

**PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation**

<b>RTIP ID#</b> <i>(required)</i> 230419									
<b>TIP ID#</b> <i>(required)</i> REG090003									
<b>Air Quality Conformity Task Force Consideration Date</b> September 25, 2012									
<b>Project Description</b> <i>(clearly describe project)</i>  As part of the Freeway Performance Initiative (FPI) Program, this project will install and widen on-ramps for ramp metering and install traffic operations system (TOS) at various locations throughout the Bay Area--specifically in Santa Clara County. The FPI Program projects, covering a total of 429 locations throughout the Bay Area, were presented to the Air Quality Conformity Task Force on April 28, 2011 and February 23, 2012. Both consultations resulted in the determination that the FPI Program projects are not projects of air quality concern. The current FPI project, which covers 15 locations in Santa Clara County, is part of the larger FPI Program. The improvements and impacts for these 15 locations are similar to the improvements and impacts for the 429 locations previously considered by the Task Force. All work will be completed within the existing right-of-way; no additional right-of-way will be acquired.									
<b>Type of Project:</b> Change to existing State highway.									
<b>County</b>	<b>Narrative Location/Route &amp; Postmiles</b>								
Santa Clara	Various locations throughout Santa Clara County								
<b>Lead Agency:</b> California Department of Transportation on behalf of MTC									
<b>Contact Person</b>	<b>Phone#</b>	<b>Fax#</b>	<b>Email</b>						
Lauren Bobadilla	408-321-5776	408-321-5787	Lauren.bobadilla@vta.org						
<b>Federal Action for which Project-Level PM Conformity is Needed</b> <i>(check appropriate box)</i>									
<input checked="" type="checkbox"/>	<b>Categorical Exclusion (NEPA)</b>	<input type="checkbox"/>	<b>EA or Draft EIS</b>	<input type="checkbox"/>	<b>FONSI or Final EIS</b>	<input type="checkbox"/>	<b>PS&amp;E or Construction</b>	<input type="checkbox"/>	<b>Other</b>
<b>Scheduled Date of Federal Action:</b> September 2012									
<b>NEPA Delegation – Project Type</b> <i>(check appropriate box)</i>									
<input checked="" type="checkbox"/>	<b>Exempt</b>	<input type="checkbox"/>	<b>Section 6004 – Categorical Exemption</b>	<input checked="" type="checkbox"/>	<b>Section 6005 – Non-Categorical Exemption</b>				
<b>Current Programming Dates</b> <i>(as appropriate)</i>									
	<b>PE/Environmental</b>	<b>ENG</b>	<b>ROW</b>	<b>CON</b>					
<b>Start</b>	3/2011	7/2011	3/2011	06/2014					
<b>End</b>	12/2012	6/2014	6/2014	12/2016					
<b>Project Purpose and Need (Summary):</b> <i>(please be brief)</i> The FPI Program will install ramp metering and TOS elements at various corridors throughout the bay area that will improve the operations, safety, and management of the Bay Area’s freeway system without a large amount of capital investment. It will maximize the efficiency and improve the management and reliability of the existing freeway infrastructure, while not expanding the freeway system but widening only selected on-ramp locations.									

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

A map showing the land uses in the various corridors are shown in Figure 1.

### **Brief summary of assumptions and methodology used for conducting analysis.**

Data presented in this form is based on MTC's latest travel demand forecast model, used for 2011 TIP projects, to estimate vehicle activity in the Bay Area. The MTC travel demand model requires various inputs, demographic assumptions, pricing assumptions, travel behavior assumptions and highway and transit network assumptions. This analysis uses the latest socioeconomic/land use forecast series, Projections 2009, developed and adopted by AGAB in March 2009, and the latest validated version of the MTC travel demand model.

