

District 10 Mobility Performance Report

2018 Third Quarter

DEPARTMENT OF TRANSPORTATION

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District 10 Mobility Performance Report

2018 Third 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 third quarter, total delay equaled 397 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 1.4 million VHD at the 60 mph threshold. Compared to the same quarter the

year before, there was a 20.3 percent increase in 35 mph quarterly delay and 25.5 percent increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 5,573 VHD at 35 mph and 19,674 VHD at 60 mph. The increased delay numbers can mainly be attributed to a 9 percent increase in the number of good detectors and -13% percent decrease in the number of bad detectors compared to the second quarter of 2018.

The following District 10 projects are currently being constructed or are scheduled for construction effective October 2018. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

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 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 / 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 2018 Q1 Quarterly Mobility Statistics.

2018 Q3 Quarterly Mobility Statistics – District 10

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

Measure	Graph	Percentage Change									
Vehicle Miles of Travel (VMT)	Miles (Billions) <table><tr><th>Period</th><th>VMT (Billions)</th></tr><tr><td>2017 Q3</td><td>1.3</td></tr><tr><td>2018 Q2</td><td>1.5</td></tr><tr><td>2018 Q3</td><td>1.5</td></tr></table>	Period	VMT (Billions)	2017 Q3	1.3	2018 Q2	1.5	2018 Q3	1.5	Over one year ago	Over last quarter
		Period	VMT (Billions)								
		2017 Q3	1.3								
2018 Q2	1.5										
2018 Q3	1.5										
19%	2.6%										
Total Vehicle Hours of Delay (VHD) at 35 mph	Hours (Thousands) <table><tr><th>Period</th><th>VHD (Thousands)</th></tr><tr><td>2017 Q3</td><td>114.7</td></tr><tr><td>2018 Q2</td><td>329.8</td></tr><tr><td>2018 Q3</td><td>396.8</td></tr></table>	Period	VHD (Thousands)	2017 Q3	114.7	2018 Q2	329.8	2018 Q3	396.8	Over one year ago	Over last quarter
		Period	VHD (Thousands)								
		2017 Q3	114.7								
2018 Q2	329.8										
2018 Q3	396.8										
245.9%	20.3%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	Hours <table><tr><th>Period</th><th>VHD (Hours)</th></tr><tr><td>2017 Q3</td><td>1507</td></tr><tr><td>2018 Q2</td><td>4567</td></tr><tr><td>2018 Q3</td><td>5573</td></tr></table>	Period	VHD (Hours)	2017 Q3	1507	2018 Q2	4567	2018 Q3	5573	Over one year ago	Over last quarter
		Period	VHD (Hours)								
		2017 Q3	1507								
2018 Q2	4567										
2018 Q3	5573										
269.8%	22%										
Total Vehicle Hours of Delay (VHD) at 60 mph	Hours (Millions) <table><tr><th>Period</th><th>VHD (Millions)</th></tr><tr><td>2017 Q3</td><td>0.5</td></tr><tr><td>2018 Q2</td><td>1.1</td></tr><tr><td>2018 Q3</td><td>1.4</td></tr></table>	Period	VHD (Millions)	2017 Q3	0.5	2018 Q2	1.1	2018 Q3	1.4	Over one year ago	Over last quarter
		Period	VHD (Millions)								
		2017 Q3	0.5								
2018 Q2	1.1										
2018 Q3	1.4										
199.5%	25.1%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	Hours (Thousands) <table><tr><th>Period</th><th>VHD (Thousands)</th></tr><tr><td>2017 Q3</td><td>7</td></tr><tr><td>2018 Q2</td><td>16</td></tr><tr><td>2018 Q3</td><td>20</td></tr></table>	Period	VHD (Thousands)	2017 Q3	7	2018 Q2	16	2018 Q3	20	Over one year ago	Over last quarter
		Period	VHD (Thousands)								
		2017 Q3	7								
2018 Q2	16										
2018 Q3	20										
198.5%	25.5%										

