

District 07 Mobility Performance Report

2023 Fourth Quarter

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

January 24, 2024
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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.

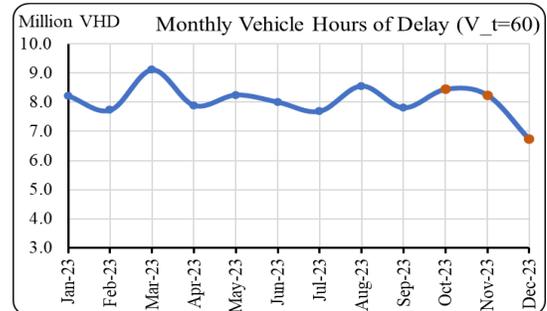
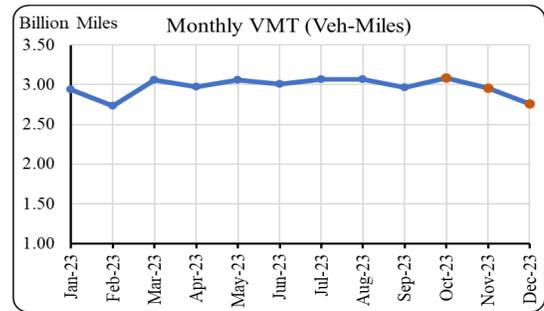
The Quarterly Mobility Performance Report (MPR) compares information with over a year ago and over previous quarter in the following performance measures:

- 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 fourth quarter (October to December of 2023), Vehicle miles of Travel (VMT) across all district 7 freeways were 8.8 billion miles, a decrease of 3.3 percent from previous quarter.
- There was 23.4 million Vehicle Hours of Delay (VHD) at the 60-mph speed threshold, a decrease of 2.6 percent over previous quarter and a decrease of 2.2 percent from a year ago.
- Only 3.1 percent of the 23.4 million VHD were generated in Ventura County, and 96.9 percent were generated in Los Angeles County.



- About 47 percent of the total delay in District 7 at the 35-mph speed threshold were generated from 3 freeways only, I-405 (22%), I-10 (13%), and I-5 (12%).
- These delays were equivalent to 311 Lost Lane Miles Hours (LLM)* from the freeway network during the PM Peak Period, compared to 294 LLM from previous quarter.
- The average weekday daily delay in this quarter was approximately 128,000 VHD at 35-mph speed threshold, and 316,000 VHD at 60-mph speed thresholds (0.8 percent increase and 2.9 Percent decrease respectively over the previous quarter.)
- Thursdays and Fridays are the most congested days of the week. 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.
- Weekend's peak hour (Saturday and Sunday) was at 3:00 PM, and 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 fourth quarter, loop detectors in good service condition account for only 30.6 percent of the total loops, while 69.4 percent of total loop detectors are nonoperational. Almost 5.8 percent of the total loops were out due to construction projects.

County	# Det	% Good	% Bad	% Construction
Los Angeles	10595	29.2	70.8	4.7
Ventura	616	54.7	45.3	23.7
Totals	11,211	30.6	69.4	5.8

➤ Top Ten Bottlenecks for the 2023 Fourth 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	Stagg St	PM	I405-N	66.97	43.2	34.213275	-118.473134	54	8.9	276,521	235
2	Los Angeles	Solano Ave	PM	I110-N	25.01	25.08	34.075092	-118.232059	62	3.7	204,156	291
3	Los Angeles	Howard Hughes Pkwy	PM	I405-S	48.67	24.9	33.976541	-118.387273	59	4.9	202,608	192
4	Los Angeles	National Blvd	AM	I405-N	52.932	29.16	34.026728	-118.429807	54	5.6	171,209	196
5	Los Angeles	Mountain Ave	PM	I10-E	45.74	47.24	34.081545	-117.727932	59	4.9	166,039	265
6	Los Angeles	Bel Air Crest Rd	AM	I405-S	59.572	35.8	34.110424	-118.481702	56	5.5	157,984	181
7	Los Angeles	Paramount Blvd	PM	SR60-E	7.91	R7.74	34.035853	-118.093489	59	4.9	156,151	207
8	Los Angeles	Adams Blvd	AM	I110-N	20.53	20.6	34.026085	-118.275163	62	4.2	153,800	223
9	Los Angeles	Garfield Ave	PM	I5-S	127.33	10.76	33.986224	-118.136014	59	2.9	143,196	265
10	Los Angeles	Haskell Ave	AM	US101-S	18.907	17.59	34.164781	-118.474288	59	4.3	142,479	206