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

Traffic data is provided and various for the region. See *Table 2, 2015 Ramp Traffic Data Opening Year*, for ramps and *Table 4, 2015 Mainline Traffic Data Opening Year* for freeway mainline segments. In the opening year, LOS will either improve or remain the same at all 15 ramps. In the opening year, LOS will either improve or remain the same for all 15 mainline segments.

### **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**

Traffic data is provided and various for the region. See *Table 3 2035 Ramp Traffic Data RTP Horizon Year*, for ramps and *Table 5, 2035 Mainline Traffic RTP Horizon Year*, for freeway mainline segments.

In the year 2035, LOS will either improve or remain the same at 14 ramps and drop slightly at 1 ramp. In the year 2035, LOS will either improve or remain the same for all 15 mainline segments.

### **Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

N/A

### **RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

N/A

### **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**

N/A

### **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**

N/A

### **Describe potential traffic redistribution effects of congestion relief** (*impact on other facilities*)

No potential traffic redistribution is intended as the ramp metering system planned for implementation will be along the whole freeway corridor to minimize any diversion along the local street system (every ramp along the corridor will be metered).

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### Comments/Explanation/Details *(please be brief)*

The project does not fit the definition of a project of air quality concern as defined by 40 CFR 93.126(b)(1) or 40 CFR 93.128.

- (i) The project is not a new freeway or a highway expansion project. It does not significantly increase the volume or percentage of diesel vehicles. The proposed Ramp Metering and TOS Projects are non-capacity increasing projects. Metering and TOS are intended to maximize the efficiency and improve the management and reliability of the existing freeway infrastructure without widening the freeways. Metering will also improve the weave and merge operations on the freeway mainline. Selected on-ramps are planned to be widened for HOV preferential treatment or for storage capacity at the on-ramps behind the ramp metering limit line. HOV lanes will provide preferential treatment for buses and carpools.
- (ii) The project does not affect intersections with LOS of D, E, or F that have a significant number of diesel vehicles. The truck percentages are low on the ramps (see tables 2 and 3). The ramp meters will be in operation only during the AM and/or PM peak periods when diesel truck traffic may be limited due to congested freeways and local arterials. Queues at metered on-ramps will be confined to the on-ramps or on dedicated lanes on the local streets without impact to local street through movements. If queues start spilling onto local street intersections, the metering system will adjust by metering at a higher rate without affecting the local streets with the use of end-of-queue detectors (installed at the entrance of on-ramps). The freeway mainline with the metering system implemented should either perform as it is currently without the metering system or better, by breaking up platoons and metering for bottlenecks along the freeway corridors.
- (iii) The project does not construct new bus or rail terminals. It does not construct any transfer points where a significant number of diesel vehicles will congregate.
- (iv) The project does not expand bus or rail terminals or diesel vehicle transfer points.
- (v) There is currently no implementation plan for PM 2.5 for this region. The project is not in and does not affect areas that will potentially be identified in the PM 2.5 implementation plan as sites of violation or possible violation.

## ATTACHMENTS

Figure 1	Map of Project Area and Land Uses
Table 1	Ramp Metering Locations and Configurations
Table 2	2015 Ramp Traffic Data Opening Year -- Build/No-Build
Table 3	2035 Ramp Traffic Data RTP Horizon Year -- Build/No-Build
Table 4	2015 Mainline Traffic Data Opening Year -- Build/No-Build
Table 5	2035 Mainline Traffic Data RTP Horizon Year -- Build/No-Build

### Notes:

Data presented in this form is based on MTC's latest travel demand forecast model used for 2011 TIP projects to estimate vehicle activity in the Bay Area. The MTC travel demand model requires various inputs, demographic assumptions, pricing assumptions, travel behavior assumptions and highway and transit network assumptions. This analysis uses the latest socioeconomic/land use forecast series, Projects 2009, developed and adopted by ABAG in March 2009, and the latest validated version of the MTC travel demand model.

The ramps are described in Table 1 and are assigned an ID number. Traffic data for each ramp is referenced to the ID numbers. The traffic data for the mainline are for each segment upstream of the referenced ramp (identified by the ramp ID number).

