

# District 06 Mobility Performance Report

2024 Second Quarter

**DEPARTMENT OF TRANSPORTATION**

August 20, 2024  
: D06 – Traffic Operations

2024 Second Quarter

## EXECUTIVE SUMMARY

### Overview

Caltrans District 6 is geographically diverse, and the second largest of the 12 Districts statewide, stretching from the southernmost part of Yosemite National Park in the north to the Mojave Desert. Also referred to as the Central Valley, District 6 encompasses Madera, Fresno, Tulare, Kings, and Kern counties. District 6 maintains and operates 476 miles of freeway and 1,554 miles of rural and urban highway. This District has the largest number of road miles in the State Highway System with 2,030 miles. Interstate 5 and State Route 99 span District 6, connecting the Central Valley to Northern and Southern California. These two routes and many others support substantial truck traffic for the agricultural base of the region.

The Mobility Performance Report (MPR) quarterly analysis compares current data with information from the same quarter of the previous year, and from the previous quarter using the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

This information is based on continuous data collected by automated vehicle detector stations deployed on urban-area freeways with recurrent congestion. The MPR presents congestion delay information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph),

and delay from vehicles traveling below 60 miles per hour (mph). The delay at the 35 miles per hour (mph) threshold represents severe congestion while delay at 60 mph represents all congestion. The criteria for speed thresholds are set by Caltrans and are based on engineering experience and District input.

## FINDINGS

In this second quarter of 2024, total delay equaled approximately 365,130 vehicle hours of delay (VHD) at the 35mph speed threshold, a decrease of an approximately 15.2 percent compared to last quarter (2024 quarter one). The average (non-holiday) weekday of vehicle hours of delay experienced in this quarter was approximately 4750 VHD (compares to 5152 VHD in last quarter) at 35mph speed threshold, a decrease of 7.8 percent. Total delay in VHD at 60mph speed threshold was calculated at approximately 1.6 million VHD, a decrease of approximately 10 percent compared to the first quarter (1.7 million VHD) of 2024. The average (non-holiday) weekday of vehicle hours of delay was reported as 20,940 (rounded off to 21,000) VHD at 60mph speed threshold, which also decreases approximately 5.4 percent compare to previous quarter (22,000 VHD for 2024 Q1). SR 41 and SR 99 in Kern and Fresno Counties continue to show the largest congestion among five counties in the District. Vehicle Miles Traveled (VMT) was reported at an approximately 2.3 billion vehicle miles which increases about 9.2 percent compared to the last quarter (2.11 billion); comparing to quarter 2 of last year (Q2 in 2023), VMT in this quarter slightly increases approximately 1.4 percent.

Overall, for this quarter, total vehicle-hour of delay at 35mph decreases approximately 15.2 percent compared to the last quarter, and the total vehicle-hour of delay at 60mph also decreases approximately 10 percent, compared to the quarter one of 2024.

For this quarter, the total number of functional detectors in the district remains as 1861 detectors. The Performance Measure System (PEMS) reported approximately 5 percent decrease in good detectors compared to the last quarter and an increase of approximately 20 percent in bad detectors compared to last quarter. The average number of good as well as bad detectors are illustrated in the graph at the end of this report.

### Top Ten Bottlenecks for Quarter 2 – 2024

Mobility Performance Report | 8/20/2024

County	Fwy	Locations	Type	Shift	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (Veh-hrs)	Avg Duration (mins)
Fresno	41 N	McKinley Ave.	ML	PM	127.09	R25.3405	36.77	-119.78	61	0.95	8690.30	5560
Fresno	99 S	McKinley Ave.	ML	AM	136.07	23.75	36.76	-119.83	56	0.91	3230.20	2570
Fresno	99 N	N. O Nielsen Ave	ML	PM	134.65	22.31	36.75	-119.82	60	0.58	4821.00	5860
Fresno	99 S	Olive Ave.	ML	PM	135.53	23.21	36.76	-119.83	53	1.25	6254.10	3630
Fresno	41 S	Shaw Ave	ML	PM	130.15	R28.395	36.81	-119.79	51	1.10	8699.50	4535
Fresno	41 N	Clinton Ave.	ML	PM	127.63	R25.8805	36.77	-119.78	48	1.60	6314.10	2515
Fresno	99 N	Stanislaus Street	ML	PM	133.35	21.0105	36.73	-119.80	43	0.85	2015.40	2520
Fresno	99 S	N. O Clinton Ave	ML	AM	137.46	25.146	36.80	-119.85	40	1.04	2749.40	1645
Fresno	180W	Fulton	ML	PM	33.62	R57.152	36.75	-119.80	38	0.30	485.60	2000
Fresno	41 N	McKinley Ave	ML	AM	127.09	R25.3405	36.77	-119.78	33	0.78	1181.30	1205

