District 08 Mobility Performance Report

2017 Third Quarter

DEPARTMENT OF TRANSPORTATION

October 17, 2017

: D8 TMS SUPPORT

2017 Third Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 8 contains two counties located in southern California: San Bernardino and Riverside Counties. Both counties are part of the Inland Empire, with Riverside County has a population of almost 2.3 million residents and San Bernardino County with 2.1 million residents. Although these are urban counties, they do contain a large amount of sparsely populated National Forest and National Recreation Area 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), 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 Third quarter of 2017, total delay equaled 2.2 million Vehicle Hours of Delay (VHD) at the 35 mph speed threshold, and 6.3 million VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 30 thousand VHD at 35 mph, and 86 thousand VHD at 60 mph. The Vehicle Miles of Travel (VMT) equaled 6.9 billion miles for this quarter. The total delay at 35 mph is 1,177,370 for Riverside County and 1,002,102 for San Bernardino County. The total delay at 60 mph is 3,118,953 for Riverside County and 3,159,863 for San Bernardino County.

PROJECT STATUS

The Following District 8 projects are currently being constructed or are scheduled for construction for 2017. These current and future (planned) projects will relieve congestion in District 8:

RIVERSIDE COUNTY

RIV 15; INSTALL AND UPGRADE TMS ELEMENTS; EA 0G770

Install new Fiber Optic infrastructure on Rte 15 from PM 0.00/41.80 and upgrade newly installed wireless vehicle detection stations. Connect all the existing TMS elements to the newly installed Fiber Optic infrastructure.

Approve Construction Contract Date- 8/15/2017

RIV 215; INSTALL AND UPGRADE TMS ELEMENTS; EA 0G780

Install new Fiber Optic infrastructure on Rte 215 from PM 8.40/38.80 and upgrade newly installed wireless vehicle detection stations. Connect all the existing TMS elements to the newly installed Fiber Optic infrastructure.

Approve Construction Contract Date- 3/30/2016

RIV 91; CIP; EA 0F540

Construct 1 MF lane & 2 Toll Express lane each direction on RTE 91 from PM 0.00/11.55. Project in Construction Express Lanes scheduled to be opened in January 2017.

Approve Construction Contract Date- 5/09/2013

RIV 15; EA 1E300

Install Ramp Metering System at both NB & SB Entrance Ramps at Temescal Canyon RD to Weirick RD on RTE 15 from PM 33.10/35.80.

Approve Construction Contract Date- 6/15/2016

RIV 60; EA 1C640

Replace Wireless Communication System with Fiber Optic Infrastructure & connect it to the existing components on Rte 60 from PM 0.00/12.20.

Approve Construction Contract Date- 5/22/2017

SAN BERNARDINO COUNTY

SBD 10; REPLACE RANDOM SLABS ON MAINLINE & CONNECTORS; EA 0Q760

Replace random slabs on Mainline & Connectors. Also upgrade all the detection TMS elements on Rte 10 from PM 0.00/30.90

Approve Construction Contract Date- 01/15/15

SBD 15; RECONSTRUCT EXISTING "D" STREET & STODDARD WELLS RD IC ; EA 3555V

Reconstruct existing "D", "E" ST, & Stoddard Wells RD IC, Widen Victorville separation overhead. PM 42.50/ 46.00

Approve Construction Contract Date- 11/05/15

SBD 210; INSTALL FIBER OPTIC COMMUNICATION (FOC), CLOSED CIRCUIT TELEVISION CAMERAS (CCTV) AND CHANGEABLE MESSAGE SIGN (CMS); EA 0E551

Install Fiber Optic Communication (FOC), Closed Circuit Television (CCTV) and Changeable Message Sign (CMS) PM 21.80/ 27.30

