B
83	El Monte at Covington		21.8	C	21.8	C	22.1	C	23.9	C	24.0	C	24.0	C	24.1	C	24.2	C	24.4	C	24.7	C
84	San Antonio at Cuesta		30.4	C	30.4	C	31.4	C	47.8	D	47.7	D	46.7	D	47.0	D	45.5	D	50.1	D	56.2	E
85	Los Altos Ave and First Street		21.0	C	21.0	C	22.0	C	21.5	C	21.5	C	21.4	C	21.5	C	21.5	C	21.5	C	21.5	C
86	San Antonio Rd at Jordan Ave*		32.8	D	32.7	D	31.8	D	92.8	F	92.9	F	93.7	F	92.7	F	90.7	F	79.7	F	78.9	F

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			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
87	Evelyn Ave at Bernardo Ave	Sunnyvale	19.7	B	19.4	B	20.5	C	39.4	D	39.4	D	39.3	D	39.3	D	51.7	D	48.7	D	47.3	D
88	Evelyn Ave at Mary Ave		36.1	D	35.6	D	37.5	D	56.3	E	56.4	E	55.9	E	56.2	E	61.8	E	61.0	E	60.5	E
89	Evelyn Ave at Sunnyvale Ave		30.4	C	30.4	C	30.6	C	89.7	F	89.6	F	93.1	F	93.1	F	120.9	F	119.0	F	116.9	F
90	Washington Ave at Bernardo Ave		6.2	A	6.1	A	6.3	A	7.3	A	7.3	A	7.3	A	7.3	A	8.0	A	7.9	A	7.9	A
91	Washington Ave at Mary Ave		14.1	B	14.1	B	14.8	B	18.5	B	18.5	B	18.5	B	18.4	B	19.2	B	18.9	B	19.0	B
92	Iowa Ave at Bernardo Ave*		18.3	C	18.3	C	13.2	B	18.3	C	18.5	C	18.5	C	18.6	C	15.6	C	14.8	B	14.7	B
93	Iowa Ave at Mary Ave		8.5	A	8.5	A	9.2	A	11.3	B	11.3	B	10.7	B	10.7	B	11.6	B	11.5	B	11.5	B
94	Iowa Ave at Pastoria Ave		7.2	A	7.2	A	7.2	A	7.5	A	7.5	A	7.5	A	7.5	A	7.5	A	7.8	A	7.8	A
95	Olive Ave at Mary Ave*		19.6	C	19.4	C	19.1	C	49.7	E	46.2	E	42.5	E	43.3	E	50.8	F	49.5	E	50.9	F
96	Olive Ave at Pastoria Ave*		11.9	B	12.0	B	12.3	B	13.7	B	13.7	B	13.3	B	13.3	B	13.0	B	13.0	B	12.9	B
97	Evelyn Ave at Fair Oaks Ave		31.8	C	31.8	C	32.5	C	57.3	E	57.4	E	67.6	E	67.6	E	80.7	F	81.3	F	79.4	E
98	Evelyn Ave at Wolfe Rd		34.5	C	34.5	C	35.6	D	48.8	D	48.7	D	49.7	D	49.6	D	53.7	D	53.7	D	53.2	D
99	Evelyn Ave at Reed Ave		9.1	A	9.1	A	9.5	A	16.0	B	15.9	B	17.3	B	17.2	B	18.5	B	18.3	B	18.2	B
100	Reed Ave at Wolfe Rd		43.8	D	43.8	D	43.7	D	40.2	D	40.2	D	39.7	D	39.7	D	40.4	D	40.3	D	40.3	D
101	Iris Ave at Fair Oaks Ave		9.2	A	9.2	A	9.1	A	9.7	A	9.7	A	9.8	A	9.8	A	9.7	A	9.7	A	9.7	A
102	Iris Ave at Wolfe Rd		19.0	B	18.9	B	19.0	B	21.8	C	21.8	C	21.7	C	21.7	C	22.6	C	22.6	C	22.6	C
103	Iris Ave at Sequoia Dr*		11.8	B	11.7	B	12.4	B	14.8	B	14.7	B	14.3	B	14.3	B	16.7	C	17.1	C	16.7	C
104	Maria Ln at Wolfe Rd		15.9	B	15.9	B	16.2	B	15.6	B	15.6	B	16.7	B	16.7	B	16.3	B	16.0	B	16.3	B