The Level of Service (LOS) descriptor is not sensitive enough to show the small differences in congestion from the no-build to the build condition. The following tables show congestion in LOS and Volume to Capacity (V/C). The change in V/C is the "no build" minus the "build", so a positive number means the V/C has decreased, and that it is less congested.

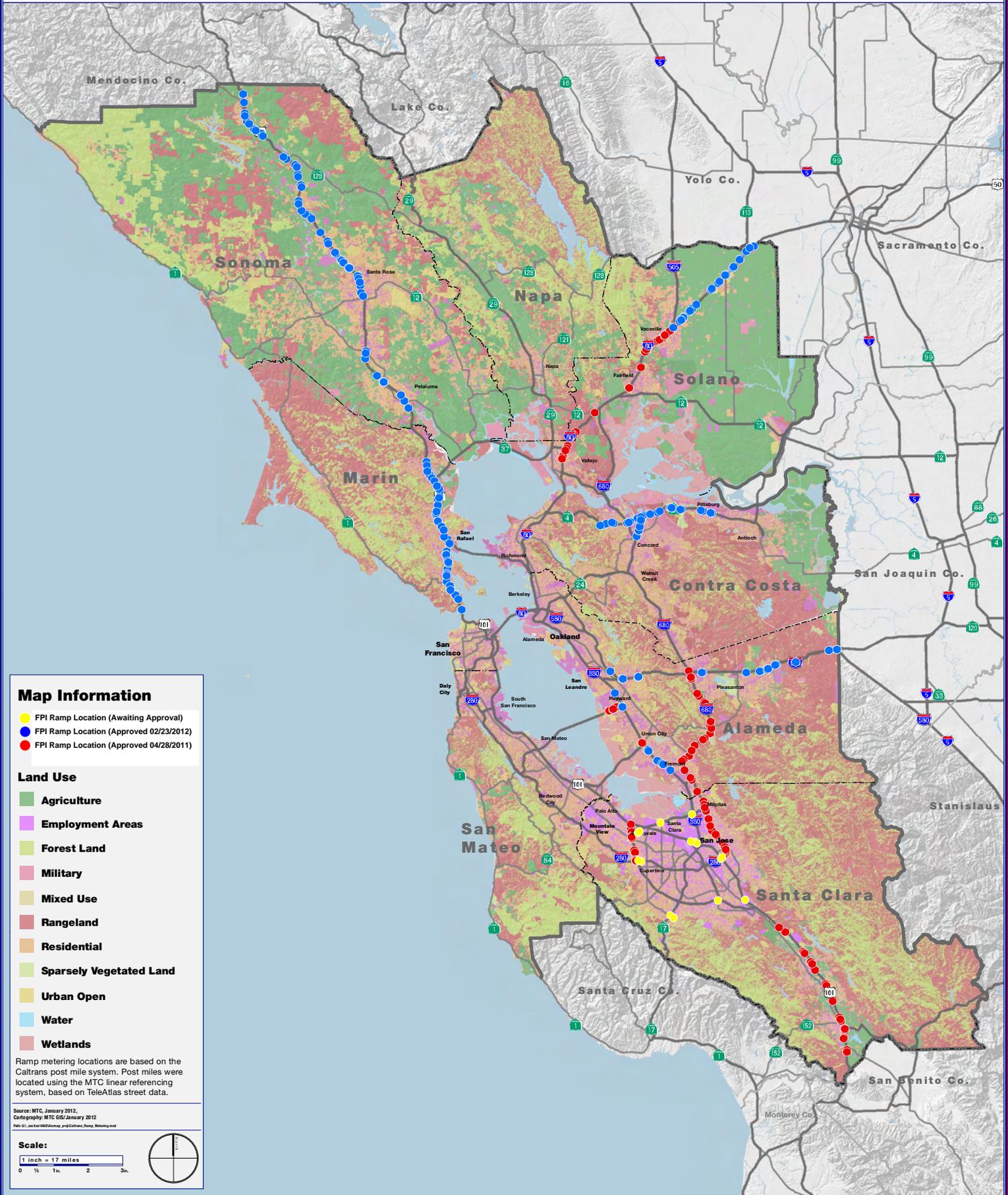
The truck percents and volumes represent total (one-, two-, and three-axle) truck volumes. Actual heavy duty truck percents and volumes will be lower. A truck percent of zero indicates a percent lower than .10 percent.

