District 10 Mobility Performance Report

2017 First Quarter

DEPARTMENT OF TRANSPORTATION

May 5, 2017

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District 10 Mobility Performance Report

2017 First Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly or annual analysis.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

This information is based on data collected every day of the quarter, twenty–four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The MPR presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph

represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the first quarter, total delay equaled 83 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold (2.9% decrease over one year ago; 37.8% decrease over last quarter), and 297 thousand VHD at the 60 mph threshold (22.4% decrease over one year ago; 33.2% decrease over last quarter). The average weekday delay experienced in this quarter was approximately 1,105 VHD at 35 mph (15% decrease over one year ago; 36.2% decrease over last quarter), and 4,170 VHD at 60 mph (25.5% decrease over one year ago; 32.4% decrease over last quarter). The decreases in VHD can be attributed to completion of the I5 widening, SR 99 South Stockton Widening, and SR 99 Manteca Widening projects.

Top Ten Bottlenecks for 2017 Quarter 1

FWY	COUNTY	LOCATION	SHIFT	ABS. PM	CA PM	# DAYS ACTVE	AVG. EXTENT (MILES)	TOTAL DELAY (VEH-HRS)	TOTAL DURATION (MINS)
I205-W	SJ	E OF HANSEN RD	AM	3.310	2.380	42	4.9	71604	5565
I580-E	SJ	E of PG&E Power Line	PM	12.306	11.710	8	5.0	5758	1160
SR99-S	SJ	N/O Jack Tone Rd	PM	238.974	3.189	47	0.4	3661	5800
SR99-S	SJ	S/O Austin Rd OC	PM	240.425	4.640	47	0.2	2383	5735
SR219-W	STA	E/O SR 99	PM	0.092	0.168	30	2.3	1665	2410
SR99-S	SJ	N/O On Ramp from Jack Tone Rd	PM	237.866	2.081	13	0.9	1302	895
SR99-S	SJ	S/O Rte 120	PM	241.202	5.417	22	0.6	1123	1550
SR99-N	STA	N/O SR 219/Broadway Ave	PM	234.083	R23.023	13	0.8	859	680
I5-N	SJ	N/O French Camp Rd	PM	468.140	R22.648	33	0.2	615	2155
SR219-W	STA	E/O SR 99	AM	0.092	0.168	14	2.3	393	455

The following District 10 projects are currently being constructed or are scheduled for construction effective April 2017. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

MER 99 MISSION AVENUE INTERCHANGE / FREEWAY; EA 10-36311

Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 04/07/2008
End Project – 04/02/2018

MER 99 LIVINGSTON FREEWAY STAGE 2; EA 10-3169E
Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 03/28/2008
End Project – 06/30/2017

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 08/01/2021
End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122
Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 01/19/2019
End Project – 10/01/2021

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911
Convert 4 lane expressway to 6 lane freeway
Approve Construction Contract Date – 05/15/2018
End Project – 10/01/2020

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

SJ 99 – SOUTH STOCKTON WIDENING; EA 10-3A100
Widen existing freeway from 4 to 6 lanes
Approve Construction Contract Date – 12/3/2012
End Project – 12/5/2017

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040
Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

I-205 SMART CORRIDOR PHASE 2; EA 10-1C330
Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road
Currently in PA&ED
End Project – 11/01/2021

STANISLAUS COUNTY

STA 99 – PELANDALE INTERCHANGE; EA 10-47210
Modify Existing Interchange
Approve Construction Contract Date – 4/15/2014
End Project – 12/1/2017

