District 06
Mobility Performance Report

2023 Second Quarter

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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:

- o   Vehicle Miles of Travel (VMT)
- o   Vehicle Hours of Delay (VHD)
- o   Lost Lane Miles (equivalent lost productivity)
- o   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 the second quarter of 2023, total delay equaled approximately 361,400 vehicle hours of delay (VHD) at the 35mph speed threshold, a decrease of approximately 2.8 percent compared to last quarter (first quarter of 2023). The average (non-holiday) weekday of vehicle hours of delay experienced in this quarter was approximately 4564 VHD (compares to 4886 VHD in last quarter) at 35mph speed threshold, a decrease of 2.6 percent. Total delay was calculated at approximately 1.58 million (rounded off to 1.6 million) VHD at 60mph speed threshold, a drop of approximately 1.9 percent compared to first quarter (1.61 million VHD) of 2023. The average (non-holiday) weekday of vehicle hours of delay was reported as 20,999 (rounded off to 21000) VHD at 60mph speed threshold, which slightly decreases approximately 0.2 percent compare to previous quarter (21,043 VHD). Kern and Fresno Counties experience the largest delay among five counties in the District, especially on SR 41 and SR 99. Vehicle Miles Traveled (VMT) was reported at an approximately 2.27 billion vehicle miles which increase approximately 13.6 percent compared to the last quarter (2.0 billion). VMT for this quarter, compared to Q2 of last year, is also slightly increase about 1.8 percent (2.23 billion for Q2 last year). Overall, for this quarter, total vehicle-hour of delay for 35mph decreases approximately 2.8 percent compared to first quarter of 2023 and the total vehicle-hour of delay at 60mph also decreases approximately 1.9 percent, compared to the last quarter. However, the total vehicle-hour of delay for 35mph increases approximately 22.1 percent compared to second quarter of last year (2022) and the

total vehicle-hour of delay at 60mph also increases approximately 10.5 percent, compared to second quarter of last year.

For this quarter, the total number of detectors in the district is increased to 1866 from 1844 (last quarter). The District added additional 22 new detectors to the facility in second quarter of 2023. The Performance Measure System (PEMS) reported 6 percent increase in good detectors compared to the last quarter and a decrease of approximately 14 percent in bad detectors compared to last quarter (probably due to construction related issues). 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 – 2023

