

District 08 Mobility Performance Report

2017 Second Quarter

DEPARTMENT OF TRANSPORTATION

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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 second quarter of 2017, total delay equaled 1.8 million Vehicle Hours of Delay (VHD) at the 35 mph speed threshold, and 6 million VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 24 thousand VHD at 35 mph, and 80 thousand VHD at 60 mph. The Vehicle Miles of Travel (VMT) equaled 7.2 billion miles for this quarter. The total delay at 35 mph is 1,023,319 for Riverside County and 810,958 for San Bernardino County. The total delay at 60 mph is 3,082,387 for Riverside County and 2,929,730 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 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 15; I-15/215 DEVORE INTERCHANGE IMPROVEMENT; EA 0K710

I-15/I-215 Devore Interchange Improvement.

Approve Construction Contract Date- 11/26/2012 & CCA-07/31/2017

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	2.34	45851.2	220.83	AM
2	Riverside	SR71-S	2.5	S/O PRADO DAM RD	2.88	39641.8	183.08	AM
3	Riverside	SR60-W	11.6	W/O Main Street	3.72	25907.9	112.08	AM
4	Riverside	I215-S	44.908	Center St	2.37	23820.7	111.42	AM
5	Riverside	I15-N	34.5	BROWN CANYON WASH	1.80	18410.7	133.33	AM
6	Riverside	SR91-W	10.724	PIERCE	1.49	18338.7	137.67	AM
7	Riverside	I15-N	52.27	PHILADELPHIA UC	0.80	13590.9	141.25	AM
8	Riverside	I15-N	45.93	.25 N/O 6th ST.	1.68	12852.6	64.08	AM
9	Riverside	SR91-E	18.522	CENTRAL EB ON	1.45	7797.3	57.58	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-N	3.2	4TH ST NB ONR	1.16	51769.3	224.75	PM
2	San Bernardino	I15-S	0.969	JURUPA	1.58	48341	199.00	PM
3	Riverside	SR60-E	16.602	PERRIS EB ONR	1.00	42706.8	235.17	PM
4	Riverside	I215-S	32.5	OLEANDER AVE	3.80	40075.6	173.00	PM
5	Riverside	I215-S	40.76	MLK SB ON	1.98	33284.7	236.08	PM
6	Riverside	SR91-W	10.724	PIERCE	1.72	28424.4	198.08	PM
7	Riverside	SR60-E	14.509	PIGEON PASS	1.78	25432.6	184.92	PM
8	San Bernardino	I210-E	2	.4 M E/O MOUNTAIN	1.07	22406.6	166.58	PM
9	Riverside	I15-N	52.27	PHILADELPHIA UC	0.80	21951	180.50	PM
10	San Bernardino	I10-E	12.6	MULBERRY CREEK	2.93	21398.3	95.42	PM

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>Quarter</th><th>Value</th></tr> <tr><td>2016 Q2</td><td>6.9</td></tr> <tr><td>2017 Q1</td><td>7.2</td></tr> <tr><td>2017 Q2</td><td>7.2</td></tr> </table>	Quarter	Value	2016 Q2	6.9	2017 Q1	7.2	2017 Q2	7.2	0.1%	-0.2%
Quarter	Value										
2016 Q2	6.9										
2017 Q1	7.2										
2017 Q2	7.2										
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>2016 Q2</td><td>1.6</td></tr> <tr><td>2017 Q1</td><td>1.6</td></tr> <tr><td>2017 Q2</td><td>1.8</td></tr> </table>	Quarter	Value	2016 Q2	1.6	2017 Q1	1.6	2017 Q2	1.8	15.4%	13.1%
Quarter	Value										
2016 Q2	1.6										
2017 Q1	1.6										
2017 Q2	1.8										
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>2016 Q2</td><td>21</td></tr> <tr><td>2017 Q1</td><td>23</td></tr> <tr><td>2017 Q2</td><td>24</td></tr> </table>	Quarter	Value	2016 Q2	21	2017 Q1	23	2017 Q2	24	16.4%	4%
Quarter	Value										
2016 Q2	21										
2017 Q1	23										
2017 Q2	24										
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>2016 Q2</td><td>5.4</td></tr> <tr><td>2017 Q1</td><td>5.6</td></tr> <tr><td>2017 Q2</td><td>6</td></tr> </table>	Quarter	Value	2016 Q2	5.4	2017 Q1	5.6	2017 Q2	6	12.3%	7.8%
Quarter	Value										
2016 Q2	5.4										
2017 Q1	5.6										
2017 Q2	6										
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>2016 Q2</td><td>70</td></tr> <tr><td>2017 Q1</td><td>78</td></tr> <tr><td>2017 Q2</td><td>80</td></tr> </table>	Quarter	Value	2016 Q2	70	2017 Q1	78	2017 Q2	80	13.9%	2.7%
Quarter	Value										
2016 Q2	70										
2017 Q1	78										
2017 Q2	80										

