

# District 03 Mobility Performance Report

2022 First Quarter

**DEPARTMENT OF TRANSPORTATION**

April 27, 2022  
: Office of Freeway Operations

2022 First Quarter

## **EXECUTIVE SUMMARY**

### **Overview**

Caltrans District 3 is comprised of eleven counties located in Northern California. Most of the congestion and delay on the state highway system takes place in the urbanized areas of Sacramento, Yolo and Placer counties.

The Mobility Performance Report (MPR) quarterly analysis compares information from this quarter with information from the previous quarter and the prior year. The following performance measures were used to quantify freeway congestion in District 3 as well as to compare the different quarters:

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

This information is based on data collected by automated vehicle detector stations deployed on urban area freeways from the Caltrans Performance Measurement System (PeMS) every day of the quarter, twenty-four hours a day, where congestion is regularly experienced. The MPR presents congestion information for two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35-mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon traffic engineering experience and District 3 Office of Freeway Operations input.

## FINDINGS

In the First quarter of 2022, there is a decrease in delay due to the impact of COVID 19 variants. The total delay on the freeways in District 3 equaled 0.54 million vehicle hours of delay (VHD) below the 35-mph speed threshold and 2.18 million VHD below 60-mph threshold. The average delay experienced on weekdays in this quarter was approximately 6,500 of VHD below 35-mph, and 29,900 of VHD below 60-mph.

Vehicle Miles of Travel (VMT) decreased by 9.7% with a total of 2.63 billion miles when compared to that of the previous quarter (2.91 billion miles). The VHD below the 60-mph speed threshold decreased by 15.2% during the same quarter. See graphs on page 4 for details.

### Top Ten Bottlenecks for Quarter 1

County	Fwy	Name	Type	Shift	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
YUB	SR70-E	70EB Yuba River Br	ML	PM	20.15	13.524	39.13	-121.58	62	2.54	44,812.70	9,220.00
YOLO	I80-W	E. of Webster UC	ML	AM	79.13	6.943	38.57	-121.62	32	4.69	29,751.30	4,770.00
SAC	SR51-S	EB Exposition Bl	ML	PM	3.33	3.326	38.60	-121.44	61	1.78	26,039.80	9,095.00
YOLO	I80-E	80EB at Mace Blvd	ML	PM	74.90	2.714	38.55	-121.69	58	1.96	17,007.40	6,535.00
SAC	SR99-S	99SB at Cosumnes	ML	PM	290.68	16.23	38.46	-121.41	62	1.57	16,605.00	9,705.00
PLA	I80-W	EB Douglas Blvd	ML	PM	103.38	1.876	38.74	-121.27	59	1.03	11,731.80	7,935.00
SAC	US50-W	15th St	ML	PM	4.50	1.345	38.56	-121.49	40	1.20	11,410.60	4,610.00
YUB	SR70-E	70EB Yuba River Br	ML	AM	20.15	13.524	39.13	-121.58	47	2.44	11,252.80	3,140.00
SAC	SR51-N	30 & E St	ML	PM	1.50	1.5	38.58	-121.46	61	1.02	10,118.30	5,245.00
SAC	SR99-N	99NB at 8TH AVE POC	ML	AM	297.89	23.419	38.55	-121.47	42	1.70	9,018.50	3,130.00

#### Notes:

- For the table above, the quarterly delay calculation was based upon a 60-mph threshold, for the a.m. or p.m. weekday peak period.
- Three of the top ten bottlenecks are located on I 80, it is the most congested corridor in Sacramento region.
- In continued efforts to help relieve congestion and allow safe merging during high traffic demand periods, the California Department of Transportation (Caltrans) has updated the ramp metering operation hours on all major freeways in Sacramento region. The metering hours will be based on traffic demand and will be activated 24/7, including holidays when minimum traffic thresholds are met. The ramp meters will be active every day including weekends and holidays.

- Caltrans District 3 has plans to construct High Occupancy Vehicle (HOV) lanes on SR-51 in Sacramento County, I-80 in Yolo County and SR-65 in Placer County. These projects are expected to reduce delay at some of the nearby bottlenecks identified above.
- The HOV lane projects on I-5 and US-50 are under construction right now.
- The project on SR 65/I-80 interchange is completed for Phase 1. This phase included reconstructing the WB I-80 connector to NB SR-65 to increase capacity and includes reconstructing the Stanford Ranch/Galleria IC improvements. The remainder of the SR 65 project is not currently funded. The planned HOV project on SR 51 is currently funding for PA&ED.
- Our district is preparing to use the information in this report to prioritize funding for projects in the SHOPP mobility programs.