The information not available in the MTC Transportation model is denoted as "N/A" or left blank.

# Ramp Metering Locations Freeway Performance Initiative

Research and Demographic Unit

Geographic Information Systems Unit



### Map Information

- FPI Ramp Location (Awaiting Approval)
- FPI Ramp Location (Approved 02/23/2012)
- FPI Ramp Location (Approved 04/28/2011)

### Land Use

- Agriculture
- Employment Areas
- Forest Land
- Military
- Mixed Use
- Rangeland
- Residential
- Sparsely Vegetated Land
- Urban Open
- Water
- Wetlands

Ramp metering locations are based on the Caltrans post mile system. Post miles were located using the MTC linear referencing system, based on TeleAtlas street data.

Source: MTC, January 2012,  
 Cartography: MTC GIS/January 2012  
 File: C:\\_work\GIS\MapInfo\proj\GIS\MapInfo\MapInfo.mxd

### Scale:



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TABLE 1 LOCATIONS

Table 1 Ramp Metering Locations and Configurations

ID	County	Route	Dir	PM	Interchange	Ramp Type	Exist Lanes Config.	# of Prop. Lanes	Widening Yes/No	Proposed Config @ RM Limit Line
1	SCL	101	N	38.7	Old Bayshore Hwy.	Diagonal	1	1	NO	1 MF
2	SCL	101	S	38.8	N 4th St.	Diagonal	1	1	NO	1 MF
3	SCL	237	E	9.3	I-880 (NB)	Connector	2	2	NO	3 SOV
4	SCL	237	E	1.6	Maude Ave.	Diagonal	1	1	NO	1 SOV
5	SCL	237	W	1.6	Middlefield Rd.	Diagonal	1	1	NO	1 SOV
6	SCL	85	S	18.5	Rte 280 (SB)	Connector	3	3	NO	2 SOV + 1 HOV
7	SCL	85	N	18.5	Rte 280 (SB)	Connector	1	1	NO	1 SOV
8	SCL	85	S	5.2	SR 87 (NB)	Connector	2	2	NO	1 SOV + 1 HOV
9	SCL	101	S	39.9	SR 87 (SB)	Connector	1	2	YES	2 MF
10	SCL	101	S	28.4	Blossom Hill Rd. (WB)	Loop	1	2	YES	1 SOV + 1 HOV
11	SCL	101	S	34.4	Story Rd. (EB)	Diagonal	1	2	YES	1 SOV + 1 HOV
12	SCL	101	S	34.4	Story Rd. (WB)	Loop	1	2	YES	1 SOV + 1 HOV
13	SCL	237	W	3.9	Fair Oaks Ave./Crossman Ave.	Diagonal	1	2	YES	1 SOV + 1 HOV
14	SCL	17	N	7.1	Hwy 9/Saratoga (SB)	Loop	1	2	YES	1 SOV + 1 HOV
15	SCL	17	N	7.2	Hwy 9/Saratoga (NB)	Diagonal	1	2	YES	1 SOV + 1 HOV