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 I-405: EA 34070, LA CIENEGA BLVD SOUTHBOUND ON AND OFF-RAMPS IMPROVEMENTS.

This project widens the southbound I-405 La Cienega Blvd exit ramp from one to two lanes, from the diverge point on, and then widens to four lanes at the ramp terminal intersection. The entrance ramp from La Cienega Blvd will be widened from one lane to two lanes up through the ramp meter line and then taper to one lane to join the existing collector-distributor road just before the Century Blvd UC.

LA SR-57: EA 27912, IN LOS ANGELES COUNTY, IN DIAMOND BAR AND CITY OF INDUSTRY ON ROUTE 60 FROM E60-S57 CONNECTOR OC TO GOLDEN SPRINGS DRIVE UC.

This project will reconstruct Grand Ave OC, and NB SR-57 Connector to EB SR-60. This project will also construct EB SR-60 Bypass Off-Ramp to Grand Ave, EB SR-60 Bypass, and construct SB Grand Ave To EB SR-60 Loop On-Ramp.

LA I-405: EA 29360, IN TORRANCE. INTERCHANGE IMPROVEMENTS AND NEW AUX LN.

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 I-10: EA 32720**, Upgrade the existing transportation management system elements in and near Santa Monica from Lincoln boulevard to McClure tunnel, on Route 10 (PM 2.1/18.3), Route 2 (PM R18.7), Route 101 (PM 11.8), and Route 105 (pm r1.95).
- **LA SR-91: EA 33860**, Upgrade existing traffic management communication in and near Carson from Route 110 to Orange County line, on Route 2 (PM R18.7), Route 5 (PM 6.8), and Route 105 (PM R2.0).
- **LA SR-60: EA 32710**, Upgrade transportation management system.
- **LA US-101: EA 33780**, This project proposes to upgrade the existing Transportation Management System (TMS) elements including Closed-Circuit Television (CCTV) cameras, Changeable Message Signs, Vehicle Detection Stations, Ramp Metering Systems, and Internet Protocol (IP) ready network at various locations in Los Angeles County.

