

District 12 Mobility Performance Report

2024 2nd Quarter

DEPARTMENT OF TRANSPORTATION

July 31, 2024

District 12 Traffic Operations Northwest

EXECUTIVE SUMMARY

Overview

Caltrans District 12 (Orange County) is located in southern California and is adjacent to District 7 (Los Angeles), District 8 (San Bernardino), and District 11 (San Diego). As of April 1, 2020, the total population in Orange County was 3,010,232. Orange County encompasses 794 square miles, and includes 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:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- 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 Mobility Performance Report 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 1st quarter of 2024, total delay equaled to 1.5 million vehicle hours of delay (VHD) at the 35 MPH speed threshold and 5 million VHD at 60 MPH threshold. Compared to the previous quarter, there was a 2.5 percent increase in 35 MPH VHD and 0.3 percent decrease in 60 MPH VHD.

The average weekday VHD experienced in this quarter was approximately 20 thousand VHD at 35 MPH and 65 thousand VHD at 60 MPH. Compared to the previous quarter, there was 2.4 percent decrease in 35 MPH VHD and 3.8 percent decrease in 60 mph VHD.

Top 10 Bottlenecks for the 2nd Quarter of 2024

Co	Shift	Fwy	Dir	Name	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
Ora	PM	SR55	N	TAFT	15.78	15.8	33.82	-117.83	62	3.07	42,223	12,540
Ora	PM	I405	N	BROOKHUR2	13.74	13.97	33.71	-117.96	63	1.62	32,929	12,655
Ora	PM	SR57	N	TONNER	11.27	22	33.94	-117.88	50	1.39	32,531	9,290
Ora	PM	I5	N	CULVER 1	98.82	R26.56	33.71	-117.78	63	2.47	30,134	14,115
Ora	AM	I5	S	MAIN 1	105.19	33	33.77	-117.87	63	0.99	28,254	10,155
Ora	PM	SR55	N	DYER 2	8.12	R8.12	33.71	-117.85	63	1.91	26,314	6,280
Ora	PM	I5	N	ALICIA 1	89.69	17.43	33.60	-117.69	30	2.75	22,694	5,755
Ora	AM	I5	N	ALICIA 1	89.69	17.43	33.60	-117.69	34	2.70	21,674	4,490
Ora	PM	SR55	N	N-O E WARNER MVDS	8.56	R8.563	33.72	-117.84	59	2.11	19,692	4,180
Ora	PM	I405	N	OLD RANCH PKWY	22.43	22.659	33.77	-118.08	60	0.82	19,617	7,910

2024 Q2 Quarterly Mobility Statistics

Measure	Graph	Percentage Change									
Vehicle Miles of Travel (VMT)	<table><caption>Vehicle Miles of Travel (VMT) Data</caption><thead><tr><th>Quarter</th><th>VMT (Billions)</th></tr></thead><tbody><tr><td>2023 Q2</td><td>3.38</td></tr><tr><td>2024 Q1</td><td>3.22</td></tr><tr><td>2024 Q2</td><td>3.34</td></tr></tbody></table>	Quarter	VMT (Billions)	2023 Q2	3.38	2024 Q1	3.22	2024 Q2	3.34	Over one year ago	Over last quarter
		Quarter	VMT (Billions)								
		2023 Q2	3.38								
2024 Q1	3.22										
2024 Q2	3.34										
-1.2%	3.7%										
Total Vehicle Hours of Delay (VHD) at 35 mph	<table><caption>Total Vehicle Hours of Delay (VHD) at 35 mph Data</caption><thead><tr><th>Quarter</th><th>VHD (Millions)</th></tr></thead><tbody><tr><td>2023 Q2</td><td>1.5</td></tr><tr><td>2024 Q1</td><td>1.5</td></tr><tr><td>2024 Q2</td><td>1.5</td></tr></tbody></table>	Quarter	VHD (Millions)	2023 Q2	1.5	2024 Q1	1.5	2024 Q2	1.5	Over one year ago	Over last quarter
		Quarter	VHD (Millions)								
		2023 Q2	1.5								
2024 Q1	1.5										
2024 Q2	1.5										
0%	2.5%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<table><caption>Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph Data</caption><thead><tr><th>Quarter</th><th>VHD (Thousands)</th></tr></thead><tbody><tr><td>2023 Q2</td><td>20</td></tr><tr><td>2024 Q1</td><td>21</td></tr><tr><td>2024 Q2</td><td>20</td></tr></tbody></table>	Quarter	VHD (Thousands)	2023 Q2	20	2024 Q1	21	2024 Q2	20	Over one year ago	Over last quarter
		Quarter	VHD (Thousands)								
		2023 Q2	20								
2024 Q1	21										
2024 Q2	20										
1.6%	-2.4%										
Total Vehicle Hours of Delay (VHD) at 60 mph	<table><caption>Total Vehicle Hours of Delay (VHD) at 60 mph Data</caption><thead><tr><th>Quarter</th><th>VHD (Millions)</th></tr></thead><tbody><tr><td>2023 Q2</td><td>5.2</td></tr><tr><td>2024 Q1</td><td>5</td></tr><tr><td>2024 Q2</td><td>5</td></tr></tbody></table>	Quarter	VHD (Millions)	2023 Q2	5.2	2024 Q1	5	2024 Q2	5	Over one year ago	Over last quarter
		Quarter	VHD (Millions)								
		2023 Q2	5.2								
2024 Q1	5										
2024 Q2	5										
-5.3%	-0.3%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<table><caption>Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph Data</caption><thead><tr><th>Quarter</th><th>VHD (Thousands)</th></tr></thead><tbody><tr><td>2023 Q2</td><td>67</td></tr><tr><td>2024 Q1</td><td>68</td></tr><tr><td>2024 Q2</td><td>65</td></tr></tbody></table>	Quarter	VHD (Thousands)	2023 Q2	67	2024 Q1	68	2024 Q2	65	Over one year ago	Over last quarter
		Quarter	VHD (Thousands)								
		2023 Q2	67								
2024 Q1	68										
2024 Q2	65										
-2.4%	-3.8%										