## Quarterly Mobility Statistics

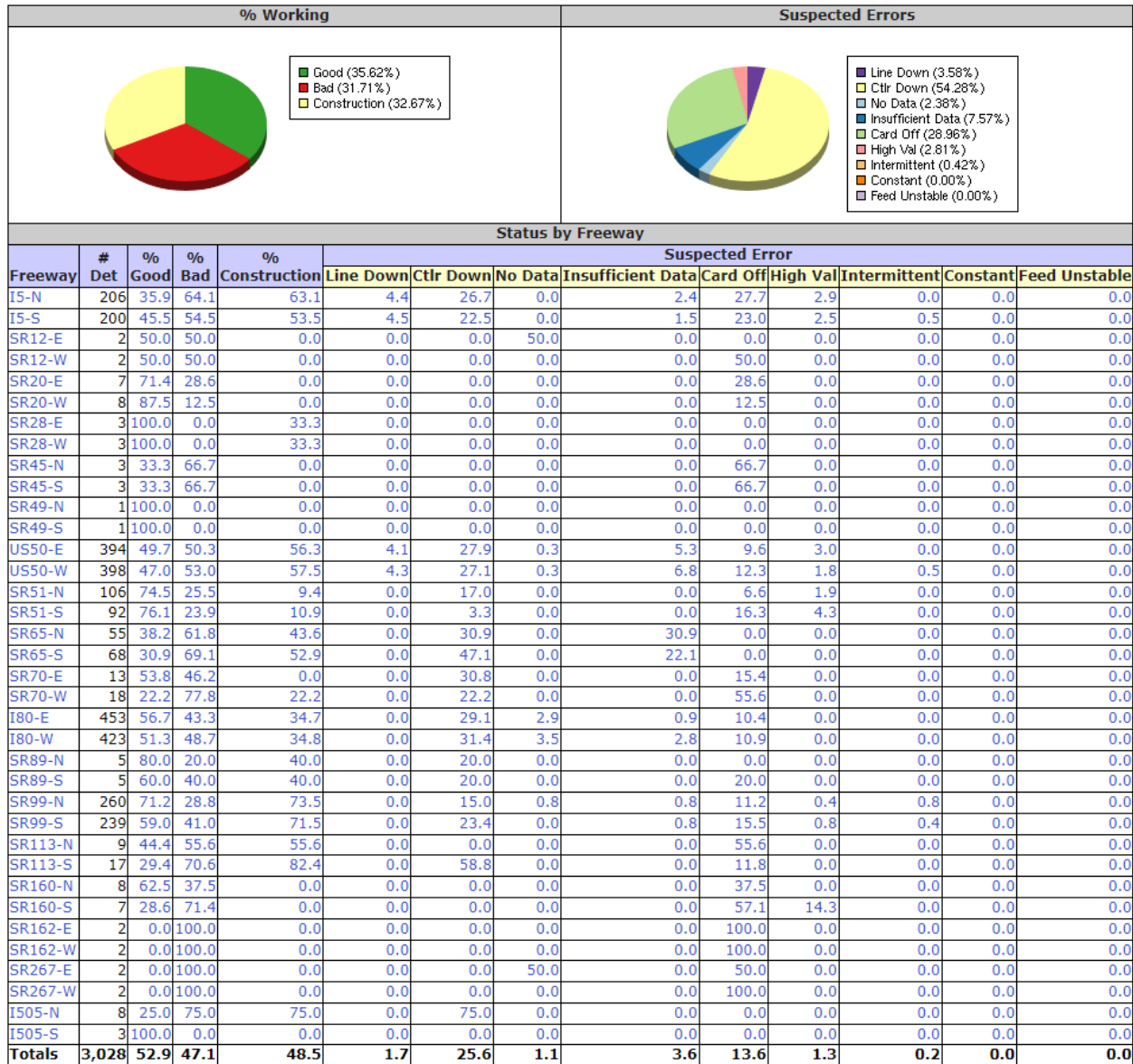
Measure	Graph	Percentage Change													
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Quarter</th><th>Value (Billions)</th></tr> <tr><td>2021</td><td>Q1</td><td>2.05</td></tr> <tr><td>2021</td><td>Q4</td><td>2.91</td></tr> <tr><td>2022</td><td>Q1</td><td>2.63</td></tr> </table>	Year	Quarter	Value (Billions)	2021	Q1	2.05	2021	Q4	2.91	2022	Q1	2.63	Over one year ago	Over last quarter
		Year	Quarter	Value (Billions)											
		2021	Q1	2.05											
2021	Q4	2.91													
2022	Q1	2.63													
28.2%	-9.7%														
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Quarter</th><th>Value (Millions)</th></tr> <tr><td>2021</td><td>Q1</td><td>486.8</td></tr> <tr><td>2021</td><td>Q4</td><td>626.5</td></tr> <tr><td>2022</td><td>Q1</td><td>538.4</td></tr> </table>	Year	Quarter	Value (Millions)	2021	Q1	486.8	2021	Q4	626.5	2022	Q1	538.4	Over one year ago	Over last quarter
		Year	Quarter	Value (Millions)											
		2021	Q1	486.8											
2021	Q4	626.5													
2022	Q1	538.4													
10.6%	-14.1%														
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Quarter</th><th>Value (Thousands)</th></tr> <tr><td>2021</td><td>Q1</td><td>5310</td></tr> <tr><td>2021</td><td>Q4</td><td>8245</td></tr> <tr><td>2022</td><td>Q1</td><td>6470</td></tr> </table>	Year	Quarter	Value (Thousands)	2021	Q1	5310	2021	Q4	8245	2022	Q1	6470	Over one year ago	Over last quarter
		Year	Quarter	Value (Thousands)											
		2021	Q1	5310											
2021	Q4	8245													
2022	Q1	6470													
21.8%	-21.5%														
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		Year	Quarter	Value (Millions)											
		2021	Q1	1.8											
2021	Q4	2.6													
2022	Q1	2.2													
19.1%	-15.2%														
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		Year	Quarter	Value (Thousands)											
		2021	Q1	23											
2021	Q4	35													
2022	Q1	30													
28.6%	-15%														

