

District 07 Mobility Performance Report

2023 Second Quarter

**DEPARTMENT OF TRANSPORTATION
OFFICE OF SYSTEM PERFORMANCE
DIVISION OF OPERATIONS**

July 24, 2023
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EXECUTIVE SUMMARY

Overview

Caltrans District 7, consisting of Los Angeles and Ventura counties, is part of the second-largest urban region in the United States. Los Angeles County is the most populous county in the United States with more than 10.2 million residents as of 2020. Ventura County has a population of 0.84 million.

The Quarterly Mobility Performance Report (MPR) compares information with over a year ago and over previous quarter in the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD) and Bottleneck Locations
- Lost Lane Miles Hours (equivalent lost productivity)
- Detection Health

This information is based on daily data collected, 24 hours a day, by automated vehicle detector stations deployed along the State Highway System. The Mobility Performance Report 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 speed threshold represents severe congestion while delay at 60 mph speed threshold represents both light and heavy congestions. These two speed thresholds are set by Caltrans based on engineering judgement.

FINDINGS

- In this second quarter (April to June of 2023), Vehicle miles of Travel (VMT) across all District 7 freeways were 9.04 billion miles, an increase of 3.6 percent from previous quarter.
 - Although VMT increased, delays decreased over the same period:
 - ❖ There was 24.1 million Vehicle Hours of Delay (VHD) at the 60-mph speed threshold, a decrease of 3.6 percent over previous quarter and a decrease of 5.5 percent from a year ago.
 - ❖ Only 3.1 percent of the 24.1 million VHD were generated in Ventura County, and 96.9 percent were generated in Los Angeles County.
 - ❖ Similarly, a total of 9 million VHD occurred at the 35-mph speed threshold, a decrease of 7.8 percent over the previous quarter and a decrease of 10.6 percent from a year ago.
 - ❖ About 46 percent (4.1 million VHD- at the 35-mph speed threshold) in Los Angeles County were generated from 3 freeways only, I-405 (22%), I-5 (13%), and I-10 (11%).
 - These delays were equivalent to 280 Lost Lane Miles Hours (LLM)^{*} from the freeway network during the PM Peak Period, compared to 307 LLM from previous quarter.
 - The average weekday daily delay in this quarter was approximately 122,000 VHD at 35-mph speed threshold, and 317,000 VHD at 60-mph speed thresholds (13.8 percent and 9.4 Percent decrease respectively over the previous quarter.)
 - Thursdays were the most congested days of the week, followed by Fridays. Morning peak hour was at 8:00 AM. Afternoon peak hour was at 5:00 PM. The peak periods extended from 7:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM.
 - The weekend (Saturday and Sunday) peak hour was at 3:00 PM, and the peak period extended between 1:00 PM and 5:00 PM.
- * **Lost Lane Miles Hours (Lost Productivity):** This is the number of lane-mile-hours that are lost due to the freeway operating under congested conditions. When the freeway is in congestion - speed is below 35 mph - PeMS find the ratio between the measured flow and the capacity for this location. This drop in capacity is due to the fact that the freeway is operating in congested conditions instead of in free flow)

- By the end of the second quarter, loop detectors in good service condition account for only 29.4 percent of the total loops, while 70.6 percent of total loop detectors are nonoperational. Almost 9.7 percent of the total loops were out due to construction projects.

County	# Det	% Good	% Bad	% Construction
Los Angeles	10625	28.4	71.6	8.8
Ventura	616	48.1	51.9	23.7
Totals	11,241	29.4	70.6	9.7

➤ Top Ten Bottlenecks for the 2023 Second Quarter:

Rank	County	Location	Shift	Fwy	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (hours)
1	Los Angeles	Garfield Ave.	PM	I5-S	127.33	10.76	33.986224	-118.136014	62	4.95	244,072	246
2	Los Angeles	Howard Hughes Pkwy	PM	I405-S	48.672	24.9	33.976541	-118.387273	63	4.81	225,929	218
3	Los Angeles	Solano Ave	PM	I110-N	25.01	25.08	34.075092	-118.232059	65	3.70	202,238	302
4	Los Angeles	Garfield Ave.	PM	SR60-E	5.594	R5.42	34.033031	-118.133612	65	3.64	189,274	305
5	Los Angeles	Adams Blvd	AM	I110-N	20.53	20.6	34.026085	-118.275163	65	4.20	161,776	234
6	Los Angeles	Pasadena Ave	PM	I5-N	136.633	20	34.076978	-118.219273	65	3.10	148,831	253
7	Los Angeles	Robertson Blvd	AM	I10-W	5.66	R7.81	34.029948	-118.392928	65	3.90	143,503	234
8	Los Angeles	Vernon Ave	PM	I110-S	18.82	18.89	34.002226	-118.281220	65	3.30	136,578	198
9	Los Angeles	Broadway	PM	US101-S	2.43	1.08	34.056861	-118.242427	65	4.41	119,957	204
10	Los Angeles	La Cienega Blvd	PM	I10-E	6.205	R8.36	34.034311	-118.384884	65	1.60	110,343	313