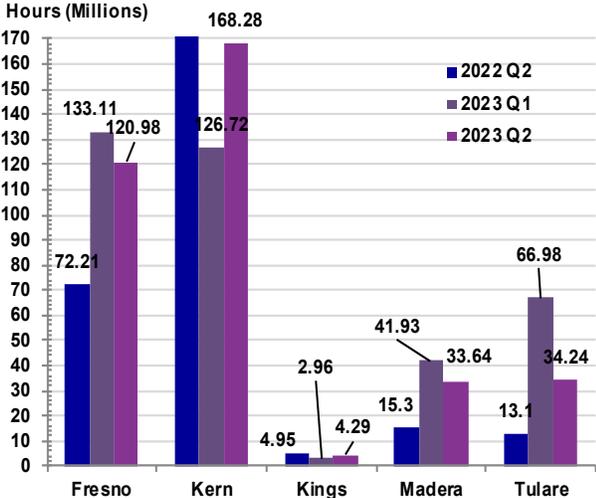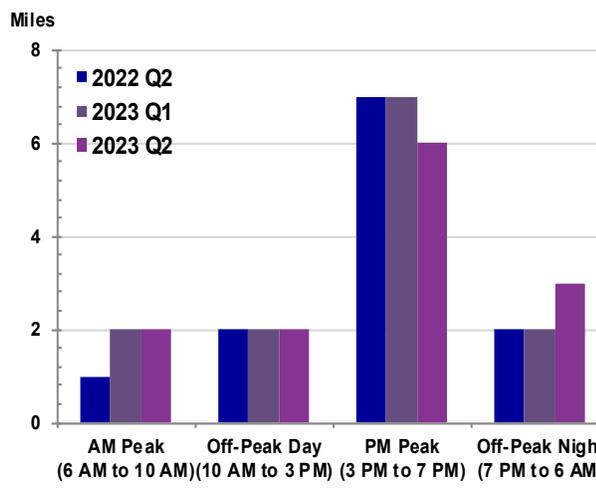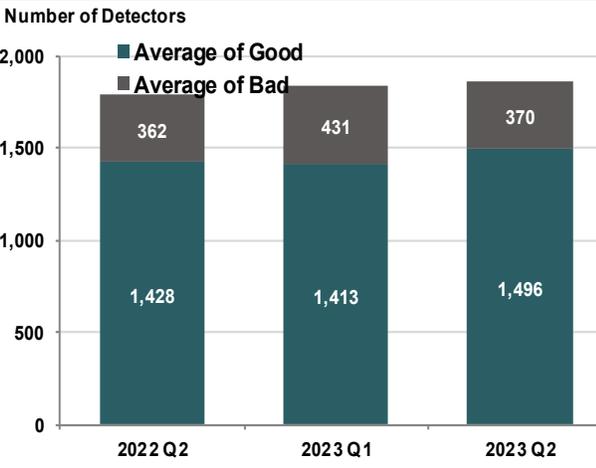| County	Fwy	Locations	Type	Shift	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (Veh-hrs)	Avg Duration (mins)
Fresno	41 N	Ashlan Ave	ML	PM	129.30	R27.55	36.80	-119.78	62	1.61	19639.5	7280
Fresno	41 N	Mc Kinley Ave.	ML	PM	127.09	R25.3405	36.77	-119.78	60	0.85	3509.80	2475
Fresno	41 N	Clinton Ave.	ML	PM	127.63	R25.8805	36.77	-119.78	54	1.42	4283.50	1990
Fresno	41 S	Shaw Ave	ML	PM	130.15	R28.395	36.81	-119.79	53	1.21	11061.7	4910
Fresno	99 N	N.O Nielsen Ave.	ML	PM	134.65	22.31	36.75	-119.82	52	0.52	3582.10	4625
Fresno	41 N	Ashlan Ave	ML	AM	129.30	R27.55	36.80	-119.78	49	1.70	9363.20	3550
Fresno	99 S	McKinley Ave.	ML	AM	136.07	23.75	36.76	-119.83	45	0.99	2343.60	1800
Kern	58 W	H Street	ML	PM	110.13	R53.307	35.35	-119.02	42	1.83	3322.20	2960
Fresno	99 S	Olive Ave.	ML	PM	135.53	23.21	36.76	-119.83	35	1.28	3813.80	2335
Fresno	41 N	Shields Ave	ML	PM	128.15	R26.4005	36.78	-119.78	27	2.06	2070.90	610

For this first quarter of 2023, the majority of district's top ten bottleneck locations are mainly on SR 41 and SR 99 in the City of Fresno in Fresno County. The listed bottleneck locations on SR

41 and SR 99 in City of Fresno are the recurrent congestion locations during peak hours and they have been occasionally observed in the past quarters. Active bottleneck locations 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	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)	Miles (Billions) 2022 Q2: 2.23 2023 Q1: 2 2023 Q2: 2.27	1.8% ⬆	13.6% ⬆
Total Vehicle Hours of Delay (VHD) at 35 mph	Hours (Millions) 2022 Q2: 296 2023 Q1: 371.7 2023 Q2: 361.4	22.1% ⬆	-2.8% ⬇
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	Hours (Thousands) 2022 Q2: 3678 2023 Q1: 4686 2023 Q2: 4564	24.1% ⬆	-2.6% ⬇
Total Vehicle Hours of Delay (VHD) at 60 mph	Hours (Millions) 2022 Q2: 1.4 2023 Q1: 1.6 2023 Q2: 1.6	10.5% ⬆	-1.9% ⬇
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	Hours (Thousands) 2022 Q2: 19 2023 Q1: 21 2023 Q2: 21	10.7% ⬆	-0.2% ⬇

