

District 07 Mobility Performance Report

2021 Fourth Quarter

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

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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. These two counties have a large amount of sparsely populated national forests and national recreation areas.

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 – December of 2021), Vehicle miles travelled (VMT) and congestion on the freeways are continue to be as pre-pandemic values.
- Having said that, VMT across all district 7 freeways in this fourth quarter was 8.9 billion miles, a decrease of 3.3 percent from previous quarter.
- Delays also decreased in this quarter:
 - ❖ There were 27.6 million Vehicle Hours of Delay (VHD) at the 60-mph speed threshold – a decrease of 1.6 percent over previous quarter and 63.3 percent increase from a year ago.
 - ❖ Only 1.8 percent of the 27.6 million VHD were generated in Ventura County, and 98.2 percent were generated in Los Angeles County.
 - ❖ About 57 percent of VHD in Los Angeles County were generated from I-405, I-5, I-10, and US-101 freeways.
 - ❖ Similarly, a total of 11.1 million VHD occurred at the 35-mph speed threshold, a decrease of 0.6 percent over the previous quarter and an increase of 73.7 percent from a year ago.
- These delays were equivalent to 355 Lost Lane Miles Hours (LLM) from the freeway network in the PM Peak Period, compared to the 332 LLM from previous quarter.
- The average weekday daily delay in this quarter was approximately 149,000 VHD at 35-mph speed threshold, and 354,000 VHD at 60-mph speed thresholds (0.6 percent and 3.6 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’s peak hour (Saturday and Sunday) was at 4:00 PM, and peak period extended between 1:00 PM and 4:00 PM.

- **Lost Lane Miles (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, good loop detectors were only 41.8 percent of the total loops, while 58.2 percent were nonoperational. Almost 25 percent of the total loops are out due to construction projects.

County	Detectors	% Good	% Bad	% Construction
Los Angeles	10,632	42.3	57.7	25
Ventura	616	33	67	23.7
Totals	11,248	41.8	58.2	24.9

➤ Top Ten Bottlenecks for the 2021 Fourth Quarter:

Rank	County	Location	Shift	Fwy	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (hrs)
1	Los Angeles	Greenwood Ave.	PM	I5-S	126.90	10.33	33.98172	-118.13085	60	5.8	292,922	252
2	Los Angeles	Howard Hughes Pkwy	PM	I405-S	48.67	24.9	33.97654	-118.38727	58	6.3	275,277	215
3	Los Angeles	Nordhoff St.	PM	I405-N	68.64	44.87	34.23737	-118.47293	47	10.0	255,678	185
4	Los Angeles	EB 210 at NB 605 Connector	PM	I210-E	36.89	R36.6	34.13340	-117.95441	58	7.6	193,184	188
5	Los Angeles	Florence Ave.	PM	I605-S	11.22	R9.164	33.93521	-118.09989	61	5.3	173,291	245
6	Los Angeles	White Oak Ave.	PM	US101-N	21.70	20.34	34.17129	-118.52036	61	6.4	160,379	163
7	Los Angeles	Palms Blvd	AM	I405-N	52.31	28.54	34.01921	-118.42385	59	5.5	158,791	167
8	Los Angeles	Adams Blvd	AM	I110-N	20.53	20.6	34.02609	-118.27516	62	4.1	152,035	223
9	Los Angeles	N Of SR-2	PM	I5-S	139.33	22.76	34.10454	-118.25292	62	2.9	134,428	262
10	Los Angeles	San Gabriel Blvd	PM	SR60-E	8.66	R8.52	34.03923	-118.08109	56	3.9	132,026	202

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 5: WIDEN AND REALIGN FREEWAY (SEGMENT 2); EA 2159U

Widen Interstate 5 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 5: WIDEN AND REALIGN FREEWAY, CONSTRUCT HOV LANES (SEGMENT 5); EA 2159S

Widen Interstate 5 by adding one HOV lane, one or two mixed-flow lanes in each direction and upgrade the inside and outside shoulders to standard width; remove and replace Florence Avenue Overcrossing, northbound on-ramp bridge from Florence Avenue, and Orr and Day Overhead railroad bridge in Los Angeles County from north of Orr and Day Overhead to I-605/I-5 Interchange.

LA 5: WIDEN & REALIGN FREEWAY FOR HOV LANES; REALIGN METROLINK RAILROAD TRACKS; EA 1218W

Add one HOV lane in each direction in Burbank from West Magnolia Boulevard Overcrossing to 0.3 mile north of Buena Vista Street/Winona Avenue Undercrossing in Los Angeles County.

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

Construct one HOV lane in each direction along I-10 in LA County from Citrus Avenue in West Covina to SR-57 in Pomona.

TRANSPORTATION MANAGEMENT SYSTEM PROJECTS TO UPGRADE THE EXISTING COMMUNICATION SYSTEMS.

