

District 10 Mobility Performance Report

2015 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

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District 10 Mobility Performance Report

2015 Fourth 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 fourth quarter, total delay equaled 81 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold (30.1% increase over one year ago; 21.8% increase over last quarter), and 364 thousand VHD at the 60 mph threshold (27.8% increase over one year ago; 2.9% increase over last quarter). The average weekday delay experienced in this quarter was approximately 1,217 VHD at 35 mph (40.7% increase over one year ago; 41.4% increase over last quarter), and 5,262 VHD at 60 mph (34.2% increase over one year ago; 8.9% increase over last quarter). The increases in VHD can be attributed to current construction projects and to the fact that this quarter received more rain / inclement weather when compared to last year and the last quarter.

Top Ten Bottlenecks for 2015 Quarter 4

FWY	COUNTY	LOCATION	SHIFT	ABS. PM	CA PM	# DAYS ACTIVE	AVG. EXTENT (MILES)	TOTAL DELAY (VEH-HRS)	TOTAL DURATION (MINS)
I205-W	SJ	E OF HANSEN RD	AM	3.310	2.380	29	4.9	20156	2275
SR99-S	STA	Maze Blvd	PM	227.325	16.290	41	3.3	3312	3160
I205-E	SJ	E of Hansen Rd	PM	3.310	2.380	1	4.9	2702	170
SR99-N	SJ	N/O Fremont St	PM	255.413	19.603	5	6.1	1889	240
SR99-N	SJ	S/O Arch Rd	PM	249.708	13.898	2	2.4	1865	225
SR99-N	SJ	N/O Fremont St	AM	255.413	19.603	1	7.1	1475	140
I580-E	SJ	E of PG&E Power Line	PM	12.306	11.710	4	5.0	1461	700
I5-N	SJ	N/O French Camp Rd	PM	468.140	22.648	51	0.3	1285	6705
SR99-S	STA	Maze Blvd	AM	227.325	16.290	3	3.3	1017	175
SR99-S	SJ	Austin Rd	PM	240.818	5.033	6	1.6	938	450

The following District 10 projects are currently being constructed or are scheduled for construction effective January 2016. These current and future (planned) projects will relieve congestion in District 10:

MERCED COUNTY

MER 99 PLAINSBURG ROAD FREEWAY; EA 10-41580

Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way

Approve Construction Contract Date – 07/27/2012

End Project – 12/30/2016

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 – 03/15/2016

MER 99 ATWATER FREEWAY; EA 10-41481

Convert from 4 lane expressway to 6 lane freeway on an 8 lane right of way
Approve Construction Contract Date – 11/28/2005
End Project – 06/30/2017

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

I-5 NORTH STOCKTON WIDENING AND HOV LANES; EA 10-0G470

Widen bridges and freeway lanes, HOV lane
Approve Construction Contract Date – 6/15/2011
End Project – 8/29/2016

SJ 99 – MANTECA WIDENING MAINLINE PHASE 1; EA 10-0E611

Widen existing freeway with HMA
Approve Construction Contract Date – 4/19/2012

End Project – 12/16/2015

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

STANISLAUS COUNTY

STA 99 – PELANDALE INTERCHANGE; EA 10-47210

Modify Existing Interchange
Approve Construction Contract Date – 4/15/2014
End Project – 12/1/2018

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 PSR/PDS; PA&ED Scheduled for mid-2016
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 next 10 years.

The next section of this report summarizes the District 10 2015 Q4 Quarterly Mobility Statistics.