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph	Hours (Thousands) 2022 Q2, 2023 Q1, 2023 Q2 Mon Tue Wed Thu Fri Sat Sun/Hol	**Largest Magnitude Decrease over one year ago** –	**Largest Magnitude Decrease over last quarter** **Sun/Hol -26.1%**
		Largest Magnitude Increase over one year ago **Wednesday 21.8%**	**Largest Magnitude Increase over last quarter** **Monday 5.6%**
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays	Hours (Thousands) Weekday (2022 Q2), Weekday (2023 Q1), Weekday (2023 Q2) Hour of Day	**Largest Magnitude Weekday Decrease over one year ago** **1 PM -1.7%**	**Largest Magnitude Weekday Decrease over last quarter** **6 PM -29.2%**
		Largest Magnitude Weekday Increase over one year ago **5 PM 33%**	**Largest Magnitude Weekday Increase over last quarter** **9 PM 87.5%**
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays	Hours (Thousands) Saturday (2022 Q2), Saturday (2023 Q1), Saturday (2023 Q2) Hour of Day	**Largest Magnitude Saturday Decrease over one year ago** **3 PM -58.5%**	**Largest Magnitude Saturday Decrease over last quarter** **3 PM -75.9%**
		Largest Magnitude Saturday Increase over one year ago **10 PM 66.2%**	**Largest Magnitude Saturday Increase over last quarter** **11 PM 94.9%**
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays	Hours (Thousands) Sunday/Holiday (2022 Q2), Sunday/Holiday (2023 Q1), Sunday/Holiday (2023 Q2) Hour of Day	**Largest Magnitude Sun./Holiday Decrease over one year ago** **3 PM -42.9%**	**Largest Magnitude Sun./Holiday Decrease over last quarter** **5 PM -51.9%**
		Largest Magnitude Sun./Holiday Increase over one year ago **10 PM 162.3%**	**Largest Magnitude Sun./Holiday Increase over last quarter** **10 PM 216.5%**

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		**Largest Magnitude Decrease over one year ago** **Kern -11.6%** ⬇	**Largest Magnitude Decrease over last quarter** **Tulare -48.9%** ⬇
		Largest Magnitude Increase over one year ago **Fresno 67.5%** ⬆	**Largest Magnitude Increase over last quarter** **Kern 32.8%** ⬆
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		**Largest Magnitude Decrease over one year ago** **PM Peak -7.4%** ⬇	**Largest Magnitude Decrease over last quarter** **PM Peak -13.4%** ⬇
		Largest Magnitude Increase over one year ago **Off-Peak Night 32.7%** ⬆	**Largest Magnitude Increase over last quarter** **Off-Peak Nig... 44.4%** ⬆
Average Number of Good and Bad Detectors		**Change in Good over one year ago** **5%** ⬆	**Change in Good over last quarter** **6%** ⬆
		Change in Bad over one year ago **2%** ⬆	**Change in Bad over last quarter** **-14%** ⬇

		Vehicle Hours of Delay at 35 mph			Difference 2023 Q2-2022 Q2		Difference 2023 Q2-2023 Q1		Rank		
Route	County	2022 Q2	2023 Q1	2023 Q2	Absolute	Percentage	Absolute	Percentage	2022 Q2	2023 Q1	2023 Q2
SR99	Kern	141,082	75,051	109,431	-31,651	-22.4%	34,380	45.8%	1	1	1
SR41	Fresno	19,000	35,558	50,221	31,221	164.3%	14,663	41.2%	4	6	2
I5	Kern	39,474	38,502	49,763	10,289	26.1%	11,261	29.2%	2	5	3
SR99	Fresno	39,189	29,696	34,659	-4,530	-11.6%	4,963	16.7%	3	7	4
SR99	Madera	15,267	41,370	33,603	18,336	120.1%	-7,767	-18.8%	5	4	5
SR99	Tulare	11,479	64,546	25,129	13,650	118.9%	-39,417	-61.1%	6	2	6
SR180	Fresno	3,030	19,603	20,336	17,306	571.1%	733	3.7%	11	8	7
I5	Fresno	6,795	46,669	13,146	6,352	93.5%	-33,522	-71.8%	8	3	8
SR198	Tulare	1,620	2,431	9,107	7,487	462.0%	6,677	274.7%	12	11	9
SR58	Kern	9,809	13,146	9,040	-769	-7.8%	-4,106	-31.2%	7	9	10
SR168	Fresno	4,195	1,581	2,616	-1,579	-37.6%	1,035	65.5%	9	12	11
SR198	Kings	122	290	2,534	2,412	1979.0%	2,245	775.4%	14	14	12
SR41	Kings	706	169	1,265	559	79.1%	1,096	648.3%	13	15	13
I5	Kings	4,126	2,499	489	-3,637	-88.1%	-2,010	-80.4%	10	10	14
SR46	Kern	58	21	41	-17	-28.9%	21	98.1%	15	16	15
SR41	Madera	28	559	27	-1	-3.9%	-532	-95.2%	16	13	16
SR152	Madera	0	6	11	11		6	101.8%		17	17
TOTALS		295,980	371,694	361,419	65,439	22.1%	-10,275	-2.8%			

Congestion by Route