105	Heatherstone Ave at Knickerbocker Dr*		10.3	B	10.3	B	10.4	B	11.6	B	11.6	B	11.6	B	11.6	B	12.2	B	12.1	B	12.0	B
106	Heatherstone Ave at Bernardo Ave		4.5	A	4.5	A	4.5	A	3.3	A	4.3	A	3.1	A	3.3	A	6.1	A	4.7	A	4.6	A
107	Heatherstone Ave at Mary Ave		3.2	A	3.2	A	3.2	A	5.1	A	5.0	A	4.9	A	5.0	A	5.8	A	5.0	A	5.0	A
108	Remington Dr at Bernardo Ave*		16.3	C	16.0	C	18.4	C	28.3	D	27.5	D	28.2	D	28.3	D	34.8	D	38.6	E	38.0	E
109	Remington Dr at Mary Ave		28.4	C	28.3	C	28.2	C	29.7	C	29.7	C	29.7	C	29.7	C	32.8	C	32.3	C	32.3	C
110	Remington Dr at Hollenbeck Ave		21.6	C	21.5	C	21.6	C	21.4	C	21.4	C	21.3	C	21.3	C	23.2	C	22.8	C	22.8	C
111	Remington Dr at Sunnyvale Saratoga Rd		64.3	E	63.9	E	66.4	E	68.6	E	68.6	E	69.2	E	69.0	E	79.3	E	78.3	E	77.5	E
112	Remington Dr at Manet Dr		12.7	B	12.8	B	13.0	B	14.7	B	14.7	B	14.8	B	14.8	B	16.3	B	15.4	B	15.4	B
113	Fremont Ave at Sunnyvale Saratoga Rd		73.5	E	73.7	E	97.9	F	62.2	E	63.1	E	63.0	E	62.0	E	63.8	E	62.9	E	63.3	E
114	Fremont Ave at Manet Dr		18.0	B	18.0	B	16.5	B	23.0	C	23.3	C	19.8	B	19.8	B	24.2	C	23.1	C	22.8	C
115	Fremont Ave at Wolfe Rd		33.4	C	33.4	C	26.6	C	46.3	D	46.2	D	46.8	D	47.1	D	91.1	F	77.8	E	78.5	E
116	Dartshire Way at Wolfe Rd*		30.4	D	30.1	D	26.2	D	475.4	F	476.1	F	n/a	F	n/a	F	554.0	F	484.4	F	493.9	F
117	Marion Way at Wolfe Rd		12.7	B	12.7	B	12.8	B	18.2	B	18.2	B	19.3	B	19.3	B	20.0	B	19.7	B	19.6	B
118	Iowa Ave/Sunnyvale Ave		11.9	B	11.9	B	11.9	B	12.6	B	12.7	B	12.6	B	12.6	B	12.4	B	12.3	B	12.3	B
119	Olive Ave/Sunnyvale Ave		13.3	B	13.3	B	13.4	B	15.4	B	15.4	B	15.2	B	15.2	B	14.8	B	14.7	B	14.7	B
120	Reed Ave/Timberpine Ave		13.6	B	13.6	B	13.7	B	18.8	B	18.7	B	20.0	B	20.0	B	21.2	C	21.0	C	20.8	C
121	Old San Francisco Rd at Fair Oaks Ave		36.5	D	36.3	D	36.3	D	38.5	D	38.5	D	39.7	D	39.7	D	40.2	D	40.3	D	40.2	D
122	Olive Ave at Fair Oaks Ave		12.7	B	12.7	B	12.7	B	18.4	B	18.4	B	18.5	B	18.6	B	18.7	B	18.8	B	18.8	B
123	Pastoria Ave at Evelyn Ave*		19.2	C	19.2	C	19.8	C	56.1	F	56.3	F	55.6	F	55.5	F	122.1	F	114.4	F	104.0	F
124	Sunset Ave at Evelyn Ave*		19.0	C	19.1	C	19.8	C	92.0	F	92.0	F	90.2	F	92.2	F	415.0	F	415.2	F	530.1	F
125	Crescent Ave at Sunnvale Saratoga Rd*		13.3	B	13.3	B	13.4	B	15.2	C	15.2	C	15.6	C	15.6	C	15.7	C	15.7	C	15.7	C
126	Dunford Way at Quail Ave*		13.3	B	13.3	B	13.2	B	13.6	B	13.6	B	13.2	B	13.4	B	14.6	B	14.3	B	14.4	B
127	Dunford Way at Lochinvar Ave*		15.9	C	15.9	C	16.6	C	19.4	C	19.2	C	19.8	C	19.7	C	21.3	C	21.0	C	21.1	C