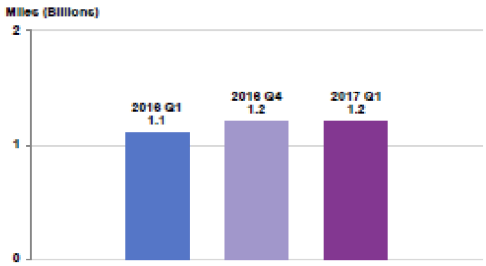
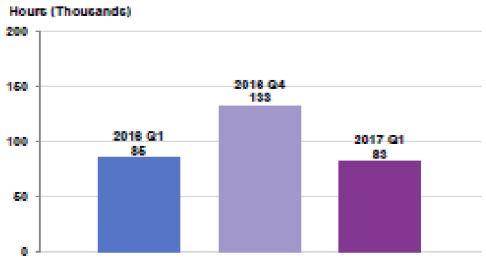
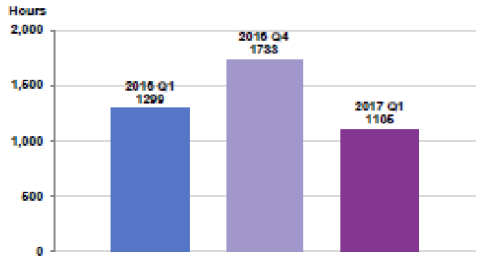
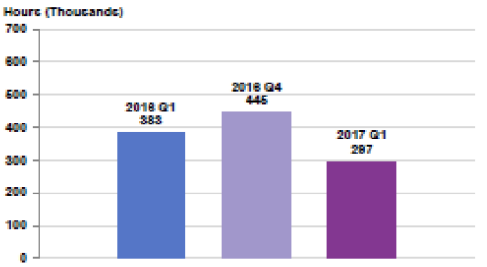
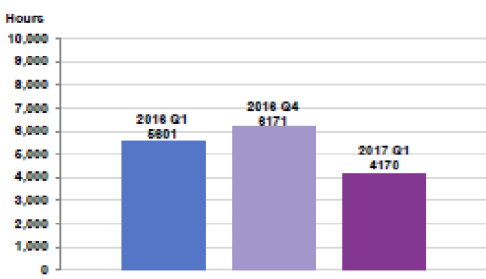
STA 99 – KIERNAN INTERCHANGE; EA 10-0L330
Reconstruct Interchange
Approve Construction Contract Date – 2/1/2013
End Project – 11/30/2017

STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300
Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Currently in PA&ED
End Project – Estimated to be mid 2020

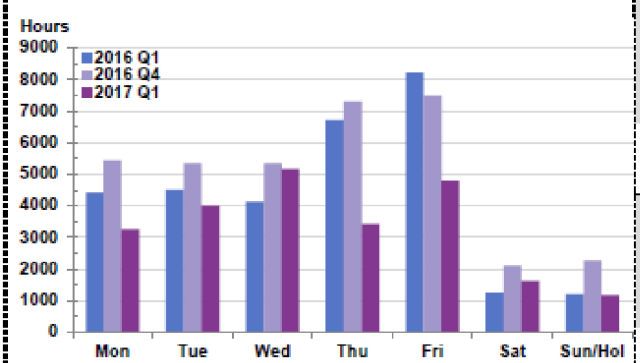
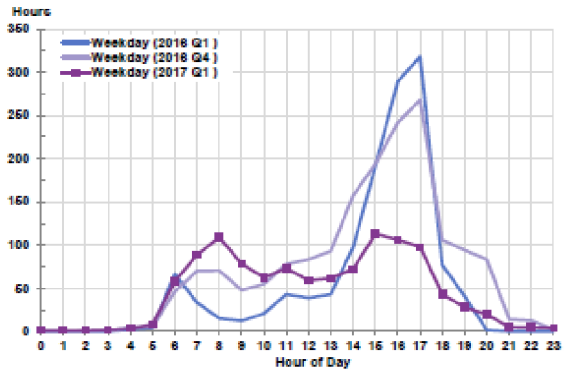
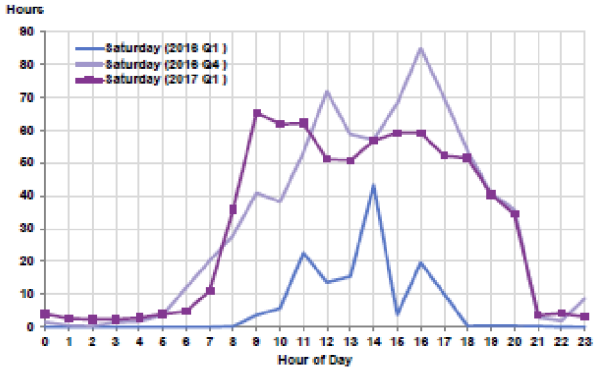
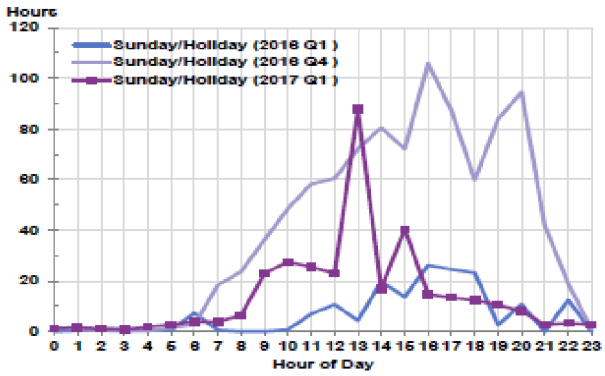
The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes, in the cities, and in the counties that experience the most congestion in District 10. It is expected that the projects will help increase the Vehicle Miles Traveled while reducing congestion and delay as the population and demand in District 10 grows over the next 10 years.