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
		Sun/Hol -5%	Thursday -0.1%
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
		8 PM -34.7%	6 PM -29.9%
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
		6 PM -36.8%	6 PM -15.7%
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
		5 PM -33.4%	4 PM -19.4%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Thursday 17.3%	Saturday 32.5%
		4 PM 22.1%	3 PM 15.4%
		12 PM 61.2%	1 PM 96.8%
		12 PM 52.7%	12 PM 205.3%

Measure	Graph	Percentage Change			
Total Vehicle Hours of Delay (VHD) by County at 35 mph	<p>Hours (Millions)</p> <p>■ 2016 Q2 ■ 2017 Q1 ■ 2017 Q2</p>	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter		
		-	San Bernardino -4.6% ↓		
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter		
Riverside 17.4% ↑	Riverside 32.6% ↑				
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	<p>Miles</p> <p>■ 2016 Q2 ■ 2017 Q1 ■ 2017 Q2</p> <p>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)</p>	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter		
		Off-Peak Night -26.6% ↓	PM Peak -3.9% ↓		
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter		
		PM Peak 10.6% ↑	Off-Peak Day 23.9% ↑		
Average Number of Good and Bad Detectors	<p>Number of Detectors</p> <p>■ Average of Good ■ Average of Bad</p>	Change in Good over one year ago	Change in Good over last quarter		
		4% ↑	4% ↑		
		Change in Bad over one year ago	Change in Bad over last quarter		
		7% ↑	0%		

Congestion by Route

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2017 Q2-2016 Q2		Difference 2017 Q2-2017 Q1		Rank		
		2016 Q2	2017 Q1	2017 Q2	Absolute	Percentage	Absolute	Percentage	2016 Q2	2017 Q1	2017 Q2
		SR-91	Riverside	261000.9	207311.8	297124.9	36124	14%	89,813	43%	3
I-215	Riverside	201149.8	278233.5	289351.9	88202.1	44%	11,118	4%	5	1	2
I-10	San Bernardino	207872.5	258424.1	230860.6	22888.1	11%	(27,564)	-11%	4	2	3
I-15	Riverside	261803.7	155425	229612.9	-32190.8	-12%	74,168	48%	2	5	4
I-15	San Bernardino	265726.7	251675.4	224671	-41055.7	-15%	(27,004)	-11%	1	3	5
I-210	San Bernardino	110682.5	144766.3	134112	23429.5	21%	(10,654)	-7%	6	6	6
SR-60	Riverside	80064.5	106985	130178.1	50113.6	63%	23,193	22%	7	7	7
SR-60	San Bernardino	51530.2	92677.3	112169.9	60639.7	118%	19,493	21%	8	8	8
I-215	San Bernardino	43070.4	64238	67700.3	24629.9	57%	3,462	5%	10	9	9
I-10	Riverside	16383.5	11747	42367	25983.5	159%	30,620	261%	12	12	10
SR-71	San Bernardino	38294.4	38017.3	41443.7	3149.3	8%	3,426	9%	11	10	11
SR-71	Riverside	51418	12020.3	34683.9	-16734.1	-33%	22,664	189%	9	11	12
SR-259	San Bernardino	84.5	1.4	0	-84.5	-100%	(1)	-100%	13	13	
TOTALS		1,589,082	1,621,522	1,834,276	245,195	15.4%	212,754	13.1%			