

District 07 Mobility Performance Report

2018 First Quarter

DEPARTMENT OF TRANSPORTATION
OFFICE OF SYSTEM MODELING, DATA COLLECTION AND ANALYSIS
DIVISION OF OPERATIONS

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EXECUTIVE SUMMARY

Overview

Caltrans District 7 contains two counties located in coastal southern California: Los Angeles and Ventura Counties. Both counties are urban, with Los Angeles being the most populous county in the United States with almost 10.2 million residents. Ventura County has a population of 856,500. Although these are urban counties, they do contain a large amount of sparsely populated National Forest and National Recreation Area.

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)
- Detection Health

This report is based on daily data collected, 24 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 60 miles per hour (mph), and delay from vehicles traveling below 35 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 on engineering experience and District input.

FINDINGS

In the first quarter of 2018, total vehicle hours of delay (VHD) at the 35 mph speed threshold equaled 14.9 million. About 97.5 percent of delay were generated in Los Angeles County and only 2.5 percent of delay in Ventura County. Almost half of the Los Angeles county delays are generated mainly from three freeways I-405, I-5, and US-101. This total delay is 8.5 percent less than the previous quarter. Similarly, total delay at the 60 mph speed threshold equaled 31.5 million VHD, a decrease of 6.3 percent of previous quarter.

The average weekday daily vehicle hour delay experienced in this quarter was approximately 210 thousand VHD at 35 mph and 434 thousand VHD at 60 mph threshold. Thursdays and Fridays are the most congested days of the week, with Peak hours extend from 6:00 am to 9:30 am and from 2:30 pm to 7:00 pm. Peak hours during weekend (Saturday and Sunday) is generally between 12:00 pm and 6:00 pm

Top Ten Bottlenecks for the 2018 First Quarter:

Rnak	Fwy	Location	Shift	Abs PM	CA PM	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Average Duration (hrs)
1	I-405-N	Nordhoff St.	PM	68.64	44.87	62	7.99	280,463	3.3
2	US-101-S	Garey Street	PM	1.80	.45	62	5.99	199,295	3.8
3	I-105-E	Long Beach Blvd	PM	11.90	R11.9	62	5.78	180,319	4.7
4	I-405-S	Van Ness Ave	PM	38.73	14.96	48	5.96	164,926	3.3
5	I-110-N	Adams Blvd	AM	20.53	20.6	60	4.03	161,551	2.9
6	I-405-N	Waterford St.	PM	55.88	32.11	55	3.57	161,338	4.2
7	US-101-S	Hayvenhurst Ave	AM	19.83	18.5	60	3.63	159,719	3.3
8	I-405-S	Howard Hughes Pkwy	PM	48.67	24.9	62	4.64	159,297	2.8
9	SR-170-S	Magnolia Blvd	AM	2.35	R15.26	61	4.08	157,336	3.6
10	US-101-S	Barham Blvd	AM	10.66	9.31	59	5.27	144,871	2.6

Project Status:

The following D7 Projects are currently being constructed or are scheduled for construction. These current or future (planned) projects will relieve congestion in D7.

LA 10: WIDEN FREEWAY, CONSTRUCT HIGH OCCUPANCY VEHICLE (HOV) LANES; EA 1193U (Segment 3)

In LA County from Citrus Ave. in West Covina to SR-57 in Pomona. Constructing one HOV lane in each direction. The proposed typical half section consists of an 8-foot inside shoulder, 12-foot HOV lane, 12-foot inside mixed-flow lane, three 12-foot mixed-flow lanes and a 10-foot outside

LA 10: WIDEN FREEWAY, CONSTRUCT HIGH OCCUPANCY VEHICLE (HOV) LANES; EA 1170U (Segment 2)

In LA County from Puente Ave in city of Baldwin Park to Citrus St. in West Covina. This project proposes to reduce traffic congestion on the I-10 by constructing one HOV lane in each direction from Puente Avenue to Citrus Avenue. The proposed typical half section consists of an 8-foot inside shoulder, 12-foot HOV lane, 12-foot inside mixed-flow lane, three 12-foot mixed-flow lanes and a 10-foot outside shoulder.