Project Status:

The following projects are currently being constructed or are scheduled for construction in District 7. These projects are expected to relieve traffic congestion in Los Angeles and Ventura counties.

LA 405: I-405/LA CIENEGA BLVD SOUTHBOUND ON AND OFF-RAMPS IMPROVEMENTS; EA 34070

Widen Interstate I-405 by adding one High Occupancy Vehicle (HOV) lane and one or two mixed-flow lanes in each direction, reconstruction of Valley View Avenue interchange, and adjacent frontage roads in Los Angeles County, in La Mirada and Santa Fe Springs, from Artesia Blvd to North Fork Coyote Creek.

LA 405: INTERCHANGE IMPROVEMENTS AND NEW AUX LANE; EA 29360

This project will improve Interstate 405 (I-405) @ Crenshaw Boulevard & 182nd Street interchange and add auxiliary lanes on I-405 between Western Avenue and Crenshaw Boulevard in Los Angeles County. Improvements include constructing a new southbound on-ramp from northbound Crenshaw Boulevard.

TRANSPORTATION MANAGEMENT SYSTEM PROJECTS TO UPGRADE THE EXISTING COMMUNICATION SYSTEMS.

- LA 10: Upgrade the existing transportation management system elements. In and near Santa Monica, from Lincoln boulevard to McClure tunnel; also, on Route 10 (PM 2.1/18.3), Route 2 (PM R18.7), Route 101 (PM 11.8), and Route 105 (PM R1.95). EA 32720.
- LA 91: upgrade existing traffic management communication in and near Carson, from Route 110 to the Orange County line; also, on Route 2 (PM R18.7), Route 5 (PM 6.8), Route 105 (PM R2.0); EA 33860
- LA 60: Upgrade transportation management system. EA 32710

ROADSIDE SAFETY IMPROVEMENT PROJECTS

- LA 101: IN THE CITY AND COUNTY OF LOS ANGELES FROM WILTON PLACE OVERCROSSING TO PILGRIMAGE OVERCROSSING. EA 32960
- LA 0405: N LOS ANGELES COUNTY NEAR CARSON AND LONG BEACH AT VARIOUS LOCATIONS FROM 0.1 MILE NORTH OF ROUTE 710 TO ROUTE 110/405 SEPARATION. EA 32180

This list of ongoing or planned projects is only a partial list, please contact Caltrans District 7 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>Q2</th></tr> <tr><td>2022</td><td>8.94</td></tr> <tr><td>2023</td><td>8.73</td></tr> <tr><td>2023</td><td>9.04</td></tr> </table>	Year	Q2	2022	8.94	2023	8.73	2023	9.04	Over one year ago	Over last quarter
		Year	Q2								
		2022	8.94								
2023	8.73										
2023	9.04										
1.2%	3.6%										
		↑	↑								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2022</td><td>10.1</td></tr> <tr><td>2023</td><td>9.7</td></tr> <tr><td>2023</td><td>9</td></tr> </table>	Year	Q2	2022	10.1	2023	9.7	2023	9	Over one year ago	Over last quarter
		Year	Q2								
		2022	10.1								
2023	9.7										
2023	9										
-10.6%	-7.8%										
		↓	↓								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2022</td><td>136</td></tr> <tr><td>2023</td><td>142</td></tr> <tr><td>2023</td><td>122</td></tr> </table>	Year	Q2	2022	136	2023	142	2023	122	Over one year ago	Over last quarter
		Year	Q2								
		2022	136								
2023	142										
2023	122										
-10.2%	-13.8%										
		↓	↓								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2022</td><td>25.5</td></tr> <tr><td>2023</td><td>25</td></tr> <tr><td>2023</td><td>24.1</td></tr> </table>	Year	Q2	2022	25.5	2023	25	2023	24.1	Over one year ago	Over last quarter
		Year	Q2								
		2022	25.5								
2023	25										
2023	24.1										
-5.5%	-3.6%										
		↓	↓								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2022</td><td>336</td></tr> <tr><td>2023</td><td>350</td></tr> <tr><td>2023</td><td>317</td></tr> </table>	Year	Q2	2022	336	2023	350	2023	317	Over one year ago	Over last quarter
		Year	Q2								
		2022	336								
2023	350										
2023	317										
-5.6%	-9.4%										
		↓	↓								