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TABLE 2 2015 RAMPS

Table 2 2015 Ramp Traffic Data Opening Year

ID	Co	Rte	Dir	PM	Interchange	Ramp Type	2015 Ramp Build					2015 Ramp No Build					V/C Diff.	LOS CHANGE
							AADT	Truck %	Truck Vol.	V/C	LOS	AADT	Truck %	Truck Vol.	V/C	LOS		
1	SCL	101	N	38.7	Old Bayshore Hwy.	Diagonal	23903	0.4	94	1.02	E	24163	0.4	93	1.00	E	0.0	
2	SCL	101	S	38.8	N 4th St.	Diagonal	10101	0.2	22	0.24	B	9931	0.2	22	0.24	A	0.0	
3	SCL	237	E	9.3	I-880 (NB)	Connector	3777	0.3	10	0.26	B	4223	0.2	9	0.32	B	0.1	Improve
4	SCL	237	E	1.6	Maude Ave.	Diagonal	3677	0.3	10	0.14	A	4264	0.3	12	0.20	A	0.1	Improve
5	SCL	237	W	1.6	Middlefield Rd.	Diagonal	13604	0.2	26	0.65	D	13601	0.2	27	0.67	D	0.0	
6	SCL	85	S	18.5	Rte 280 (SB)	Connector	3603	0.3	12	0.21	A	4029	0.4	16	0.20	A	0.0	
7	SCL	85	N	18.5	Rte 280 (SB)	Connector	1017	0.1	1	0.03	A	863	0.1	1	0.02	A	0.0	
8	SCL	85	S	5.2	SR 87 (NB)	Connector	N/A	0.0	0	0.00	N/A	N/A	0.0	0	0.00	N/A	0.0	
9	SCL	101	S	39.9	SR 87 (SB)	Connector	15260	0.6	95	0.33	B	15109	0.6	91	0.31	B	0.0	
10	SCL	101	S	28.4	Blossom Hill Rd. (WB)	Loop	2847	0.8	24	0.08	A	3075	0.9	26	0.08	A	0.0	
11	SCL	101	S	34.4	Story Rd. (EB)	Diagonal	10114	0.7	73	0.34	B	8784	0.7	60	0.36	B	0.0	
12	SCL	101	S	34.4	Story Rd. (WB)	Loop	10114	0.7	73	0.34	B	8784	0.7	60	0.36	B	0.0	
13	SCL	237	W	3.9	Fair Oaks Ave./Crossman Ave.	Diagonal	1788	0.1	1	0.04	A	1795	0.1	1	0.05	A	0.0	
14	SCL	17	N	7.1	Hwy 9/Saratoga (SB)	Loop	2957	0.2	5	0.15	A	2961	0.2	5	0.15	A	0.0	
15	SCL	17	N	7.2	Hwy 9/Saratoga (NB)	Diagonal	2957	0.2	5	0.15	A	2961	0.2	5	0.15	A	0.0	

NOTE: N/A = Data is not available in the MTC Transportation Network.