For this third quarter of 2023, PEMS reports the District’s top ten bottleneck locations as shown in the above table. The majority of district’s top bottleneck locations are mainly on SR 41, and SR 99 in the City of Fresno in Fresno County. There was also one bottleneck location on SR 180, where the interchange of SR 180 and SR 99 in the City of Fresno. The listed bottleneck

District 06

locations on the table are the recurrent congestion locations during peak hours and they have been occasionally observed in the past quarters. PEMS also reported bottlenecks on SR 99 near Avenue 9 interchange Madera County. However, the District suspected that bottleneck at this location was caused by construction projects (and possibly incidents) in the area. It is thus eliminated from the top ten bottleneck locations in this report. The above bottleneck locations are selected as the top ten bottleneck locations in the District for this quarter. Active bottlenecks are defined (or computed by PeMS) as delay (VHD) be at least 20 percent of all weekdays during the quarter, persisted for at least 15 minutes on average, and caused more than 100 vehicle hours of delay (VHD) per weekday.

### 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>2023</td><td>2.27</td></tr> <tr><td>2024</td><td>2.3</td></tr> </table>	Year	Q2	2023	2.27	2024	2.3	Over one year ago	Over last quarter
		Year	Q2						
		2023	2.27						
2024	2.3								
1.4%	9.2%								
Total 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>2023</td><td>361.4</td></tr> <tr><td>2024</td><td>365.1</td></tr> </table>	Year	Q2	2023	361.4	2024	365.1	Over one year ago	Over last quarter
		Year	Q2						
		2023	361.4						
2024	365.1								
1%	-15.2%								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Hours)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2023</td><td>4564</td></tr> <tr><td>2024</td><td>4750</td></tr> </table>	Year	Q2	2023	4564	2024	4750	Over one year ago	Over last quarter
		Year	Q2						
		2023	4564						
2024	4750								
4.1%	-7.8%								
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>2023</td><td>1.6</td></tr> <tr><td>2024</td><td>1.6</td></tr> </table>	Year	Q2	2023	1.6	2024	1.6	Over one year ago	Over last quarter
		Year	Q2						
		2023	1.6						
2024	1.6								
-2%	-10%								
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		Year	Q2						
		2023	21						
2024	21								
-0.3%	-5.4%								

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
		Wednesday -11%	Sun/Hol -37.8%
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
		1 AM -59.8%	5 PM -26.2%
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
		12 PM -54.3%	4 PM -79%
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
		10 PM -45%	6 PM -44.9%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Monday 8.1%	Thursday 9.6%
		7 PM 48.3%	3 PM 28.2%
		3 PM 102.6%	10 PM 176.8%
		5 PM 50.5%	10 PM 61.3%

