

# District 04 Mobility Performance Report

2015 Third Quarter

**DEPARTMENT OF TRANSPORTATION**

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Office of Highway Operations

## District 04 Mobility Performance Report

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2015 Third Quarter

### EXECUTIVE SUMMARY

#### Overview

Caltrans District 4 is comprised of nine counties that border the San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. Although these are urban counties, they do contain a large amount of sparsely populated land.

The Mobility Performance quarterly analysis compares information with over a year ago and over last quarter in the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

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 7.6 million vehicle hours of delay (VHD) at the 35 mph speed threshold, and 15.7 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was a 40% increase in 35 mph total quarterly delay and 30.6% increase in 60 mph total quarterly delay. This increase may be due to the recovering economy and also a 14% increase in good working detector that were able to capture more congestion.

The average weekday delay experienced in this quarter was approximately 100 thousand VHD at 35 mph, and 210 thousand VHD at 60 mph. Thursday continues to be the most congested day of the week. There was a large increase seen between the year before third quarter Saturday and Sunday time of day charts. Three factors contributed to this increase. The main cause was a data collection software bug that caused the system to stop collecting data mostly during the weekends. The other causes were the overall increase in working detectors and the increased congestion caused by the improving economy.

Alameda County with 2.7 million vehicle hours of total delay during the third quarter and Santa Clara County with 1.6 million vehicle hours of total delay continues to be the most congested and second most congested counties in the District.

## Quarterly Mobility Statistics

Measure	Graph	Percentage Change									
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Quarter</th><th>Value</th></tr> <tr><td>2014 Q3</td><td>7.2</td></tr> <tr><td>2015 Q2</td><td>7.8</td></tr> <tr><td>2015 Q3</td><td>7.9</td></tr> </table>	Quarter	Value	2014 Q3	7.2	2015 Q2	7.8	2015 Q3	7.9	Over one year ago	Over last quarter
		Quarter	Value								
2014 Q3	7.2										
2015 Q2	7.8										
2015 Q3	7.9										
		10.1% ↑	2.1% ↑								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Quarter</th><th>Value</th></tr> <tr><td>2014 Q3</td><td>5.4</td></tr> <tr><td>2015 Q2</td><td>7</td></tr> <tr><td>2015 Q3</td><td>7.6</td></tr> </table>	Quarter	Value	2014 Q3	5.4	2015 Q2	7	2015 Q3	7.6	Over one year ago	Over last quarter
		Quarter	Value								
2014 Q3	5.4										
2015 Q2	7										
2015 Q3	7.6										
		40% ↑	8.9% ↑								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Quarter</th><th>Value</th></tr> <tr><td>2014 Q3</td><td>74</td></tr> <tr><td>2015 Q2</td><td>94</td></tr> <tr><td>2015 Q3</td><td>100</td></tr> </table>	Quarter	Value	2014 Q3	74	2015 Q2	94	2015 Q3	100	Over one year ago	Over last quarter
		Quarter	Value								
2014 Q3	74										
2015 Q2	94										
2015 Q3	100										
		34.6% ↑	6.5% ↑								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Quarter</th><th>Value</th></tr> <tr><td>2014 Q3</td><td>12</td></tr> <tr><td>2015 Q2</td><td>14.6</td></tr> <tr><td>2015 Q3</td><td>15.7</td></tr> </table>	Quarter	Value	2014 Q3	12	2015 Q2	14.6	2015 Q3	15.7	Over one year ago	Over last quarter
		Quarter	Value								
2014 Q3	12										
2015 Q2	14.6										
2015 Q3	15.7										
		30.6% ↑	6.9% ↑								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Quarter</th><th>Value</th></tr> <tr><td>2014 Q3</td><td>166</td></tr> <tr><td>2015 Q2</td><td>199</td></tr> <tr><td>2015 Q3</td><td>210</td></tr> </table>	Quarter	Value	2014 Q3	166	2015 Q2	199	2015 Q3	210	Over one year ago	Over last quarter
		Quarter	Value								
2014 Q3	166										
2015 Q2	199										
2015 Q3	210										
		26.6% ↑	5.5% ↑								

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	Largest Magnitude Increase over last quarter
		Monday 46.3% ↑	Friday 7.3% ↑
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
		4 AM -1% ↓	4 PM -4.7% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
5 PM 25.9% ↑	9 AM 22.6% ↑		
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
		-	3 PM -8.3% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
12 PM 62.8% ↑	11 AM 24.3% ↑		
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
		8 AM -40.8% ↓	9 PM -7.9% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
4 PM 164.9% ↑	2 PM 47.8% ↑		

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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
		Sonoma -12.4%	San Francisco -6.6%
		Largest Magnitude Increase over one year ago	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	Largest Magnitude Decrease over last quarter
		Off-Peak Night -24.2%	-
		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	Change in Good over last quarter
		14%	3%
		Change in Bad over one year ago	Change in Bad over last quarter
		3%	-2%