Approve Construction Contract Date- 01/11/17

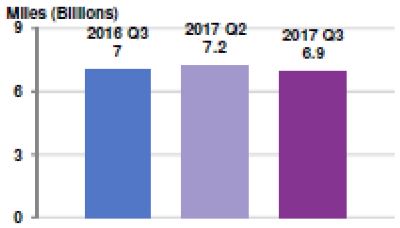
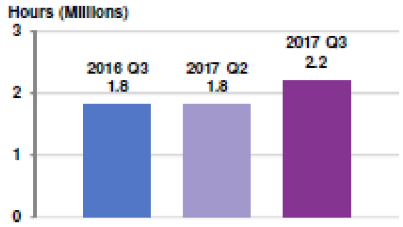
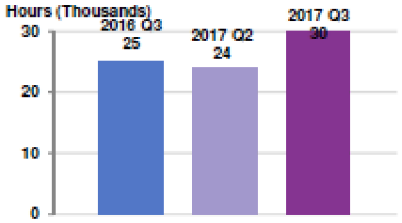
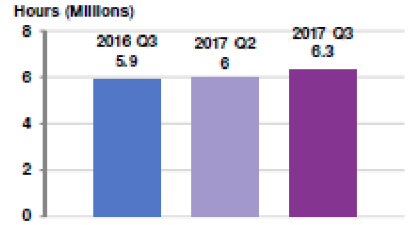
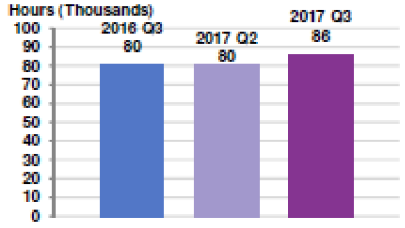
Top Ten Bottleneck AM Period

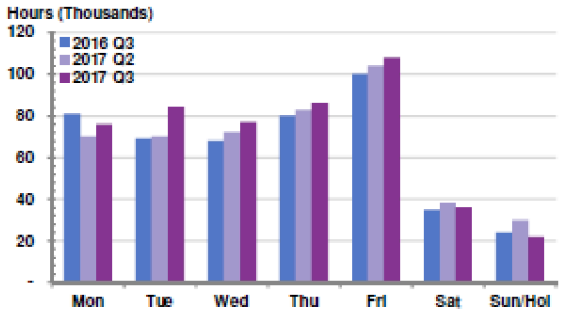
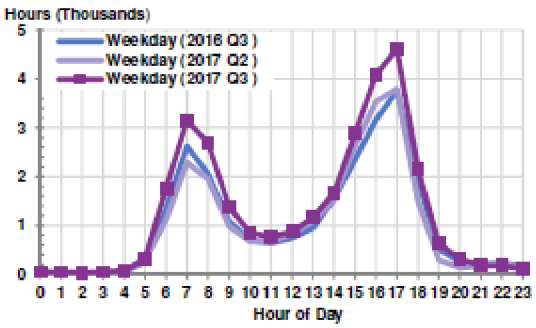
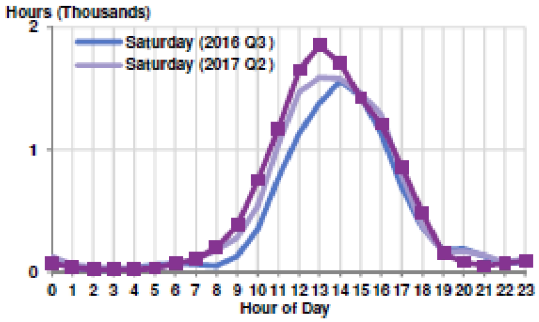
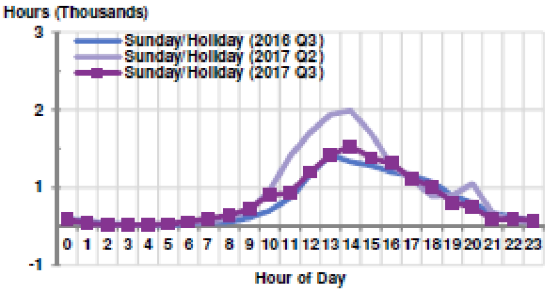
Rank	County	Freeway	CA Postmile	Approximate Location	Average Extent (miles)	Total Delay (hours)	Total Duration (hours)	Period
1	Riverside	I215-N	40.929	MARTIN LUTHER KING	2.38	43907	213	AM
2	Riverside	SR71-S	2.5	S-O PRADO DAM RD	3.24	25760	91	AM
3	Riverside	I215-S	44.908	Center St	2.75	23782	108	AM
4	Riverside	SR91-W	10.724	PIERCE	1.37	19083	152	AM
5	Riverside	I15-N	52.27	PHILADELPHIA UC	0.82	17453	162	AM
6	Riverside	I15-N	34.5	BROWN CANYON WASH	2.12	12471	72	AM
7	Riverside	I15-N	45.93	.25 N-O 6th ST.	1.87	12112	62	AM
8	Riverside	SR91-E	18.522	CENTRAL EB ON	1.36	5895	44	AM