128	S Frances St at Evelyn Ave		12.5	B	12.4	B	12.6	B	33.1	C	33.0	C	37.6	D	37.5	D	56.3	E	54.8	D	51.5	D

El Camino Off-Corridor Alternatives Signalized/Unsignalized Intersection LOS Comparison (with Optimized Signal Timing) - 2040 PM

ID	Study Intersection	City	Existing (2013)		Existing (2013) + Project (Alt 2)		Existing (2013) + Project (Alt 4c)		Alt 1 (2040) OPTIMIZED TIMING		Alt 2 (2040) OPTIMIZED TIMING		Alt 3a (2040) OPTIMIZED TIMING		Alt 3b (2040) OPTIMIZED TIMING		Alt 4a (2040) OPTIMIZED TIMING		Alt 4b (2040) OPTIMIZED TIMING		Alt 4c (2040) OPTIMIZED TIMING	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
129	Lawrence Expy at Cabrillo Ave	Santa Clara	92.6	F	92.5	F	107.0	F	106.4	F	106.4	F	127.7	F	127.9	F	119.0	F	118.1	F	117.9	F
130	Bowers Ave at Cabrillo Ave		27.1	C	27.1	C	27.2	C	36.1	D	36.0	D	36.7	D	36.8	D	37.3	D	37.2	D	37.1	D
131	Los Padres Blvd at Cabrillo Ave*		8.5	A	8.5	A	8.5	A	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A	8.9	A
132	Monroe St at Cabrillo Ave*		16.2	C	16.2	C	16.2	C	22.9	C	23.1	C	29.1	D	29.1	D	29.6	D	29.6	D	29.6	D
133	Bowers Ave at Monroe St		51.4	D	51.4	D	51.0	D	39.5	D	39.5	D	43.4	D	43.2	D	44.9	D	44.7	D	44.1	D
134	Los Padres Blvd at Monroe St		4.6	A	4.6	A	4.6	A	5.3	A	5.3	A	5.2	A	5.2	A	5.3	A	5.3	A	5.3	A
135	Scott Blvd at Monroe St		34.0	C	34.0	C	34.3	C	41.0	D	40.9	D	45.9	D	45.7	D	46.5	D	46.2	D	46.2	D
136	Los Padres Blvd at Warburton Ave*		8.5	A	8.5	A	8.5	A	9.0	A	8.9	A	9.0	A	9.0	A	9.0	A	9.0	A	9.0	A
137	Scott Blvd at Warburton Ave		13.1	B	13.1	B	13.2	B	12.8	B	12.8	B	13.2	B	13.0	B	13.0	B	13.1	B	13.0	B
138	Lincoln St at Warburton Ave*		9.5	A	9.5	A	9.5	A	9.6	A	9.6	A	9.6	A	9.6	A	9.6	A	9.6	A	9.6	A
139	Monroe St at Warburton Ave*		15.8	C	15.8	C	15.8	C	18.5	C	18.6	C	20.5	C	20.5	C	20.8	C	20.2	C	20.2	C
140	Lafayette St at Warburton Ave*		20.3	C	20.2	C	20.6	C	35.6	E	35.7	E	35.9	E	35.9	E	36.0	E	36.0	E	35.9	E
141	Flora Vista Ave at Granada Ave*		8.4	A	8.4	A	8.1	A	8.1	A	8.1	A	8.6	A	8.6	A	8.5	A	8.5	A	8.5	A
142	Pomeroy Ave at Granada Ave/Calabazas Blvd*		28.3	D	28.3	D	29.0	D	25.6	D	25.4	D	29.4	D	29.4	D	28.9	D	28.6	D	28.6	D
143	Lincoln St at Lewis St*		11.9	B	11.9	B	12.0	B	17.0	C	16.9	C	16.0	C	16.0	C	16.0	C	15.9	C	16.0	C
144	Monroe St at Lewis St		9.9	A	9.9	A	9.9	A	9.7	A	9.6	A	10.6	B	10.7	B	10.6	B	10.2	B	10.6	B