- LA 10: Repair Ramp Metering and Vehicle Detection System on various routes. EA 34050.
- LA 405: Upgrade existing Traffic Management Communication System from Ventura Blvd. Undercrossing to I-5/I-405 Separation. EA 25710.
- LA 60: Upgrade transportation management system. EA 32710

ROADSIDE SAFETY IMPROVEMENT PROJECTS

- LA 005: In Los Angeles County from rout 5/118 separation to Balboa Blvd. EA 31990.
- LA 005: In the city of Los Angeles, upgrade traffic signals and curb ramps. EA 35180
- LA 105: Install safety lighting At I-105/I-110 Interchange, EA 29740

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>2020</td><td>8.37</td></tr> <tr><td>2021</td><td>8.94</td></tr> </table>	Year	Q4	2020	8.37	2021	8.94	Over one year ago	Over last quarter
		Year	Q4						
		2020	8.37						
2021	8.94								
6.7%	-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>2020</td><td>6.4</td></tr> <tr><td>2021</td><td>11.1</td></tr> </table>	Year	Q4	2020	6.4	2021	11.1	Over one year ago	Over last quarter
		Year	Q4						
		2020	6.4						
2021	11.1								
73.7%	-0.6%								
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>2020</td><td>91</td></tr> <tr><td>2021</td><td>149</td></tr> </table>	Year	Q4	2020	91	2021	149	Over one year ago	Over last quarter
		Year	Q4						
		2020	91						
2021	149								
63.3%	-0.6%								
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>2020</td><td>17.5</td></tr> <tr><td>2021</td><td>27.6</td></tr> </table>	Year	Q4	2020	17.5	2021	27.6	Over one year ago	Over last quarter
		Year	Q4						
		2020	17.5						
2021	27.6								
57.5%	-1.6%								
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>2020</td><td>245</td></tr> <tr><td>2021</td><td>354</td></tr> </table>	Year	Q4	2020	245	2021	354	Over one year ago	Over last quarter
		Year	Q4						
		2020	245						
2021	354								
44.4%	-3.6%								

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
		-	Monday -14.1% ↓
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
		4 AM -73% ↓	11 AM -22.4% ↓
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
		7 AM -69.9% ↓	2 PM -22.4% ↓
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 AM -61.8% ↓	1 PM -11.5% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Thursday 61.5% ↑	Sun/Hol 37.3% ↑
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		8 AM 168.5% ↑	6 PM 17.1% ↑
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		5 PM 198.6% ↑	6 PM 45.1% ↑
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		4 PM 134% ↑	5 PM 119.8% ↑

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
		Ventura -10.7% ↓	Ventura -61.9% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Los Angeles 75.3% ↑	Los Angeles 1% ↑
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
		-	Off-Peak Day -6.7% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 43.9% ↑	PM Peak 7% ↑
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-7% ↓	-9% ↓
		Change in Bad over one year ago	Change in Bad over last quarter
		19% ↑	8% ↑

Congestion by Route

Route	County	Vehicle Hours of Delay at 35 mph			Difference 2021 Q4-2020 Q4		Difference 2021 Q4-2021 Q3		Rank		
		2020 Q4	2021 Q3	2021 Q4	Absolute	Percentage	Absolute	Percentage	2020 Q4	2021 Q3	2021 Q4
I-405	Los Angeles	940,822	2,230,509	2,400,401	1,459,579	155.1%	169,892	7.6%	1	1	1
I-5	Los Angeles	808,377	1,528,068	1,636,057	827,681	102.4%	107,989	7.1%	3	2	2
I-10	Los Angeles	816,834	1,212,091	1,263,190	446,356	54.6%	51,100	4.2%	2	4	3
US-101	Los Angeles	727,098	1,259,438	1,086,726	359,628	49.5%	-172,711	-13.7%	4	3	4
I-210	Los Angeles	623,187	827,203	988,181	364,994	58.6%	160,979	19.5%	5	5	5
S-R60	Los Angeles	353,700	718,119	756,631	402,931	113.9%	38,512	5.4%	7	6	6
I-605	Los Angeles	347,006	486,994	580,749	233,744	67.4%	93,755	19.3%	8	8	7
I-110	Los Angeles	488,476	568,662	512,401	23,925	4.9%	-56,261	-9.9%	6	7	8
SR-91	Los Angeles	128,023	420,718	503,421	375,399	293.2%	82,703	19.7%	13	10	9
I-710	Los Angeles	246,579	424,940	449,176	202,597	82.2%	24,236	5.7%	10	9	10
SR-57	Los Angeles	142,223	284,722	242,194	99,972	70.3%	-42,528	-14.9%	12	12	11
I-105	Los Angeles	230,583	303,321	235,897	5,314	2.3%	-67,425	-22.2%	11	11	12
SR-134	Los Angeles	77,806	214,902	119,972	42,166	54.2%	-94,930	-44.2%	15	15	13
SR-118	Los Angeles	16,804	87,240	102,571	85,768	510.4%	15,332	17.6%	17	16	14
SR-14	Los Angeles	276,756	245,725	90,896	-185,860	-67.2%	-154,829	-63.0%	9	14	15
US-101	Ventura	105,847	250,457	72,453	-33,395	-31.5%	-178,004	-71.1%	14	13	16
SR-118	Ventura	9,475	25,521	31,010	21,535	227.3%	5,489	21.5%	18	18	17
SR-2	Los Angeles	4,244	20,713	18,361	14,117	332.6%	-2,352	-11.4%	20	19	18
SR-71	Los Angeles	40,424	53,080	16,951	-23,472	-58.1%	-36,128	-68.1%	16	17	19
SR-47	Los Angeles	8,057	17,489	4,692	-3,365	-41.8%	-12,797	-73.2%	19	20	20
SR-33	Ventura	3,395	3,395	3,422	26	0.8%	26	0.8%	21	21	21
SR-90	Los Angeles	1,055	374	20	-1,036	-98.2%	-354	-94.8%	22	23	22
SR-126	Los Angeles	60	3	5	-55	-92.5%	1	32.4%	24	24	23
SR-23	Ventura	911	1,001	0	-911	-100.0%	-1,001	-100.0%	23	22	24
SR-170	Los Angeles	0	0	0	0		0				
TOTALS		6,397,739	11,184,684	11,115,376	4,717,637	73.7%	-69,308	-0.6%			

SR-170 ALL Loops are down from Mid December 2018