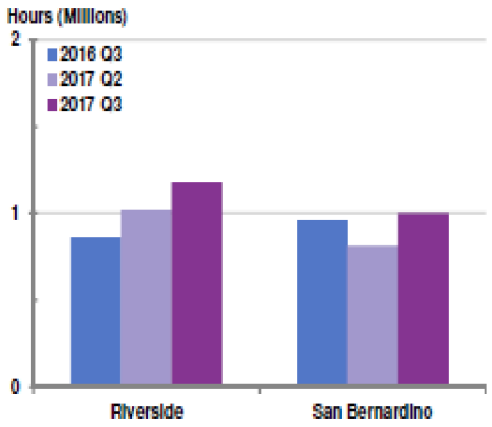
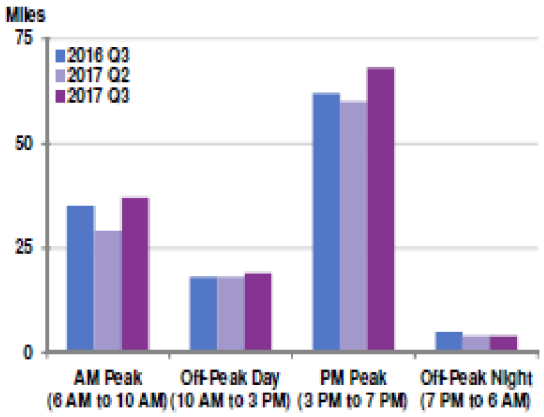
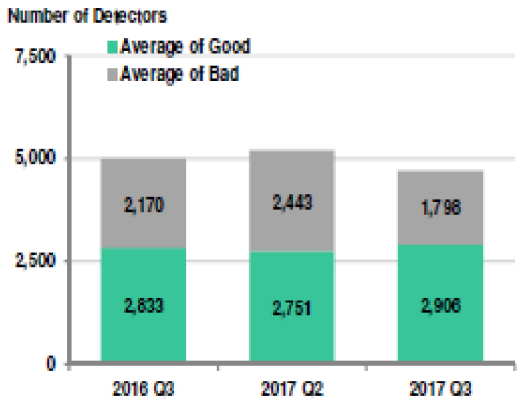
Top Ten Bottleneck PM Period

Rank	County	Freeway	CA Postmile	Approximate Location	Average Extent (miles)	Total Delay (hours)	Total Duration (hours)	Period
1	San Bernardino	I15-S	.969	JURUPA	1.75	55233	208	PM
2	San Bernardino	I15-N	3.2	4TH ST NB ONR	1.46	51770	195	PM
3	Riverside	I215-S	R32.5	OLEANDER AVE	3.80	49361	206	PM
4	Riverside	I215-S	40.76	MLK SB ON	2.21	41883	240	PM
5	Riverside	SR60-E	16.602	PERRIS EB ONR	1.00	29513	162	PM
6	Riverside	SR91-W	10.724	PIERCE	1.68	29417	195	PM
7	San Bernardino	I210-E	3.69	CAMPUS EB ON	1.55	28134	134	PM
8	San Bernardino	I210-E	2	.4 M E-O MOUNTAIN	1.18	23555	149	PM
9	Riverside	I15-N	45.93	.25 N-O 6th ST.	1.59	20044	116	PM
10	San Bernardino	I10-E	12.6	MULBERRY CREEK	2.84	19471	80	PM

