

District 03 Mobility Performance Report

2015 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

January 5, 2016
: Nelson Xiao

District 03 Mobility Performance Report

2015 Fourth Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 3 contains eleven counties that located in northern California. Most of its congestion and delay take place at urbanized counties of Sacramento, Yolo, and Placer.

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), Bottleneck Locations
- 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 fourth quarter, total delay equaled 1.15 million vehicle hours of delay (VHD) at the 35 mph speed threshold, and 2.93 million VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 16 thousand VHD at 35 mph, and 40 thousand VHD at 60 mph. SR51 is the worst performing freeway in District 3 since it has the highest Total Delay per route.

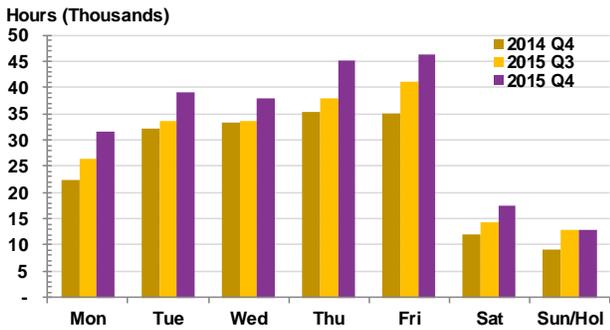
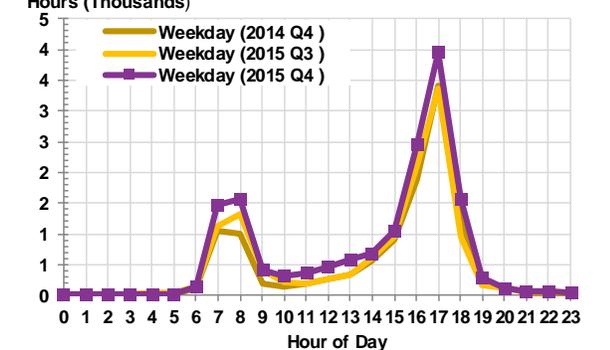
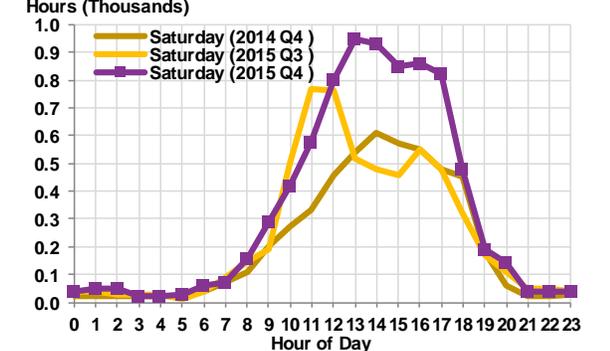
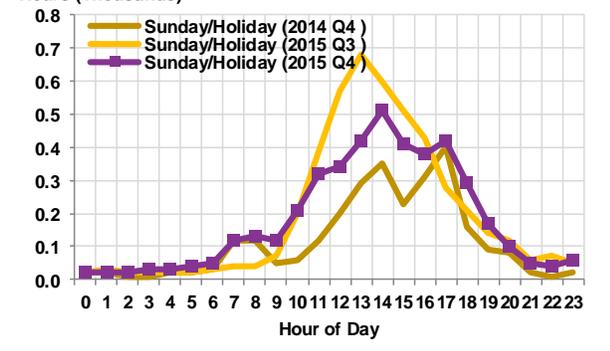
Top Ten Bottlenecks for this Quarter

Fwy	Location	Shift	Abs PM	CA PM	# Days Active	Average Extent (Miles)	Total Delay (veh-hrs)	Total Duration (minutes)
US50-W	15th St	PM	4.51	L1.351	47	3.0	54,544	6,790
SR51-N	Elvas UP	PM	2.40	2.40	51	2.2	35,581	4,745
US50-E	Stockton Blvd.	PM	6.35	R.711	51	2.8	34,924	5,320
SR51-N	SB Watt Ave.	PM	7.85	7.85	52	3.6	32,710	5,665
SR51-S	EB Exposition Bl.	PM	3.32	3.32	61	1.5	32,493	11,530
I80-W	EB Madison to WB 80	AM	95.85	12.35	46	2.1	21,635	4,735
SR51-N	NB Fulton Ave.	PM	6.87	6.87	59	2.1	20,779	5,990
SR99-S	EB Consumnes River	PM	290.64	16.20	44	1.8	20,283	7,380
SR51-S	Auburn Blvd	AM	7.55	7.57	54	1.7	19,740	6,895
SR160-S	51/160 IC	PM	49.35	46.75	62	0.7	19,486	13,340

Note: For the table above, the quarterly delay calculation was based on 60 mph threshold, AM or PM weekday peak period.

