

District 12 Mobility Performance Report

2024 1st Quarter

DEPARTMENT OF TRANSPORTATION

April 29, 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 12 percent decrease in 35 MPH VHD and 7.4 percent decrease in 60 MPH VHD.

The average weekday VHD experienced in this quarter was approximately 21 thousand VHD at 35 MPH and 68 thousand VHD at 60 MPH. Compared to the previous quarter, there was 11.8 percent decrease in 35 MPH VHD and 7 percent decrease in 60 mph VHD.

Top 10 Bottlenecks for the 1st 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	59	3.14	44,939	12,870
Ora	PM	SR57	N	TONNER	11.27	22	33.94	-117.88	61	1.24	38,213	13,845
Ora	AM	I5	S	MAIN 1	105.19	33	33.77	-117.87	62	1.05	30,944	9,435
Ora	AM	I5	S	LA PALMA	113.17	40.98	33.85	-117.96	58	1.39	30,735	6,490
Ora	AM	I405	S	HARBOR 1	10.97	11.2	33.69	-117.92	48	1.96	27,088	4,720
Ora	PM	SR91	E	LAKEVIEW1	28.45	R10.08	33.85	-117.81	57	3.09	24,848	13,005
Ora	PM	I405	N	BROOKHUR2	13.74	13.97	33.71	-117.96	60	1.42	22,147	10,200
Ora	PM	I5	N	CULVER 1	98.82	R26.56	33.71	-117.78	62	2.11	21,103	11,730
Ora	PM	SR55	N	N-O E WARNER MVDS	8.56	R8.563	33.72	-117.84	60	2.02	20,934	4,760
Ora	AM	I405	S	WARNER	14.49	14.72	33.71	-117.97	56	1.07	19,361	7,535

2024 Q1 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>2023</td><td>3.17</td><td>3.33</td><td></td></tr> <tr><td>2024</td><td>3.22</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2023	3.17	3.33		2024	3.22			Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
		2023	3.17	3.33											
2024	3.22														
1.6%	-3.4%														
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>2023</td><td>1.6</td><td>1.7</td><td></td></tr> <tr><td>2024</td><td>1.5</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2023	1.6	1.7		2024	1.5			Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
		2023	1.6	1.7											
2024	1.5														
-3.5%	-12%														
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>2023</td><td>23</td><td>23</td><td></td></tr> <tr><td>2024</td><td>21</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2023	23	23		2024	21			Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
		2023	23	23											
2024	21														
-8.6%	-11.8%														
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>2023</td><td>5.5</td><td>5.4</td><td></td></tr> <tr><td>2024</td><td>5</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2023	5.5	5.4		2024	5			Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
		2023	5.5	5.4											
2024	5														
-9.1%	-7.4%														
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>2023</td><td>76</td><td>73</td><td></td></tr> <tr><td>2024</td><td>68</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2023	76	73		2024	68			Over one year ago	Over last quarter
		Year	Q1	Q4	Q1										
		2023	76	73											
2024	68														
-10.6%	-7%														

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
		Friday -26.8% ↓	Thursday -12.8% ↓
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
		5 PM -16.3% ↓	5 PM -13.9% ↓
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 -22.1% ↓	5 PM -28.4% ↓
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
		9 AM -35.5% ↓	5 PM -40.3% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		Monday 2.7% ↑	Monday 10.1% ↑
		8 AM 8.4% ↑	11 PM 113.2% ↑
		11 AM 71.9% ↑	11 AM 79.1% ↑
		6 PM 96.8% ↑	8 PM 38.3% ↑

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph	<p>Hours (Millions)</p> <p>■ 2023 Q1 ■ 2023 Q4 ■ 2024 Q1</p> <p>Orange</p>	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Orange -3.5% 	Orange -12%
		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	<p>Miles</p> <p>■ 2023 Q1 ■ 2023 Q4 ■ 2024 Q1</p> <p>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)</p>	Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		PM Peak -14% 	PM Peak -12.6%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Off-Peak Day 92.8% 	Off-Peak Day 5.9%
Average Number of Good and Bad Detectors	<p>Number of Detectors</p> <p>■ Average of Good ■ Average of Bad</p> <p>2023 Q1 2023 Q4 2024 Q1</p>	Change in Good over one year ago	Change in Good over last quarter
		13% 	7%
		Change in Bad over one year ago	Change in Bad over last quarter
		-8% 	-12%

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2024 Q1-2023 Q1		Difference 2024 Q1-2023 Q4		Rank		
		2023 Q1	2023 Q4	2024 Q1	Absolute	Percentage	Absolute	Percentage	2023 Q1	2023 Q4	2024 Q1
I405	Orange	303,029	395,101	402,228	99,199	32.7%	7,127	1.8%	3	2	1
I5	Orange	420,637	424,171	346,063	-74,574	-17.7%	-78,109	-18.4%	1	1	2
SR91	Orange	380,644	335,903	280,152	-100,491	-26.4%	-55,750	-16.6%	2	3	3
SR55	Orange	194,124	218,522	217,800	23,676	12.2%	-722	-0.3%	4	4	4
SR57	Orange	170,253	193,305	159,496	-10,757	-6.3%	-33,809	-17.5%	5	5	5
SR22	Orange	62,374	78,028	60,819	-1,555	-2.5%	-17,210	-22.1%	6	6	6
SR73	Orange	8,407	18,697	15,760	7,354	87.5%	-2,937	-15.7%	8	9	7
I605	Orange	2,183	27,056	15,560	13,377	612.7%	-11,497	-42.5%	9	7	8
SR241	Orange	20,098	22,686	9,480	-10,618	-52.8%	-13,206	-58.2%	7	8	9
SR133	Orange	1,038	1,343	1,455	417	40.1%	111	8.3%	11	10	10
SR261	Orange	1,299	158	73	-1,226	-94.4%	-85	-53.9%	10	11	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		1,564,092	1,714,979	1,508,893	-55,199	-3.5%	-206,085	-12.0%			