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2015 Q3-2014 Q3		Difference 2015 Q3-2015 Q2		Rank		
		2014 Q3	2015 Q2	2015 Q3	Absolute	Percentage	Absolute	Percentage	2014 Q3	2015 Q2	2015 Q3
I80	Alameda	431,403	782,930	846,234	414,831	96%	63,304	8%	3	1	1
I880	Alameda	535,776	760,792	776,019	240,242	45%	15,227	2%	2	2	2
US101	San Mateo	538,336	545,193	593,548	55,213	10%	48,355	9%	1	3	3
US101	Santa Clara	382,910	451,132	549,941	167,032	44%	98,810	22%	4	4	4
I580	Alameda	313,956	354,891	349,407	35,452	11%	-5,484	-2%	5	5	5
I680	Contra Costa	186,527	301,115	336,118	149,591	80%	35,003	12%	10	7	6
I680	Alameda	285,885	331,232	284,734	-1,151	0%	-46,499	-14%	7	6	7
SR4	Contra Costa	103,170	180,191	276,040	172,870	168%	95,849	53%	20	14	8
I80	San Francisco	146,980	247,157	272,290	125,310	85%	25,134	10%	13	9	9
I280	Santa Clara	261,860	238,540	256,151	-5,710	-2%	17,611	7%	8	10	10
SR85	Santa Clara	163,478	223,961	254,140	90,662	55%	30,179	13%	11	12	11
I80	Solano	117,336	147,645	246,765	129,430	110%	99,120	67%	18	18	12
I80	Contra Costa	117,820	217,054	244,574	126,754	108%	27,520	13%	16	13	13
SR24	Contra Costa	121,801	167,285	234,421	112,620	1	67,136	40%	14	15	14
US101	Marin	231,963	229,011	227,531	-4,432	-2%	-1,479	-1%	9	11	15
US101	San Francisco	306,334	265,297	207,079	-99,255	-32%	-58,218	-22%	6	8	16
SR92	San Mateo	77,343	146,291	172,913	95,569	124%	26,622	18%	23	19	17
SR237	Santa Clara	67,149	150,783	163,783	96,634	144%	13,000	9%	25	17	18
SR84	Alameda	117,682	131,329	146,107	28,425	0	14,778	11%	17	21	19
I880	Santa Clara	64,405	138,497	125,075	60,670	94%	-13,422	-10%	26	20	20
SR92	Alameda	3,110	97,626	114,115	111,005	3569%	16,488	17%	38	22	21
SR37	Sonoma	10,609	154,954	109,550	98,942	933%	-45,403	-29%	32	16	22
SR24	Alameda	109,285	75,063	97,676	-11,609	-11%	22,613	30%	19	25	23
I280	San Mateo	99,485	77,321	88,920	-10,565	-11%	11,599	15%	21	24	24
SR17	Santa Clara	68,481	61,561	86,214	17,733	26%	24,654	40%	24	29	25
I680	Santa Clara	48,456	69,034	79,802	31,346	65%	10,769	16%	27	26	26
I580	Contra Costa	11,788	35,351	75,807	64,018	543%	40,455	114%	31	31	27
SR37	Marin	9,436	92,953	75,254	65,818	698%	-17,699	-19%	33	23	28
SR87	Santa Clara	46,121	65,371	73,652	27,532	60%	8,282	13%	28	28	29
SR238	Alameda	86,389	69,007	62,743	-23,646	-27%	-6,264	-9%	22	27	30
I280	San Francisco	30,786	60,723	56,187	25,401	83%	-4,535	-7%	29	30	31
US101	Sonoma	158,010	30,262	38,079	-119,930	(1)	7,818	26%	12	32	32
SR242	Contra Costa	25,759	20,929	15,271	-10,487	-41%	-5,658	-27%	30	33	33
I880S	Alameda	6,630	19,303	12,158	5,529	83%	-7,145	-37%	34	34	34
I680	Solano	4,377	2,734	11,193	6,816	156%	8,459	309%	35	38	35
SR152	Santa Clara	299	3,557	10,186	9,888	3308%	6,629	186%	40	37	36
SR37	Solano	119,018	14,504	6,863	-112,154	-94%	-7,640	-53%	15	35	37
I380	San Mateo	3,702	5,344	5,579	1,877	51%	235	4%	36	36	38
I780	Solano	9	861	2,238	2,229	26226%	1,376	160%	45	41	39
SR12	Napa	0	1,461	2,071	2,071		610	42%		39	40
I980	Alameda	1,446	1,240	852	-594	-41%	-388	-31%	39	40	41
SR25	Santa Clara	195	314	695	500	256%	381	122%	41	42	42
I580	Marin	3,591	4	303	-3,289	-92%	298	6777%	37	44	43
SR156	Santa Clara	35	1	115	80	232%	114	22840%	43	45	44
SR29	Napa	23	24	24	1	4%	0	-1%	44	43	45
I80	Napa	137	0	6	-131	-96%	6		42		46
<b>TOTALS</b>		<b>5,419,288</b>	<b>6,969,825</b>	<b>7,588,423</b>	<b>2,169,135</b>	<b>40%</b>	<b>618,598</b>	<b>9%</b>			