ROADSIDE SAFETY IMPROVEMENT PROJECTS

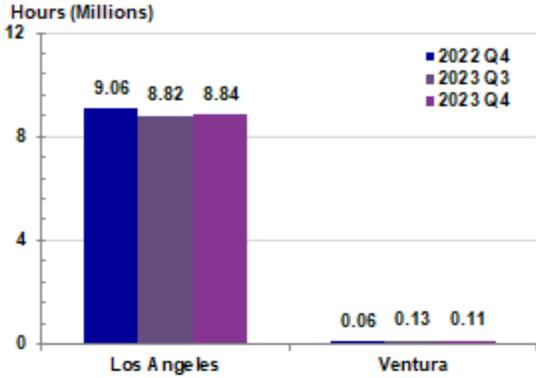
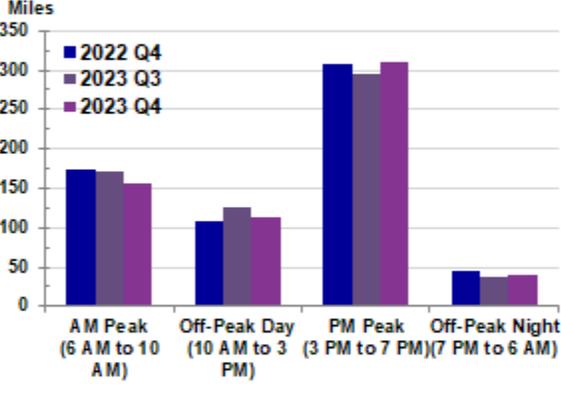
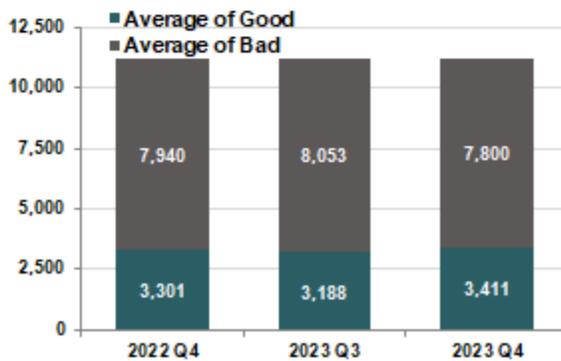
- **LA I-110: EA 31200**, In Los Angeles County at various locations. The project will replace some of the Transportation Management System (TMS) field elements, which includes replacement of the existing copper cables with fiber optic cables along the corridor and at all Closed-Circuit Television Cameras (CCTVs), Ramp Metering Systems (RMS), Vehicle Detection Stations (VDS), and Extinguishable Message Sign (EMS).
- **LA I-405: EA 32180**, in Los Angeles County near Carson and long beach at various locations from 0.1 mile north of route 710 to route 110/405 separation.

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>Q4</th></tr> <tr><td>2022</td><td>9.04</td></tr> <tr><td>2023</td><td>9.1</td></tr> <tr><td>2023</td><td>8.8</td></tr> </table>	Year	Q4	2022	9.04	2023	9.1	2023	8.8	Over one year ago	Over last quarter
		Year	Q4								
		2022	9.04								
2023	9.1										
2023	8.8										
-2.7%	-3.3%										
↓	↓										
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2022</td><td>9.1</td></tr> <tr><td>2023</td><td>9.0</td></tr> <tr><td>2023</td><td>8.9</td></tr> </table>	Year	Q4	2022	9.1	2023	9.0	2023	8.9	Over one year ago	Over last quarter
		Year	Q4								
		2022	9.1								
2023	9.0										
2023	8.9										
-1.9%	0%										
↓	-										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2022</td><td>129</td></tr> <tr><td>2023</td><td>127</td></tr> <tr><td>2023</td><td>128</td></tr> </table>	Year	Q4	2022	129	2023	127	2023	128	Over one year ago	Over last quarter
		Year	Q4								
		2022	129								
2023	127										
2023	128										
-1.2%	0.8%										
↓	↑										
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2022</td><td>23.9</td></tr> <tr><td>2023</td><td>24</td></tr> <tr><td>2023</td><td>23.4</td></tr> </table>	Year	Q4	2022	23.9	2023	24	2023	23.4	Over one year ago	Over last quarter
		Year	Q4								
		2022	23.9								
2023	24										
2023	23.4										
-2.2%	-2.6%										
↓	↓										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2022</td><td>324</td></tr> <tr><td>2023</td><td>326</td></tr> <tr><td>2023</td><td>316</td></tr> </table>	Year	Q4	2022	324	2023	326	2023	316	Over one year ago	Over last quarter
		Year	Q4								
		2022	324								
2023	326										
2023	316										
-2.4%	-2.9%										
↓	↓										

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 -6.7% ↓	Tuesday -10% ↓
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 -13.9% ↓	9 AM -16.3% ↓
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
		7 PM -36.5% ↓	12 PM -29.6% ↓
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
		8 AM -11% ↓	11 PM -39.3% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		Monday 3% ↑	Sun/Hol 46.2% ↑
		2 PM 9.8% ↑	6 PM 14.3% ↑
		2 PM 5.1% ↑	6 PM 31.3% ↑
		12 PM 7.8% ↑	5 PM 166.8% ↑