The next section of this report summarizes the District 10 2017 Q1 Quarterly Mobility Statistics.

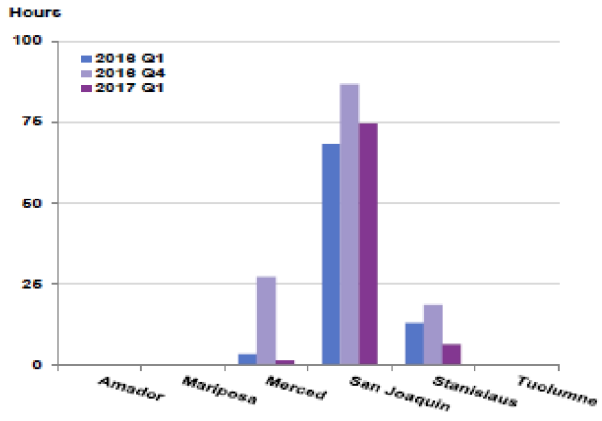
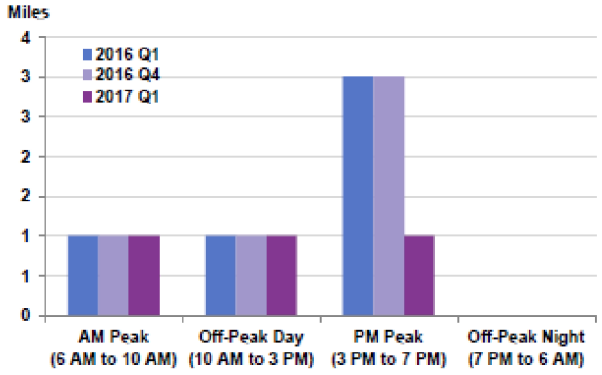
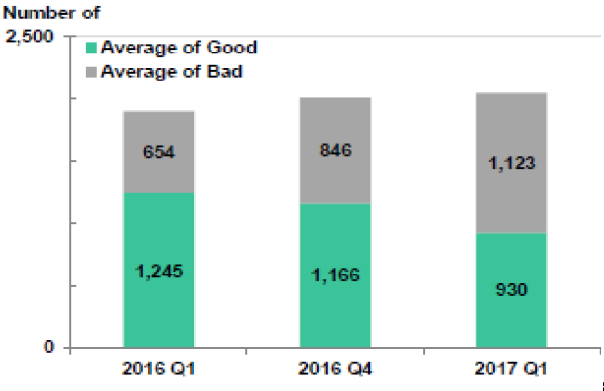
2017 Q1 Quarterly Mobility Statistics – District 10

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		11.3% ↑	0.8% ↑
Total Vehicle Hours of Delay (VHD) at 35 mph		-2.9% ↓	-37.8% ↓
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		-15% ↓	-36.2% ↓
Total Vehicle Hours of Delay (VHD) at 60 mph		-22.4% ↓	-33.2% ↓
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		-25.5% ↓	-32.4% ↓