145	Lawrence Expy at Benton St		64.2	E	63.7	E	66.6	E	84.0	F	83.9	F	96.8	F	96.8	F	95.5	F	96.5	F	94.1	F
146	Pomeroy Ave at Benton St		9.8	A	9.8	A	10.0	A	11.0	B	11.0	B	12.1	B	12.1	B	11.9	B	11.9	B	11.8	B
147	Kiely Blvd at Benton St		31.4	C	31.3	C	33.5	C	41.9	D	42.2	D	51.8	D	52.1	D	50.3	D	50.0	D	49.9	D
148	San Tomas Expy at Benton St		80.9	F	80.9	F	86.0	F	246.3	F	245.9	F	256.0	F	255.9	F	256.4	F	256.1	F	256.1	F
149	Los Padres Blvd at Benton St*		13.6	B	13.6	B	13.6	B	16.6	C	16.6	C	17.2	C	17.1	C	16.7	C	16.7	C	16.6	C
150	Scott Blvd at Benton St		20.8	C	20.8	C	20.7	C	30.3	C	30.3	C	29.9	C	29.7	C	29.2	C	29.1	C	29.0	C
151	Lincoln St at Benton St		14.4	B	14.4	B	14.3	B	15.3	B	15.4	B	15.6	B	15.4	B	15.4	B	15.4	B	15.4	B
152	Monroe St at Benton St		13.2	B	13.2	B	13.1	B	14.2	B	14.2	B	14.1	B	14.1	B	14.1	B	14.1	B	14.1	B
153	Poinciana Dr at Halford Ave*		9.1	A	9.1	A	9.5	A	9.6	A	9.5	A	12.0	B	12.0	B	10.3	B	10.3	B	10.3	B
154	Flora Vista Ave at Benton St*		30.0	D	30.0	D	27.8	D	41.6	E	41.8	E	56.5	F	57.0	F	52.4	F	51.7	F	51.2	F
155	Calabazas Blvd at Barkley Ave*		9.1	A	9.1	A	9.1	A	9.1	A	9.1	A	9.0	A	9.0	A	9.0	A	9.1	A	9.0	A
156	Scott Blvd at Cabrillo Ave*		35.3	E	35.2	E	38.0	E	n/a	F	n/a	F	n/a	F	n/a	F	n/a	F	n/a	F	n/a	F
157	Lewis St at Lafayette St		75.0	E	75.0	E	75.7	E	85.7	F	84.6	F	82.7	F	82.3	F	82.1	F	82.3	F	83.0	F
158	Lafayette St at Benton St		57.7	E	57.8	E	58.4	E	84.7	F	81.9	F	80.8	F	81.2	F	80.5	F	80.3	F	80.4	F
159	De La Cruz Blvd at Matthew St*		57.2	F	57.6	F	55.7	F	328.0	F	328.5	F	392.1	F	383.6	F	400.2	F	400.8	F	414.1	F
160	De La Cruz Blvd at Reed St		23.1	C	23.1	C	22.9	C	50.1	D	49.8	D	49.5	D	48.8	D	50.2	D	50.2	D	50.6	D
161	Cabrillo Ave at San Tomas Expy		23.0	C	23.0	C	22.7	C	29.7	C	29.7	C	32.1	C	32.0	C	33.4	C	33.2	C	33.2	C
162	Halford Ave at Tamarack Ln*		9.2	A	9.2	A	9.4	A	9.3	A	9.3	A	10.6	B	10.5	B	9.5	A	9.5	A	9.5	A
163	Halford Ave at Lillick Dr*		8.5	A	8.5	A	8.3	A	8.9	A	8.9	A	9.6	A	9.7	A	8.7	A	8.8	A	8.7	A
164	Benton and Wood Duck*		9.2	A	9.2	A	9.2	A	11.2	B	11.2	B	11.8	B	11.8	B	11.6	B	11.5	B	11.5	B

HCM 2000 Capacity Analysis procedures are reported for all intersections. Overall intersection Delay/LOS is reported for signalized intersections.
* HCM Unsignalized Capacity Analysis displays the intersection approach with the greatest average delay (in seconds) and corresponding level of service