Quarterly Mobility Statistics

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		-1.6%	-3.9%
Total Vehicle Hours of Delay (VHD) at 35 mph		19.9%	18.8%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		21.4%	24.7%
Total Vehicle Hours of Delay (VHD) at 60 mph		6.2%	4.4%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		8.4%	8.3%

Measure	Graph	Percentage Change		
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Monday -5.9%	Largest Magnitude Decrease over last quarter Sun/Hol -26.7%	
		Largest Magnitude Increase over one year ago Tuesday 22.2%	Largest Magnitude Increase over last quarter Tuesday 21%	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 11 PM -33.9%	Largest Magnitude Weekday Decrease over last quarter 11 PM -24.7%	
		Largest Magnitude Weekday Increase over one year ago 4 PM 29.2%	Largest Magnitude Weekday Increase over last quarter 7 AM 37.1%	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 8 PM -60.4%	Largest Magnitude Saturday Decrease over last quarter 8 PM -53.8%	
		Largest Magnitude Saturday Increase over one year ago 12 PM 45.5%	Largest Magnitude Saturday Increase over last quarter 1 PM 16.5%	
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun/Holiday Decrease over one year ago 7 PM -23.8%	Largest Magnitude Sun/Holiday Decrease over last quarter 1 PM -36.2%	
		Largest Magnitude Sun/Holiday Increase over one year ago 10 AM 100.3%	Largest Magnitude Sun/Holiday Increase over last quarter 6 PM 29.4%	

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 –
		Largest Magnitude Increase over one year ago Riverside 36.8%	Largest Magnitude Increase over last quarter San Bernardino 23.6%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago Off-Peak Night -22.7%	Largest Magnitude Decrease over last quarter –
		Largest Magnitude Increase over one year ago PM Peak 9%	Largest Magnitude Increase over last quarter AM Peak 28.3%
Average Number of Good and Bad Detectors		Change in Good over one year ago 3%	Change in Good over last quarter 6%
		Change in Bad over one year ago -17%	Change in Bad over last quarter -26%

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2017 Q3-2016 Q3		Difference 2017 Q3-2017 Q2		Rank		
Route	County	2016 Q3	2017 Q2	2017 Q3	Absolute	Percentage	Absolute	Percentage	2016 Q3	2017 Q2	2017 Q3
SR-91	Riverside	279472	297124.9	444018.5	164546.5	59%	146,894	49%	2	1	1
I-15	San Bernardino	316941	224671	391579.9	74638.9	24%	166,909	74%	1	5	2
I-215	Riverside	216594.1	289351.9	312981.6	96387.5	45%	23,630	8%	4	2	3
I-15	Riverside	242445.8	229612.9	276040.8	33595	14%	46,428	20%	3	4	4
I-10	San Bernardino	207536.2	230860.6	216865.8	9329.6	4%	(13,995)	-6%	5	3	5
I-210	San Bernardino	170765.5	134112	158556.4	-12209.1	-7%	24,444	18%	6	6	6
SR-60	San Bernardino	150432.2	112169.9	117265.6	-33166.6	-22%	5,096	5%	7	8	7
SR-60	Riverside	68237.2	130178.1	100767	32529.8	48%	(29,411)	-23%	8	7	8
SR-71	San Bernardino	43100.4	41443.7	68621.7	25521.3	59%	27,178	66%	11	11	9
I-215	San Bernardino	68078	67700.3	49212.3	-18865.7	-28%	(18,488)	-27%	9	9	10
SR-71	Riverside	48399.1	34683.9	29478.2	-18920.9	-39%	(5,206)	-15%	10	12	11
I-10	Riverside	5270.4	42367	14084.4	8814	167%	(28,283)	-67%	12	10	12
SR-259	San Bernardino	128.3	0	0	-128.3	-100%	-		13		
TOTALS		1,817,400	1,834,276	2,179,472	362,072	19.9%	345,196	18.8%			