2015 Q4 Quarterly Mobility Statistics – District 10

Measure	Graph	Percentage Change							
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>1.1</td></tr> <tr><td>2015</td><td>1.1</td></tr> </table>	Year	Q4	2014	1.1	2015	1.1	Over one year ago	Over last quarter
		Year	Q4						
2014	1.1								
2015	1.1								
		4.4% ↑	-1.3% ↓						
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>62</td></tr> <tr><td>2015</td><td>81</td></tr> </table>	Year	Q4	2014	62	2015	81	Over one year ago	Over last quarter
		Year	Q4						
2014	62								
2015	81								
		30.1% ↑	21.8% ↑						
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>865</td></tr> <tr><td>2015</td><td>1,217</td></tr> </table>	Year	Q4	2014	865	2015	1,217	Over one year ago	Over last quarter
		Year	Q4						
2014	865								
2015	1,217								
		40.7% ↑	41.4% ↑						
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>285</td></tr> <tr><td>2015</td><td>364</td></tr> </table>	Year	Q4	2014	285	2015	364	Over one year ago	Over last quarter
		Year	Q4						
2014	285								
2015	364								
		27.8% ↑	2.9% ↑						
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>3,921</td></tr> <tr><td>2015</td><td>5,262</td></tr> </table>	Year	Q4	2014	3,921	2015	5,262	Over one year ago	Over last quarter
		Year	Q4						
2014	3,921								
2015	5,262								
		34.2% ↑	8.9% ↑						

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
		Tuesday -7.3%	Monday -16.9%
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
		6 AM -59.7%	12 PM -27.8%
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
		2 PM -78.3%	11 AM -95%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter
		1 PM -72.5%	1 PM -83.9%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		5 PM 217%	5 PM 72.8%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Merced -92.2%	Stanislaus -23%
Average Non-Holiday Weekday Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
			Off-Peak Night -33.4%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		9%	8%
		Change in Bad over one year ago	Change in Bad over last quarter
		17%	-6%

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2015 Q4-2014 Q4		Difference 2015 Q4-2015 Q3		Rank		
		2014 Q4	2015 Q3	2015 Q4	Absolute	Percentage	Absolute	Percentage	2014 Q4	2015 Q3	2015 Q4
I205	San Joaquin	24840.4	162765.6	167255.9	142415.5	573%	4,490	3%	2	1	1
SR99	San Joaquin	4907.7	24091.9	42903.1	37995.4	774%	18,811	78%	5	2	2
I580	San Joaquin	2539.3	5791.9	23085.3	20546	808%	17,293	299%	7	5	3
SR99	Stanislaus	27122.9	21686.5	16617.9	-10505	-39%	(5,069)	-23%	1	3	4
SR4	San Joaquin	5187.5	7818.8	10737.6	5550.1	107%	2,919	37%	4	4	5
I5	San Joaquin	1990.8	3960.2	3586.5	1595.7	80%	(374)	-9%	8	7	6
I5	Stanislaus	178.9	3830.2	3033.1	2854.2	1595%	(797)	-21%	9	8	7
SR99	Merced	19429.6	456.9	1668.3	-17781.3	-91%	1,211	265%	3	9	8
SR152	Merced	3314	4010.3	112.7	-3201.3	-97%	(3,898)	-97%	6	6	9
SR49	Mariposa	38.2	189.6	81	42.8	112%	(109)	-57%	11	10	10
I5	Merced	0	19.7	2.5	2.5		(17)	-87%		11	11
SR132	San Joaquin	49.6	13.4	0.8	-48.8	-98%	(13)	-94%	10	12	12
SR104	Amador	0	0	0	0		-				
SR108	Tuolumne	0	0	0	0		-				
SR12	San Joaquin	0	0	0	0		-				
SR120	San Joaquin	0	0	0	0		-				
SR120	Tuolumne	0	0	0	0		-				
SR219	Stanislaus	0	0	0	0		-				
TOTALS		89,599	234,635	269,085	179,486	200%	34,450	15%			

I5 Merced: No delay detected in 2014 Q4.

SR104 Amador: No delay detected in 2014 Q4, 2015 Q3, and 2015 Q4

SR 108 Tuolumne: No delay detected in 2014 Q4, 2015 Q3, and 2015 Q4

SR 12 San Joaquin: No delay detected in 2014 Q4, 2015 Q3, and 2015 Q4

SR 120 San Joaquin No delay detected in 2014 Q4, 2015 Q3, and 2015 Q4

SR 120 Tuolumne: No delay detected in 2014 Q4, 2015 Q3, and 2015 Q4

SR 219 Stanislaus: No delay detected in 2014 Q4, 2015 Q3, and 2015 Q4