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Table 3 2035 RAMPS

Table 3 2035 Ramp Traffic Data RTP Horizon Year

ID	County	Route	Dir	PM	Interchange	Ramp Type	2035 Ramp Build					2035 Ramp No Build					V/C DIFF	LOS Change
							AADT	Truck %	Truck Vol.	V/C	LOS	AADT	Truck %	Truck Vol.	V/C	LOS		
1	SCL	101	N	38.7	Old Bayshore Hwy.	Diagonal	24983	0.6	143	1.02	E	27751	0.5	149	1.03	E	0.0	
2	SCL	101	S	38.8	N 4th St.	Diagonal	8789	0.2	21	0.14	A	14656	0.3	37	0.43	C	0.3	Improve
3	SCL	237	E	9.3	I-880 (NB)	Connector	4451	0.3	13	0.34	B	6854	0.4	27	0.66	D	0.3	Improve
4	SCL	237	E	1.6	Maude Ave.	Diagonal	4401	0.3	15	0.15	A	4936	0.3	16	0.25	B	0.1	Improve
5	SCL	237	W	1.6	Middlefield Rd.	Diagonal	16606	0.2	40	0.81	E	15959	0.3	42	0.73	D	-0.1	Worse
6	SCL	85	S	18.5	Rte 280 (SB)	Connector	4666	0.5	23	0.22	A	4467	0.5	22	0.19	A	0.0	
7	SCL	85	N	18.5	Rte 280 (SB)	Connector	1054	0.1	1	0.04	A	878	0.1	1	0.02	A	0.0	
8	SCL	85	S	5.2	SR 87 (NB)	Connector	0	0.0	0	0.00	N/A	0	0.0	0	0.00	N/A	0.0	
9	SCL	101	S	39.9	SR 87 (SB)	Connector	18427	0.6	114	0.55	C	18359	0.6	115	0.56	C	0.0	
10	SCL	101	S	28.4	Blossom Hill Rd. (WB)	Loop	3309	1.0	34	0.09	A	3394	1.1	38	0.09	A	0.0	
11	SCL	101	S	34.4	Story Rd. (EB)	Diagonal	10259	0.9	89	0.43	C	12206	0.8	95	0.45	C	0.0	
12	SCL	101	S	34.4	Story Rd. (WB)	Loop	10259	0.9	89	0.43	C	12206	0.8	95	0.45	C	0.0	
13	SCL	237	W	3.9	Fair Oaks Ave./Crossman Ave.	Diagonal	2542	0.1	4	0.05	A	2567	0.2	5	0.06	A	0.0	
14	SCL	17	N	7.1	Hwy 9/Saratoga (SB)	Loop	3285	0.2	6	0.16	A	3209	0.2	6	0.15	A	0.0	
15	SCL	17	N	7.2	Hwy 9/Saratoga (NB)	Diagonal	3285	0.2	6	0.16	A	3209	0.2	6	0.15	A	0.0	

NOTE: N/A = Data is not available in the MTC Transportation Network.

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Table 4 2015 MAINLINE

Table 4 2015 Mainline Traffic Data Opening Year

ID	County	Route	Dir	PM	Interchange	Ramp Type	2015 Mainline Build					2015 Mainline No Build					V/C DIFF	LOS Change
							AADT	Truck %	Truck Vol.	V/C	LOS	AADT	Truck %	Truck Vol.	V/C	LOS		
1	SCL	101	N	38.7	Old Bayshore Hwy.	Diagonal	100208	0.6	631	0.92	E	107441	0.6	608	0.96	E	0.0	
2	SCL	101	S	38.8	N 4th St.	Diagonal	87057	0.8	664	0.39	B	94135	0.7	647	0.42	C	0.0	
3	SCL	237	E	9.3	I-880 (NB)	Connector	77356	1.5	1149	0.74	D	82610	1.4	1127	0.77	D	0.0	
4	SCL	237	E	1.6	Maude Ave.	Diagonal	0	0.0	0	0.00	N/A	0	0.0	0	0.00	N/A	0.0	
5	SCL	237	W	1.6	Middlefield Rd.	Diagonal	47550	0.5	220	0.80	E	51184	0.4	219	0.89	E	0.1	Improve
6	SCL	85	S	18.5	Rte 280 (SB)	Connector	30865	0.2	64	0.38	B	33652	0.2	63	0.43	C	0.1	Improve
7	SCL	85	N	18.5	Rte 280 (SB)	Connector	60921	0.4	269	0.72	D	64143	0.4	280	0.75	D	0.0	
8	SCL	85	S	5.2	SR 87 (NB)	Connector	0	0.0	0	0.00	N/A	0	0.0	0	0.00	N/A	0.0	
9	SCL	101	S	39.9	SR 87 (SB)	Connector	97116	1.0	946	0.44	C	104684	0.9	946	0.48	C	0.0	
10	SCL	101	S	28.4	Blossom Hill Rd. (WB)	Loop	46230	1.6	717	0.39	B	51171	1.4	720	0.45	C	0.1	Improve
11	SCL	101	S	34.4	Story Rd. (EB)	Diagonal	70060	0.9	598	0.46	C	74553	0.8	576	0.52	C	0.1	Improve
12	SCL	101	S	34.4	Story Rd. (WB)	Loop	70060	0.9	598	0.46	C	74553	0.8	576	0.52	C	0.1	Improve
13	SCL	237	W	3.9	Fair Oaks Ave./Crossman Ave.	Diagonal	53353	1.4	753	0.55	C	56038	1.3	739	0.58	C	0.0	
14	SCL	17	N	7.1	Hwy 9/Saratoga (SB)	Loop	52315	0.1	72	0.84	E	51815	0.1	66	0.83	E	0.0	
15	SCL	17	N	7.2	Hwy 9/Saratoga (NB)	Diagonal	52315	0.1	72	0.84	E	51815	0.1	66	0.83	E	0.0	