Quarterly Mobility Statistics

Measure	Graph	Percentage Change							
		Over one year ago	Over last quarter						
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>2.30</td></tr> <tr><td>2015</td><td>2.42</td></tr> </table>	Year	Q4	2014	2.30	2015	2.42	Over one year ago	Over last quarter
		Year	Q4						
2014	2.30								
2015	2.42								
		5.1% ↑	-3.4% ↓						
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>0.83</td></tr> <tr><td>2015</td><td>1.15</td></tr> </table>	Year	Q4	2014	0.83	2015	1.15	Over one year ago	Over last quarter
		Year	Q4						
2014	0.83								
2015	1.15								
		38% ↑	22.4% ↑						
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>11,634</td></tr> <tr><td>2015</td><td>15,677</td></tr> </table>	Year	Q4	2014	11,634	2015	15,677	Over one year ago	Over last quarter
		Year	Q4						
2014	11,634								
2015	15,677								
		34.7% ↑	28.2% ↑						
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2014</td><td>2.28</td></tr> <tr><td>2015</td><td>2.93</td></tr> </table>	Year	Q4	2014	2.28	2015	2.93	Over one year ago	Over last quarter
		Year	Q4						
2014	2.28								
2015	2.93								
		28.8% ↑	13.3% ↑						
Average Non-Holiday Weekday 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>32</td></tr> <tr><td>2015</td><td>40</td></tr> </table>	Year	Q4	2014	32	2015	40	Over one year ago	Over last quarter
		Year	Q4						
2014	32								
2015	40								
		26.3% ↑	16.1% ↑						

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 
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 8 PM -9.3% 	Largest Magnitude Weekday Decrease over last quarter 9 PM -15.7% 
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 4 AM -13.3% 	Largest Magnitude Saturday Decrease over last quarter 11 AM -24.8% 
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 1 AM -17.9% 	Largest Magnitude Sun./Holiday Decrease over last quarter 1 PM -39.2% 
		Largest Magnitude Increase over one year ago Friday 31.6% 	Largest Magnitude Increase over last quarter Thursday 19.3% 
		Largest Magnitude Weekday Increase over one year ago 4 PM 30% 	Largest Magnitude Weekday Increase over last quarter 6 PM 65.3% 
		Largest Magnitude Saturday Increase over one year ago 1 PM 74.2% 	Largest Magnitude Saturday Increase over last quarter 2 PM 92.7% 
		Largest Magnitude Sun./Holiday Increase over one year ago 11 AM 162.2% 	Largest Magnitude Sun./Holiday Increase over last quarter 5 PM 50.2% 

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
		↓	↓
		El Dorado -82.4%	El Dorado -82.4%
		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
		↓	↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		AM Peak 59%	PM Peak 23.6%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		↑	↓
		3%	-2.5%
		Change in Bad over one year ago	Change in Bad over last quarter
		↓	↑
		-2%	10%

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
SR51	Sacramento	219172.6	231693.5	293783.8	74611.2	34%	62,090	27%	1	1	1
SR99	Sacramento	133072.3	154621.9	209662.6	76590.3	58%	55,041	36%	3	2	2
US50	Sacramento	136224.7	148403.3	181918.1	45693.4	34%	33,515	23%	2	3	3
I5	Sacramento	104626	81266.6	103592.2	-1033.8	-1%	22,326	27%	4	5	4
I80	Yolo	68222.2	98502.6	70845.2	2623	4%	(27,657)	-28%	5	4	5
SR113	Yolo	3916.1	28544.5	60702.6	56786.5	1450%	32,158	113%	13	8	6
I80	Sacramento	59101.1	54743.6	55361.1	-3740	-6%	618	1%	6	6	7
I80	Placer	33735.1	43346.6	40796.9	7061.8	21%	(2,550)	-6%	7	7	8
I5	Yolo	3686.8	16019.7	32278.8	28592	776%	16,259	101%	14	11	9
SR160	Sacramento	22891.8	18534.7	30440.4	7548.6	33%	11,906	64%	8	10	10
US50	Yolo	22233.2	21944	23033.2	800	4%	1,089	5%	9	9	11
SR65	Placer	12093.8	11726	16580.6	4486.8	37%	4,855	41%	10	13	12
I80	Nevada	6052.4	13661.2	14830.3	8777.9	145%	1,169	9%	11	12	13
SR70	Yuba	5849.2	3782.1	11766.6	5917.4	101%	7,985	211%	12	16	14
SR99	Butte	252.2	4142.6	1139.4	887.2	352%	(3,003)	-72%	16	15	15
US50	El Dorado	532.2	6402.5	1128.2	596	112%	(5,274)	-82%	15	14	16
SR99	Sutter	72.8	836.2	220.4	147.6	203%	(616)	-74%	17	17	17
I80	Sierra	0	0	0	0		-				
SR12	Sacramento	0	0	0	0		-				
SR267	Placer	0	0	0	0		-				
SR275	Yolo	0.5	0	0	-0.5	-100%	-		18		
SR89	Placer	0	0	0	0		-				
TOTALS		831,735	938,172	1,148,080	316,345	38%	209,909	22%			

As identified by the congestion table above, there was a 22% increase in delay when comparing the 4th quarter with the previous quarter; even the VMT was 3% less. The increase in delay could be a seasonal change. In the summer months, the traffic was more spread out for the entire day when comparing with fall months when traffic was more concentrated during the commute hours.

Like the previous quarter, the on-going HOV lane project on Sac-80 (nearby the I-80/I-5 connector) continue to create congestion and delay on I-80 and nearby freeways. It is anticipated that would be not improvement until 2016, when the project is completed.