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph	Hours (Thousands) ■ 2023 Q2 ■ 2024 Q1 ■ 2024 Q2 Mon Tue Wed Thu Fri Sat Sun/Hol	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Friday -13.1%	Thursday -8.2%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Monday 13.7%	Saturday 17.9%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays	Hours (Thousands) — Weekday (2023 Q2) — Weekday (2024 Q1) — Weekday (2024 Q2) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Hour of Day	Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter
		4 PM -16.1%	6 PM -21.3%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		8 AM 27.4%	3 PM 11.2%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays	Hours (Thousands) — Saturday (2023 Q2) — Saturday (2024 Q1) — Saturday (2024 Q2) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Hour of Day	Largest Magnitude Saturday Decrease over one year ago	Largest Magnitude Saturday Decrease over last quarter
		2 PM -33.4%	8 AM -9.2%
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		6 PM 48.3%	5 PM 40.2%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays	Hours (Thousands) — Sunday/Holiday (2023 Q2) — Sunday/Holiday (2024 Q1) — Sunday/Holiday (2024 Q2) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Hour of Day	Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter
		8 AM -45.2%	6 PM -40.4%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		8 PM 90.8%	1 PM 69.1%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph	Hours (Millions) ■ 2023 Q2 ■ 2024 Q1 ■ 2024 Q2 Orange	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Orange 0%	—
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	Miles ■ 2023 Q2 ■ 2024 Q1 ■ 2024 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	Largest Magnitude Decrease over last quarter
		PM Peak -6.9% ↓	PM Peak -9% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Average Number of Good and Bad Detectors	Number of Detectors ■ Average of Good ■ Average of Bad 2023 Q2 2024 Q1 2024 Q2	Change in Good over one year ago	Change in Good over last quarter
		3% ↑	-7% ↓
		Change in Bad over one year ago	Change in Bad over last quarter
		11% ↑	16% ↑

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2024 Q2-2023 Q2		Difference 2024 Q2-2024 Q1		Rank		
		2023 Q2	2024 Q1	2024 Q2	Absolute	Percentage	Absolute	Percentage	2023 Q2	2024 Q1	2024 Q2
I5	Orange	423,119	346,063	393,874	-29,245	-6.9%	47,812	13.8%	1	2	1
I405	Orange	284,571	402,228	316,926	32,355	11.4%	-85,302	-21.2%	3	1	2
SR55	Orange	240,421	217,800	257,785	17,364	7.2%	39,985	18.4%	4	4	3
SR57	Orange	170,352	159,496	235,279	64,927	38.1%	75,783	47.5%	5	5	4
SR91	Orange	351,134	280,152	213,216	-137,918	-39.3%	-66,936	-23.9%	2	3	5
SR22	Orange	34,900	60,819	84,025	49,124	140.8%	23,206	38.2%	6	6	6
I605	Orange	8,848	15,560	20,236	11,388	128.7%	4,676	30.1%	9	8	7
SR73	Orange	8,981	15,760	13,952	4,971	55.3%	-1,809	-11.5%	8	7	8
SR241	Orange	23,092	9,480	9,474	-13,618	-59.0%	-6	-0.1%	7	9	9
SR261	Orange	759	73	800	41	5.3%	727	998.2%	10	11	10
SR133	Orange	283	1,455	486	203	71.6%	-969	-66.6%	11	10	11
SR74	Orange	5	5	5	0	0.0%	0	0.0%	12	12	12
SR142	Orange	3	3	3	0	0.0%	0	0.0%	13	13	13
SR1	Orange	0	0	0	0		0				
TOTALS		1,546,468	1,508,893	1,546,059	-409	0.0%	37,166	2.5%			