Measure	Graph	Percentage Change																									
Total Vehicle Hours of Delay (VHD) by County at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <thead> <tr> <th>County</th> <th>2023 Q2</th> <th>2024 Q1</th> <th>2024 Q2</th> </tr> </thead> <tbody> <tr> <td>Fresno</td> <td>120.98</td> <td>202.88</td> <td>155.97</td> </tr> <tr> <td>Kern</td> <td>168.28</td> <td>115.55</td> <td>133.85</td> </tr> <tr> <td>Kings</td> <td>4.29</td> <td>6.2</td> <td>3.18</td> </tr> <tr> <td>Madera</td> <td>33.64</td> <td>44.6</td> <td>43.57</td> </tr> <tr> <td>Tulare</td> <td>34.24</td> <td>61.32</td> <td>28.56</td> </tr> </tbody> </table>	County	2023 Q2	2024 Q1	2024 Q2	Fresno	120.98	202.88	155.97	Kern	168.28	115.55	133.85	Kings	4.29	6.2	3.18	Madera	33.64	44.6	43.57	Tulare	34.24	61.32	28.56	<p>Largest Magnitude Decrease over one year ago</p> <p>Kern -20.5% ↓</p>	<p>Largest Magnitude Decrease over last quarter</p> <p>Fresno -23.1% ↓</p>
		County	2023 Q2	2024 Q1	2024 Q2																						
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Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	<p>Miles</p> <table border="1"> <thead> <tr> <th>Category</th> <th>2023 Q2</th> <th>2024 Q1</th> <th>2024 Q2</th> </tr> </thead> <tbody> <tr> <td>AM Peak (6 AM to 10 AM)</td> <td>2.0</td> <td>2.0</td> <td>2.0</td> </tr> <tr> <td>Off-Peak Day (10 AM to 3 PM)</td> <td>2.0</td> <td>2.0</td> <td>2.0</td> </tr> <tr> <td>PM Peak (3 PM to 7 PM)</td> <td>6.0</td> <td>8.0</td> <td>7.0</td> </tr> <tr> <td>Off-Peak Night (7 PM to 6 AM)</td> <td>3.0</td> <td>2.0</td> <td>2.0</td> </tr> </tbody> </table>	Category	2023 Q2	2024 Q1	2024 Q2	AM Peak (6 AM to 10 AM)	2.0	2.0	2.0	Off-Peak Day (10 AM to 3 PM)	2.0	2.0	2.0	PM Peak (3 PM to 7 PM)	6.0	8.0	7.0	Off-Peak Night (7 PM to 6 AM)	3.0	2.0	2.0	<p>Largest Magnitude Decrease over one year ago</p> <p>Off-Peak Night -34.3% ↓</p>	<p>Largest Magnitude Decrease over last quarter</p> <p>AM Peak -35.1% ↓</p>				
		Category	2023 Q2	2024 Q1	2024 Q2																						
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<p>Largest Magnitude Increase over one year ago</p> <p>PM Peak 11% ↑</p>	<p>Largest Magnitude Increase over last quarter</p> <p>Off-Peak Day 9.7% ↑</p>																										
Average Number of Good and Bad Detectors	<p>Number of Detectors</p> <table border="1"> <thead> <tr> <th>Period</th> <th>Average of Good</th> <th>Average of Bad</th> </tr> </thead> <tbody> <tr> <td>2023 Q2</td> <td>1,496</td> <td>370</td> </tr> <tr> <td>2024 Q1</td> <td>1,488</td> <td>373</td> </tr> <tr> <td>2024 Q2</td> <td>1,414</td> <td>447</td> </tr> </tbody> </table>	Period	Average of Good	Average of Bad	2023 Q2	1,496	370	2024 Q1	1,488	373	2024 Q2	1,414	447	<p>Change in Good over one year ago</p> <p>-5% ↓</p>	<p>Change in Good over last quarter</p> <p>-5% ↓</p>												
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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
SR99	Kern	109,431	65,039	95,173	-14,259	-13.0%	30,134	46.3%	1	2	1
SR99	Fresno	34,659	66,002	63,485	28,826	83.2%	-2,517	-3.8%	4	1	2
I5	Fresno	13,146	43,656	52,239	39,093	297.4%	8,582	19.7%	8	7	3
SR99	Madera	33,603	44,032	43,550	9,947	29.6%	-482	-1.1%	5	6	4
I5	Kern	49,763	44,870	37,225	-12,539	-25.2%	-7,646	-17.0%	3	5	5
SR41	Fresno	50,221	59,211	31,797	-18,423	-36.7%	-27,414	-46.3%	2	3	6
SR99	Tulare	25,129	53,420	24,468	-660	-2.6%	-28,952	-54.2%	6	4	7
SR180	Fresno	20,336	16,662	7,335	-13,001	-63.9%	-9,326	-56.0%	7	9	8
SR198	Tulare	9,107	7,903	4,094	-5,013	-55.0%	-3,808	-48.2%	9	10	9
SR198	Kings	2,534	2,846	1,786	-749	-29.5%	-1,060	-37.3%	12	13	10
I5	Kings	489	3,352	1,388	899	183.7%	-1,964	-58.6%	14	12	11
SR58	Kern	9,040	5,623	1,150	-7,890	-87.3%	-4,473	-79.5%	10	11	12
SR168	Fresno	2,616	17,353	1,111	-1,505	-57.5%	-16,242	-93.6%	11	8	13
SR46	Kern	41	1	292	251	605.6%	291	36412.5%	15	18	14
SR41	Madera	27	544	24	-3	-11.4%	-520	-95.6%	16	14	15
SR178	Kern	0	19	9	9		-10	-52.7%		16	16
SR41	Kings	1,265	7	7	-1,258	-99.4%	0	4.3%	13	17	17
SR152	Madera	11	27	1	-11	-95.5%	-26	-98.1%	17	15	18
<b>TOTALS</b>		<b>361,419</b>	<b>430,565</b>	<b>365,133</b>	<b>3,713</b>	<b>1.0%</b>	<b>-65,433</b>	<b>-15.2%</b>			