District 12 Mobility Performance Report

2018 2nd Quarter

DISTRICT 12 MOBILITY PERFORMANCE REPORT

2018 2nd Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 12 (Orange County) is located in southern California and is neighbors with District 7 (Los Angeles), District 8 (San Bernardino), and District 11 (San Diego). As of July 2016 the total population in Orange County was 3,172,532. The jurisdictional boundaries of Orange County encompass a metropolitan area of 794 square miles, including 34 cities, and 17 state highway routes. The county has 1,059 lane miles of general purpose lanes and 226 lane miles of High-Occupancy Vehicle (HOV) lanes, which is one of California's largest HOV lane networks. Orange County is the third most populous county in California, the sixth-most populous in the United States, and more populous than twenty-one U.S. states. Its county seat is Santa Ana. It is the second most densely populated county in the state.

The Mobility Performance quarterly analysis compares information from the most recent quarter and the previous 4 quarters, involving the following performance measures:

- o   Vehicle Miles of Travel (VMT)

- o   Vehicle Hours of Delay (VHD)

- o   Lost Lane Miles (LLM)

- o   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 uses congestion at two speed thresholds: delay from vehicles traveling below 35 MPH and delay from vehicles traveling below 60 mph. The 35 MPH limit

represents severe congestion while the 60 MPH limit represents light and heavy congestion. These thresholds/limits are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the second quarter, total delay equaled 2.1million VHD at the 35 mph speed threshold, and 6.1million VHD at the 60 mph threshold. Compared to the same quarter the year before, total delay equaled to 2.1 million VHD in 35 mph and 5.4 percent increase in 60 mph from 5.8 million to 6.1 million VHD.

The average weekday delay experienced in this quarter was approximately 29 thousand VHD at 35 mph, and 81 thousand VHD at 60 mph.

Top 10 Bottlenecks for the 2nd Quarter of 2018

Fwy	Location	Shift	Abs PM	CA PM	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
I405-N	EUCLID	PM	12.62	12.85	44	2.381818	43569.9	5240
I405-S	HARVARD	PM	5.98	6.21	62	1.596774	34709.2	10080
SR55-S	17TH 1	AM	11.602	11.62	64	1.329688	34282.5	12135
I405-N	WARNER	PM	14.59	14.82	45	2.48	31443	5170
I405-N	BROOKHUR2	PM	13.74	13.97	48	2.445833	30294	5670
I405-N	HAMPSHIRE	PM	11.93	12.16	40	1.8075	29962.8	3540
I405-N	BEACH 2	PM	16.53	16.76	59	1.245763	25326.9	9190
I5-N	B ST	PM	102.251	30	64	2.985938	23921.5	14675
I5-N	1ST	PM	103.051	30.8	64	0.648438	23796.4	16195
I5-S	S OF 22	AM	105.988	33.8	64	1.028125	19908.4	10940

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Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)	Miles (Billions) 2017 Q2: 3.5, 2018 Q1: 3.5, 2018 Q2: 3.5	3.4% ⬆	5.9% ⬆
Total Vehicle Hours of Delay (VHD) at 35 mph	Hours (Millions) 2017 Q2: 2.6, 2018 Q1: 2.1, 2018 Q2: 2.1	-19.3% ⬇	3.2% ⬆
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	Hours (Thousands) 2017 Q2: 36, 2018 Q1: 29, 2018 Q2: 29	-19.9% ⬇	-2.6% ⬇
Total Vehicle Hours of Delay (VHD) at 60 mph	Hours (Millions) 2017 Q2: 6.9, 2018 Q1: 5.8, 2018 Q2: 6.1	-11.9% ⬇	5.4% ⬆
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	Hours (Thousands) 2017 Q2: 92, 2018 Q1: 80, 2018 Q2: 81	-12.2% ⬇	1% ⬆

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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
		Thursday -14.3% ⬇	Monday -11.4% ⬇
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		–	Saturday 23.4% ⬆
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
		5 PM -17.7% ⬇	8 AM -22.5% ⬇
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		5 AM 39.4% ⬆	3 PM 16.8% ⬆
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
		1 PM -22.1% ⬇	6 PM -11.5% ⬇
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		6 AM 141.8% ⬆	4 PM 65.1% ⬆
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
		12 PM -21.7% ⬇	5 PM -37.6% ⬇
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		8 AM 95.9% ⬆	12 PM 51.4% ⬆

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Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph	Hours (Millions) ■ 2017 Q2 ■ 2018 Q1 ■ 2018 Q2 Orange: 2.65, 2.07, 2.14	**Largest Magnitude Decrease over one year ago** Orange -19.3% ⬇	**Largest Magnitude Decrease over last quarter** –
		Largest Magnitude Increase over one year ago –	**Largest Magnitude Increase over last quarter** Orange 3.2% ⬆
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	Miles ■ 2017 Q2 ■ 2018 Q1 ■ 2018 Q2 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)	**Largest Magnitude Decrease over one year ago** PM Peak -15.8% ⬇	**Largest Magnitude Decrease over last quarter** AM Peak -13% ⬇
		Largest Magnitude Increase over one year ago –	**Largest Magnitude Increase over last quarter** Off-Peak Day 37.4% ⬆
Average Number of Good and Bad Detectors	Number of Detectors ■ Average of Good ■ Average of Bad 2017 Q2: 1,275 / 4,348 2018 Q1: 1,543 / 4,168 2018 Q2: 1,463 / 4,296	**Change in Good over one year ago** -1% ⬇	**Change in Good over last quarter** 3% ⬆
		Change in Bad over one year ago 15% ⬆	**Change in Bad over last quarter** -5% ⬇

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		Vehicle Hours of Delay at 35 mph			Difference 2018 Q2-2017 Q2		Difference 2018 Q2-2018 Q1		Rank		
Route	County	2017 Q2	2018 Q1	2018 Q2	Absolute	Percentage	Absolute	Percentage	2017 Q2	2018 Q1	2018 Q2
I405	Orange	706,079	663,832	586,949	-119,130	-16.9%	-76,883	-11.6%	1	1	1
I5	Orange	471,591	451,761	521,179	49,588	10.5%	69,419	15.4%	3	2	2
SR91	Orange	495,655	217,284	275,875	-219,780	-44.3%	58,591	27.0%	2	4	3
SR55	Orange	461,403	283,897	274,121	-187,282	-40.6%	-9,777	-3.4%	4	3	4
SR57	Orange	226,682	172,825	197,535	-29,147	-12.9%	24,710	14.3%	5	5	5
SR22	Orange	131,925	124,910	103,966	-27,959	-21.2%	-20,944	-16.8%	6	6	6
SR73	Orange	105,409	86,005	86,189	-19,220	-18.2%	184	0.2%	7	7	7
SR241	Orange	21,880	28,783	42,679	20,799	95.1%	13,897	48.3%	8	8	8
I605	Orange	19,763	18,430	17,500	-2,263	-11.4%	-930	-5.0%	9	9	9
SR133	Orange	5,468	18,199	16,289	10,822	197.9%	-1,910	-10.5%	10	10	10
SR142	Orange	0	2,036	12,796	12,796		10,760	528.6%		11	11
SR74	Orange	41	119	684	643	1568.8%	565	474.3%	12	13	12
SR261	Orange	883	1,015	313	-572	-64.6%	-702	-69.1%	11	12	13
SR1	Orange	0	7	0	0		-7	-100.0%		14	
SR39	Orange	3	0	0	-3	-100.0%	0		13		