LA 405: INSTALL CONCRETE BARRIER & METAL BEAM GUARD RAILING, IN THE CITY OF CARSON FROM ALAMEDA ST. TO AVALON BLVD. ; EA 28740

To construct new concrete barrier and MBGR on both northbound and southbound directions along the I-405 between northbound on-ramp from Alameda Street and Avalon Boulevard Undercrossing (UC). Reconstruct shoulder on southbound, includes modifying drainage and irrigation utilities, and relocating or modifying electrical and communications systems. Improvements will enhance the safety of the state highway

LA 405: IN LOS ANGELES COUNTY, FROM I-10 TO US101 WIDEN FOR HOV LANE; EA 12030

Widen the existing northbound 405. This project will provide continuous Carpool lanes on I-405 by closing the last gap.

LA 101: IN LOS ANGELES COUNTY, ON SOUTHBOUND US-101, BETWEEN LANKERSHIM BLVD OFF-RAMP AND BARHAM BLVD OFF-RAMP; EA 29920

- Construct a new southbound (SB) on-ramp from Universal Studios Boulevard (USB).
- Improve freeway operation by shifting and widening SB US-101 to extend the existing two-lane portion of the Lankershim/Regal on-ramp.
- Modify freeway geometric designs to improve stopping sight distance in the area of the new USB SB on-ramp.
- Eliminate undesirable weaving situation by closing the existing SB Barham/Bennett off-ramp while retaining the existing SB Barham/Bennett on-ramp for safety.

TRANSPORTATION MANAGEMENT SYSTEM PROJECTS TO UPGRADE THE EXISTING COMMUNICATION SYSTEMS.

- LA 105: IN LOS ANGELES COUNTY, FROM CALIFORNIA STREET AND IMPERIAL HIGHWAY TO STUDEBAKER ROAD; EA 30460
- LA 605: FROM LA COUNTY LINE TO RTE. 210; EA 31190
- LA 110: BETWEEN SR-47 and I-5; EA 31200

This List of ongoing or planned projects is only a partial list, please contact Caltrans office for more details.

Quarterly Mobility Statistics

Measure	Graph	Percentage Change													
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>9.2</td><td>9.5</td><td></td></tr> <tr><td>2018</td><td></td><td></td><td>9.2</td></tr> </table>	Year	Q1	Q4	Q1	2017	9.2	9.5		2018			9.2	Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
2017	9.2	9.5													
2018			9.2												
		0.5%	-2.4%												
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>15.2</td><td>16.2</td><td></td></tr> <tr><td>2018</td><td></td><td></td><td>14.9</td></tr> </table>	Year	Q1	Q4	Q1	2017	15.2	16.2		2018			14.9	Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
2017	15.2	16.2													
2018			14.9												
		-2%	-8.5%												
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>214</td><td>233</td><td></td></tr> <tr><td>2018</td><td></td><td></td><td>210</td></tr> </table>	Year	Q1	Q4	Q1	2017	214	233		2018			210	Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
2017	214	233													
2018			210												
		-1.7%	-9.6%												
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>32.2</td><td>33.7</td><td></td></tr> <tr><td>2018</td><td></td><td></td><td>31.5</td></tr> </table>	Year	Q1	Q4	Q1	2017	32.2	33.7		2018			31.5	Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
2017	32.2	33.7													
2018			31.5												
		-2.2%	-6.3%												
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>444</td><td>468</td><td></td></tr> <tr><td>2018</td><td></td><td></td><td>434</td></tr> </table>	Year	Q1	Q4	Q1	2017	444	468		2018			434	Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
2017	444	468													
2018			434												
		-2.3%	-7.3%												

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
		Tuesday -4.8%	Tuesday -11.1%
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
		7 AM -10.4%	5 PM -9.8%
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
		3 PM -8.5%	6 PM -26.5%
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
		10 PM -48.8%	6 PM -41%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		4 PM 5.9%	-
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		8 PM 5.5%	12 PM 7.2%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		3 PM 5.1%	1 AM 20.3%