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Los Angeles -2.5% ↓	Largest Magnitude Decrease over last quarter Ventura -11.9% ↓
		Largest Magnitude Increase over one year ago Ventura 84.4% ↑	Largest Magnitude Increase over last quarter Los Angeles 0.1% ↑
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago AM Peak -11.3% ↓	Largest Magnitude Decrease over last quarter AM Peak -9% ↓
		Largest Magnitude Increase over one year ago Off-Peak Day 6% ↑	Largest Magnitude Increase over last quarter PM Peak 6.1% ↑
Average Number of Good and Bad Detectors		Change in Good over one year ago 3% ↑	Change in Good over last quarter 7% ↑
		Change in Bad over one year ago -2% ↓	Change in Bad over last quarter -3% ↓

Congestion by Route

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2023 Q4-2022 Q4		Difference 2023 Q4-2023 Q3		Rank		
		2022 Q4	2023 Q3	2023 Q4	Absolute	Percentage	Absolute	Percentage	2022 Q4	2023 Q3	2023 Q4
		I-405	Los Angeles	1,992,660	1,880,611	1,940,525	-52,135	-2.6%	59,914	3.2%	1
I-10	Los Angeles	915,810	1,101,853	1,232,559	316,749	34.6%	130,707	11.9%	4	3	2
I-5	Los Angeles	1,362,366	1,191,469	1,062,181	-300,186	-22.0%	-129,288	-10.9%	2	2	3
I-210	Los Angeles	676,826	833,179	903,997	227,170	33.6%	70,818	8.5%	5	5	4
US-101	Los Angeles	1,008,699	853,761	799,236	-209,464	-20.8%	-54,525	-6.4%	3	4	5
SR-60	Los Angeles	622,080	660,498	619,584	-2,497	-0.4%	-40,914	-6.2%	6	6	6
I-605	Los Angeles	527,760	588,223	576,108	48,348	9.2%	-12,115	-2.1%	8	7	7
I-110	Los Angeles	552,174	563,324	522,767	-29,407	-5.3%	-40,557	-7.2%	7	8	8
I-710	Los Angeles	423,656	352,252	343,902	-79,753	-18.8%	-8,350	-2.4%	9	9	9
SR-91	Los Angeles	316,479	279,124	262,116	-54,362	-17.2%	-17,008	-6.1%	10	10	10
SR-14	Los Angeles	189,781	169,427	176,353	-13,428	-7.1%	6,926	4.1%	11	11	11
SR-134	Los Angeles	101,007	94,917	143,919	42,912	42.5%	49,003	51.6%	13	13	12
I-105	Los Angeles	167,911	141,539	117,282	-50,629	-30.2%	-24,257	-17.1%	12	12	13
SR-118	Los Angeles	73,631	51,157	72,720	-912	-1.2%	21,563	42.2%	14	16	14
SR-57	Los Angeles	38,494	57,403	57,717	19,223	49.9%	314	0.5%	17	15	15
US-101	Ventura	38,758	75,059	46,476	7,717	19.9%	-28,583	-38.1%	16	14	16
SR-23	Ventura	4,884	22,131	33,262	28,378	581.1%	11,131	50.3%	20	18	17
SR-118	Ventura	13,900	26,924	29,304	15,404	110.8%	2,380	8.8%	19	17	18
SR-33	Ventura	3,309	3,309	3,167	-141	-4.3%	-141	-4.3%	21	19	19
SR-47	Los Angeles	1,625	1,856	2,209	584	36.0%	353	19.0%	23	20	20
SR-71	Los Angeles	3,204	1,691	1,624	-1,581	-49.3%	-67	-4.0%	22	21	21
SR-126	Los Angeles	5	702	375	370	7710.4%	-327	-46.6%	25	22	22
SR-90	Los Angeles	24	8	110	86	364.6%	102	1259.3%	24	23	23
SR-170	Los Angeles	70,173	0	0	-70,173	-100.0%	0		15		24
SR-2	Los Angeles	19,152	0	0	-19,152	-100.0%	0		18		25
TOTALS		9,124,366	8,950,412	8,947,490	-176,876	-1.9%	-2,922	-0.03%			