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	Largest Magnitude Decrease over last quarter
		Largest Magnitude Increase over one year ago Tuesday 223.3%	Largest Magnitude Increase over last quarter Tuesday 48%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter
		Largest Magnitude Weekday Increase over one year ago 4 PM 253.8%	Largest Magnitude Weekday Increase over last quarter 7 AM -7.2%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 7 AM -79.2%	Largest Magnitude Saturday Decrease over last quarter 1 PM -22.9%
		Largest Magnitude Saturday Increase over one year ago 12 PM 185.7%	Largest Magnitude Saturday Increase over last quarter 4 PM 53.4%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 8 AM -74.7%	Largest Magnitude Sun./Holiday Decrease over last quarter 9 PM -37.7%
		Largest Magnitude Sun./Holiday Increase over one year ago 2 PM 288.9%	Largest Magnitude Sun./Holiday Increase over last quarter 2 PM 95.2%

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	Hours (Thousands) ■ 2017 Q3 ■ 2018 Q2 ■ 2018 Q3	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		San Joaquin 262.1% ↑	Stanislaus 87.7% ↑
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	Miles ■ 2017 Q3 ■ 2018 Q2 ■ 2018 Q3 AM Peak (6 AM to 10 AM) Off-Peak Day (10 AM to 3 PM) PM Peak (3 PM to 7 PM) Off-Peak Night (7 PM to 6 AM)	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 325.9% ↑	AM Peak -98.2% ↓ PM Peak 46% ↑
Average Number of Good and Bad Detectors	Number of Detectors ■ Average of Bad ■ Average of Good 2017 Q3 2018 Q2 2018 Q3	Change in Good over one year ago	Change in Good over last quarter
		Change in Bad over one year ago	Change in Bad over last quarter
		60% ↑ -41% ↓	9% ↑ -13% ↓

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

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2018 Q3-2017 Q3		Difference 2018 Q3-2018 Q2		Rank		
		2017 Q3	2018 Q2	2018 Q3	Absolute	Percentage	Absolute	Percentage	2017 Q3	2018 Q2	2018 Q3
I205	San Joaquin	191624.2	385323	299410.2	107786	56%	(85,913)	-22%	1	1	1
SR99	Stanislaus	30506.7	37993.2	84460.4	53953.7	177%	46,467	122%	3	3	2
SR99	San Joaquin	61140.4	32978	48745	-12395.4	-20%	15,767	48%	2	4	3
I5	San Joaquin	2219.6	10348.3	46887.5	44667.9	2012%	36,539	353%	6	7	4
SR4	San Joaquin	307.6	32040	34517.8	34210.2	11122%	2,478	8%	11	5	5
SR132	Stanislaus	10576.6	24300	23946.1	13369.5	126%	(354)	-1%	4	6	6
I580	San Joaquin	5206.4	54056.7	18541.5	13335.1	256%	(35,515)	-66%	5	2	7
I5	Stanislaus	0	1858.8	12083.4	12083.4		10,225	550%		10	8
SR152	Merced	0	368.8	6556.5	6556.5		6,188	1678%		14	9
SR99	Merced	1255.8	6516.9	5724.8	4469	356%	(792)	-12%	8	8	10
SR219	Stanislaus	1869.7	2853	5256	3386.3	181%	2,403	84%	7	9	11
SR165	Merced	0	131.6	1631.7	1631.7		1,500	1140%		16	12
SR108	Tuolumne	0	671.9	975.5	975.5		304	45%		12	13
SR132	San Joaquin	1131.2	779.1	743.7	-387.5	-34%	(35)	-5%	9	11	14
SR120	San Joaquin	752	561.3	709.2	-42.8	-6%	148	26%	10	13	15
SR49	Mariposa	0	102.1	538	538		436	427%		17	16
SR88	Amador	0	0	262.3	262.3		262				17
I5	Merced	0	2	36.8	36.8		35	1740%		18	18
SR104	Amador	0	0	0	0		-				
SR12	San Joaquin	3.4	0.1	0	-3.4	-100%	(0)	-100%	12	19	
SR120	Tuolumne	0	0	0	0		-				
SR49	Tuolumne	0	267.1	0	0		(267)	-100%		15	
TOTALS		306,594	591,152	591,026	284,433	92.8%	-126	0.0%			