NOTE: N/A = Data is not available in the MTC Transportation Network.

**Table 5 2035 MAINLINE**

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**Table 5 2035 Mainline Traffic RTP Horizon Year**

ID	County	Route	Dir	PM	Interchange	Ramp Type	2035 Mainline Build					2035 Mainline No Build					V/C Diff	LOS Change
							AADT	Truck %	Truck Vol.	V/C	LOS	AADT	Truck %	Truck Vol.	V/C	LOS		
1	SCL	101	N	38.7	Old Bayshore Hwy.	Diagonal	117431	0.7	826	0.96	E	121322	0.7	794	0.99	E	0.0	
2	SCL	101	S	38.8	N 4th St.	Diagonal	100304	0.8	762	0.53	C	110491	0.7	751	0.61	D	0.1	Improve
3	SCL	237	E	9.3	I-880 (NB)	Connector	86586	1.6	1413	0.77	D	96005	1.5	1408	0.90	E	0.1	Improve
4	SCL	237	E	1.6	Maude Ave.	Diagonal	0	0.0	0	0.00	N/A	0	0.0	0	0.00	N/A	0.0	
5	SCL	237	W	1.6	Middlefield Rd.	Diagonal	56014	0.6	317	0.94	E	58941	0.5	315	1.00	E	0.1	Improve
6	SCL	85	S	18.5	Rte 280 (SB)	Connector	33539	0.2	70	0.44	C	38017	0.2	75	0.55	C	0.1	Improve
7	SCL	85	N	18.5	Rte 280 (SB)	Connector	69233	0.5	339	0.78	D	71548	0.5	355	0.82	E	0.0	
8	SCL	85	S	5.2	SR 87 (NB)	Connector	0	0.0	0	0.00	N/A	0	0.0	0	0.00	N/A	0.0	
9	SCL	101	S	39.9	SR 87 (SB)	Connector	114360	1.1	1249	0.56	C	123085	1.0	1285	0.63	D	0.1	Improve
10	SCL	101	S	28.4	Blossom Hill Rd. (WB)	Loop	53296	1.5	800	0.50	C	59318	1.3	798	0.58	C	0.1	Improve
11	SCL	101	S	34.4	Story Rd. (EB)	Diagonal	78493	0.9	677	0.63	D	85552	0.8	675	0.68	D	0.1	Improve
12	SCL	101	S	34.4	Story Rd. (WB)	Loop	78493	0.9	677	0.63	D	85552	0.8	675	0.68	D	0.1	Improve
13	SCL	237	W	3.9	Fair Oaks Ave./Crossman Ave.	Diagonal	61436	1.6	971	0.63	D	65034	1.4	919	0.67	D	0.0	
14	SCL	17	N	7.1	Hwy 9/Saratoga (SB)	Loop	56533	0.1	73	0.91	E	55590	0.1	73	0.88	E	0.0	
15	SCL	17	N	7.2	Hwy 9/Saratoga (NB)	Diagonal	56533	0.1	73	0.91	E	55590	0.1	73	0.88	E	0.0	

NOTE: N/A = Data is not available in the MTC Transportation Network.