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 -11.3% ↓	Friday -14.9% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Monday 0.5% ↑	Saturday 8% ↑
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 AM -11.2% ↓	8 AM -25.9% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		6 AM 3.4% ↑	1 PM 1.4% ↑
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 -15.3% ↓	6 PM -29.8% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		5 PM 2.6% ↑	3 PM 22.9% ↑
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
		1 PM -20.1% ↓	6 PM -31.3% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		12 AM 81.2% ↑	2 PM 32.7% ↑

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
		Los Angeles -11.4% ↓	Los Angeles -8.3% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Ventura 235.2% ↑	Ventura 57.6% ↑
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
		PM Peak -4.7% ↓	AM Peak -17.8% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		-	-
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-5% ↓	-17% ↓
		Change in Bad over one year ago	Change in Bad over last quarter
		2% ↑	9% ↑

Congestion by Route

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2023 Q2-2022 Q2		Difference 2023 Q2-2023 Q1		Rank		
		2022 Q2	2023 Q1	2023 Q2	Absolute	Percentage	Absolute	Percentage	2022 Q2	2023 Q1	2023 Q2
I-405	Los Angeles	2,213,010	2,054,975	1,951,804	-261,207	-11.8%	-103,172	-5.0%	1	1	1
I-5	Los Angeles	1,432,880	1,456,595	1,194,397	-238,483	-16.6%	-262,197	-18.0%	2	2	2
I-10	Los Angeles	1,051,567	1,050,673	1,007,452	-44,115	-4.2%	-43,220	-4.1%	4	3	3
I-210	Los Angeles	958,380	757,090	881,384	-76,996	-8.0%	124,294	16.4%	5	5	4
US-101	Los Angeles	1,179,848	1,002,505	790,169	-389,679	-33.0%	-212,336	-21.2%	3	4	5
I-110	Los Angeles	490,617	590,283	581,200	90,583	18.5%	-9,084	-1.5%	8	7	7
I-605	Los Angeles	561,339	505,863	564,906	3,567	0.6%	59,043	11.7%	6	8	8
I-710	Los Angeles	457,519	452,346	362,193	-95,326	-20.8%	-90,153	-19.9%	10	9	9
SR-91	Los Angeles	465,280	354,763	262,143	-203,137	-43.7%	-92,621	-26.1%	9	10	10
SR-14	Los Angeles	96,684	264,197	178,996	82,311	85.1%	-85,202	-32.2%	13	11	11
I-105	Los Angeles	195,667	156,118	159,242	-36,425	-18.6%	3,124	2.0%	11	13	12
SR-134	Los Angeles	142,517	198,213	158,919	16,403	11.5%	-39,294	-19.8%	12	12	13
US-101	Ventura	11,377	39,100	65,678	54,300	477.3%	26,577	68.0%	19	17	14
SR-118	Los Angeles	73,681	85,441	59,218	-14,463	-19.6%	-26,223	-30.7%	15	14	15
SR-57	Los Angeles	81,560	47,045	37,988	-43,573	-53.4%	-9,057	-19.3%	14	16	16
SR-23	Ventura	0	16,145	22,697	22,697		6,553	40.6%		18	17
SR-118	Ventura	19,267	13,644	22,115	2,848	14.8%	8,472	62.1%	17	20	18
SR-2	Los Angeles	16,777	15,614	9,720	-7,057	-42.1%	-5,894	-37.7%	18	19	19
SR-33	Ventura	3,309	3,309	3,309	0	0.0%	0	0.0%	20	21	20
SR-47	Los Angeles	1,748	1,626	1,625	-123	-7.0%	-1	0.0%	21	22	21
SR-170	Los Angeles	0	72,474	1,500	1,500		-70,974	-97.9%		15	22
SR-71	Los Angeles	58,586	1,223	956	-57,630	-98.4%	-267	-21.8%	16	23	23
SR-126	Los Angeles	111	972	10	-101	-90.8%	-962	-99.0%	22	24	24
SR-90	Los Angeles	28	189	3	-25	-88.8%	-186	-98.4%	23	25	25
TOTALS		10,053,452	9,745,584	8,988,907	-1,064,545	-10.6%	-756,677	-7.8%			