<p>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</p>	<p>Hours (Thousands)</p>	<p>Largest Magnitude Sun./Holiday Decrease over one year ago</p> <p>10 PM -48.8% ↓</p>	<p>Largest Magnitude Sun./Holiday Decrease over last quarter</p> <p>6 PM -41% ↓</p>
<p>Measure</p>	<p>Graph</p>	<p>Percentage Change</p>	
<p>Total Vehicle Hours of Delay (VHD) by County at 35 mph</p>	<p>Hours (Millions)</p>	<p>Largest Magnitude Decrease over one year ago</p> <p>Los Angeles -2% ↓</p>	<p>Largest Magnitude Decrease over last quarter</p> <p>Los Angeles -7.9% ↓</p>
<p>Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph</p>	<p>Miles</p>	<p>Largest Magnitude Decrease over one year ago</p> <p>AM Peak -10.6% ↓</p>	<p>Largest Magnitude Decrease over last quarter</p> <p>PM Peak -8.1% ↓</p>
<p>Average Number of Good and Bad Detectors</p>	<p>Number of Detectors</p>	<p>Change in Good over one year ago</p> <p>-2% ↓</p>	<p>Change in Good over last quarter</p> <p>-7% ↓</p>
		<p>Change in Bad over one year ago</p> <p>3% ↑</p>	<p>Change in Bad over last quarter</p> <p>8% ↑</p>

Congestion by Route

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2018 Q1-2017 Q1		Difference 2018 Q1-2017 Q4		Rank		
		2017 Q1	2017 Q4	2018 Q1	Absolute	Percentage	Absolute	Percentage	2017 Q1	2017 Q4	2018 Q1
		I405	Los Angeles	2,976,061	3,547,470	3,106,200	130,139	4.4%	-441,270	-12.4%	1
US101	Los Angeles	1,756,683	2,414,351	2,197,421	440,738	25.1%	-216,930	-9.0%	3	2	2
I5	Los Angeles	1,869,947	1,783,841	1,541,799	-328,148	-17.5%	-242,042	-13.6%	2	3	3
I10	Los Angeles	1,326,618	977,477	1,242,098	-84,520	-6.4%	264,621	27.1%	4	6	4
I110	Los Angeles	1,130,186	1,138,722	1,134,495	4,309	0.4%	-4,227	-0.4%	6	4	5
I210	Los Angeles	1,202,282	1,112,686	942,799	-259,484	-21.6%	-169,888	-15.3%	5	5	6
SR60	Los Angeles	814,466	854,049	806,642	-7,824	-1.0%	-47,407	-5.6%	8	8	7
I105	Los Angeles	476,610	647,500	670,751	194,141	40.7%	23,251	3.6%	10	9	8
I605	Los Angeles	873,796	891,887	654,643	-219,153	-25.1%	-237,244	-26.6%	7	7	9
SR91	Los Angeles	506,884	598,095	510,203	3,319	0.7%	-87,892	-14.7%	9	10	10
SR134	Los Angeles	439,697	443,692	418,108	-21,589	-4.9%	-25,584	-5.8%	12	11	11
SR170	Los Angeles	381,957	248,413	327,878	-54,079	-14.2%	79,466	32.0%	13	15	12
US101	Ventura	324,821	395,450	298,868	-25,954	-8.0%	-96,583	-24.4%	14	12	13
I710	Los Angeles	449,290	226,692	254,892	-194,398	-43.3%	28,200	12.4%	11	16	14
SR57	Los Angeles	163,292	280,738	229,154	65,863	40.3%	-51,583	-18.4%	16	13	15
SR14	Los Angeles	173,546	260,512	194,836	21,290	12.3%	-65,676	-25.2%	15	14	16
SR118	Los Angeles	128,837	143,291	109,146	-19,692	-15.3%	-34,145	-23.8%	17	17	17
SR2	Los Angeles	95,823	116,017	97,515	1,693	1.8%	-18,502	-15.9%	18	18	18
SR23	Ventura	57,242	72,468	51,049	-6,193	-10.8%	-21,419	-29.6%	19	19	19
SR71	Los Angeles	2,642	35,879	26,186	23,544	891.2%	-9,694	-27.0%	22	21	20
SR118	Ventura	691	40,881	22,718	22,027	3185.8%	-18,163	-44.4%	23	20	21
SR47	Los Angeles	3,450	9,721	22,436	18,986	550.3%	12,716	130.8%	21	22	22
SR90	Los Angeles	4,436	1,099	830	-3,606	-81.3%	-269	-24.5%	20	23	23
SR126	Los Angeles	0	27	20	20		-7	-25.4%		24	24
TOTALS		15,159,257	16,240,959	14,860,687	-298,569	-2.0%	-1,380,271	-8.5%			