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
		Saturday -21.8%	Thursday -27.3% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Thursday 39.8% ↑	Sun/Hol 27.3% ↑		
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
		2 PM -19.9% ↓	5 PM -27.5% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
8 AM 264.8% ↑	8 AM 10.3% ↑		
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
		4 PM -55.6% ↓	4 PM -42.1% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
7 PM 74.8% ↑	10 AM 75.5% ↑		
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 PM -47.4% ↓	8 PM -65% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
1 PM 36.8% ↑	1 PM 155.2% ↑		

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
		El Dorado -77.8% ↓	Sacramento -21.5% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Yuba 1599% ↑	Yuba 82.6% ↑		
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 Night -46.4% ↓	PM Peak -27.9% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
PM Peak 13.6% ↑	- ↑		
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-6% ↓	12% ↑
		Change in Bad over one year ago	Change in Bad over last quarter
70% ↑	-9% ↓		

The Figure below is the screen shot on 01/01/2022, beginning of the Q1 2022. This Figure illustrates the percentage of detector health per route to determine which detectors are measuring the performance of our state highways in District 3. Due to construction projects on I-5 (HOV lane is under construction from US 50 connector to City of Elk Grove), I-80 (RHMA Pavement Rehabilitation Project), US-50 (Multimodal Corridor Enhancement and Rehabilitation Project), and SR-99 (RHMA Overlay), about one third of detectors are out of service. Caltrans will not be

able to see much improvement of detectors health until construction is completed on the main corridors within the Sacramento Metro area.



Overall, congestion and delay have decreased due to impact of COVID 19 variants. Travel demand was reduced by 10% and delay was reduced by 6% when compared to the previous quarter. See table below for reference.



Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2022 Q1-2021 Q1		Difference 2022 Q1-2021 Q4		Rank		
		2021 Q1	2021 Q4	2022 Q1	Absolute	Percentage	Absolute	Percentage	2021 Q1	2021 Q4	2022 Q1
SR51	Sacramento	91,691	145,846	103,302	11,611	12.7%	-42,545	-29.2%	1	1	1
I80	Yolo	52,970	80,004	83,060	30,090	56.8%	3,055	3.8%	4	3	2
I5	Sacramento	28,640	59,809	73,034	44,395	155.0%	13,226	22.1%	8	4	3
SR99	Sacramento	58,958	91,497	72,675	13,717	23.3%	-18,823	-20.6%	3	2	4
US50	El Dorado	67,111	25,429	67,111	0	0.0%	41,682	163.9%	2	9	5
SR70	Yuba	3,167	29,453	53,809	50,642	1599.0%	24,357	82.7%	14	8	6
I80	Placer	48,277	50,162	41,468	-6,809	-14.1%	-8,694	-17.3%	6	5	7
SR65	Placer	33,252	34,056	32,754	-498	-1.5%	-1,302	-3.8%	7	7	8
US50	Sacramento	51,655	47,975	31,611	-20,044	-38.8%	-16,364	-34.1%	5	6	9
I80	Nevada	21,361	13,700	9,566	-11,795	-55.2%	-4,134	-30.2%	9	11	10
I80	Sacramento	11,147	21,855	6,955	-4,193	-37.6%	-14,901	-68.2%	10	10	11
SR89	Placer	4,809	2,987	5,036	226	4.7%	2,049	68.6%	12	14	12
US50	Yolo	3,443	9,362	3,438	-5	-0.1%	-5,924	-63.3%	13	13	13
I5	Yolo	753	10,093	2,699	1,946	258.4%	-7,394	-73.3%	18	12	14
SR12	Sacramento	1,917	2,808	2,005	87	4.6%	-803	-28.6%	15	15	15
SR89	El Dorado	1,045	287	1,045	0	0.0%	758	264.5%	17	17	16
SR99	Butte	1,270	203	492	-779	-61.3%	288	141.9%	16	18	17
SR20	Nevada	9	0	398	389	4270.3%	398		22		18
SR28	Placer	428	1,272	394	-34	-8.0%	-878	-69.0%	19	16	19
SR160	Sacramento	1	5	269	268	44683.3%	264	5871.1%	23	30	20
SR99	Sutter	36	53	246	210	580.4%	193	363.8%	21	22	21
SR49	Nevada	0	28	109	109		81	286.2%		24	22
SR113	Yolo	0	130	102	102		-28	-21.5%		19	23
SR20	Colusa	58	20	97	39	67.5%	77	391.4%	20	26	24
SR20	Sutter	0	9	56	56		47	501.1%		29	25
SR267	Placer	4,918	16	47	-4,871	-99.0%	31	195.6%	11	27	26
I505	Yolo	0	39	27	27		-11	-28.8%		23	27
SR113	Sutter	0	84	14	14		-70	-83.1%		20	28
SR70	Sutter	0	12	4	4	925.0%	-8	-66.4%	24	28	29
I5	Colusa	0	83	3	3		-80	-96.6%		21	30
SR162	Butte	0	2	1	1		-1	-50.0%		31	31
SR20	Yuba	0	23	0	0		-23	-100.0%			25
SR45	Colusa	0	2	0	0		-2	-100.0%			32
<b>TOTALS</b>		<b>486,916</b>	<b>627,305</b>	<b>591,827</b>	<b>104,910</b>	<b>21.5%</b>	<b>-35,478</b>	<b>-5.7%</b>			

As indicated by the table above the Total Delay for all monitored routes has decreased by 35,478 hours, a decrease of 5.7% when compared with previous quarter.

Based on the total delay by route, Business-80 aka SR-51 was the worst performing freeway in District 3 due to its bottleneck locations. Four out of ten most congested routes are in Sacramento County, which is due to its travel demand associated with Sacramento Regional high population, employment, and educational centers. As identified on pages 2 and 3 of this report, Caltrans is continuing the process of implementing HOV lanes and 24/7 ramp meter operations for Sacramento’s freeway system. HOV lane projects on SR-51, I-5, I-80, and US-50 are planned or under construction to mitigate congestion on these routes. Further congestion mitigation can be

achieved by *Work at Home* and increasing mode shift away from single occupancy vehicles to higher occupancy vehicles such as carpooling, vanpooling, and higher utilization of mass transit options. The District continues to explore the best possible ways to reduce delay in the impacted areas of District 3.