Data may change in coming months due to on-going data reconciliation process

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Friday -41.7%	Largest Magnitude Decrease over last quarter Thursday -53.2%
		Largest Magnitude Increase over one year ago Wednesday 24.8%	Largest Magnitude Increase over last quarter –
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 5 PM -69.2%	Largest Magnitude Weekday Decrease over last quarter 5 PM -63.4%
		Largest Magnitude Weekday Increase over one year ago 8 AM 610.2%	Largest Magnitude Weekday Increase over last quarter 8 AM 54.7%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago –	Largest Magnitude Saturday Decrease over last quarter 4 PM -30.4%
		Largest Magnitude Saturday Increase over one year ago 9 AM 1659.1%	Largest Magnitude Saturday Increase over last quarter 9 AM 59.8%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 4 PM -43.8%	Largest Magnitude Sun./Holiday Decrease over last quarter 4 PM -86.1%
		Largest Magnitude Sun./Holiday Increase over one year ago 1 PM 1911%	Largest Magnitude Sun./Holiday Increase over last quarter 1 PM 21.8%

Data may change in coming months due to on-going data reconciliation process

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Stanislaus -51.1%	Largest Magnitude Decrease over last quarter Merced -94.3%
		Largest Magnitude Increase over one year ago San Joaquin 9.1%	Largest Magnitude Increase over last quarter –
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago PM Peak -49%	Largest Magnitude Decrease over last quarter PM Peak -55.8%
		Largest Magnitude Increase over one year ago –	Largest Magnitude Increase over last quarter –
Average Number of Good and Bad Detectors		Change in Good over one year ago -25%	Change in Good over last quarter -20%
		Change in Bad over one year ago 72%	Change in Bad over last quarter 33%

Data may change in coming months due to on-going data reconciliation process

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2017 Q1-2016 Q1		Difference 2017 Q1-2016 Q4		Rank		
Route	County	2016 Q1	2016 Q4	2017 Q1	Absolute	Percentage	Absolute	Percentage	2016 Q1	2016 Q4	2017 Q1
I205	San Joaquin	65,911	274,610	119,552	53,642	81.4%	-155,058	-56.5%	2	1	1
SR99	San Joaquin	20,973	64,509	68,896	47,924	228.5%	4,388	6.8%	3	2	2
I580	San Joaquin	75,654	57,976	42,247	-33,408	-44.2%	-15,729	-27.1%	1	3	3
SR219	Stanislaus	0	3,857	3,522	3,522		-335	-8.7%		7	4
SR99	Stanislaus	8,914	14,101	2,946	-5,968	-66.9%	-11,155	-79.1%	5	5	5
SR99	Merced	2,960	25,734	1,552	-1,408	-47.6%	-24,183	-94.0%	7	4	6
I5	San Joaquin	1,866	3,315	960	-906	-48.5%	-2,355	-71.0%	8	8	7
SR132	San Joaquin	0	0	476	476		476	476000.0%		13	8
SR4	San Joaquin	11,054	10,360	320	-10,734	-97.1%	-10,040	-96.9%	4	6	9
SR120	San Joaquin	0	0	203	203		203				10
SR49	Mariposa	57	67	25	-32	-55.9%	-42	-62.6%	10	11	11
I5	Stanislaus	4,334	717	11	-4,322	-99.7%	-706	-98.4%	6	10	12
SR152	Merced	460	1,636	10	-450	-97.9%	-1,626	-99.4%	9	9	13
I5	Merced	43	0	0	-43	-100.0%	0		11		
SR104	Amador	0	0	0	0		0				
SR108	Tuolumne	0	0	0	0		0				
SR12	San Joaquin	0	1	0	0		-1	-100.0%		12	
SR120	Tuolumne	0	0	0	0		0				
TOTALS		**192,225**	**456,883**	**240,720**	**48,495**	**25.2%**	**-216,163**	**-47.3%**			

SR 219 Stanislaus: No delay detected in 2016 Q1
SR 132 San Joaquin: No delay detected in 2016 Q1 and 2016 Q4
SR 120 San Joaquin: No delay detected in 2016 Q1 and 2016 Q4
I5 Merced: No delay detected in 2016 Q4 and 2017 Q1
SR 104 Amador: No delay detected in 2016 Q1, 2016 Q4, and 2017 Q1
SR 108 Tuolumne: No delay detected in 2016 Q1, 2016 Q4, and 2017 Q1
SR 12 San Joaquin: No delay detected in 2016 Q1, 2016 Q4, and 2017 Q1
SR 120 Tuolumne: No delay detected in 2016 Q1, 2016 Q4, and 2017 Q1