

District 10 Mobility Performance Report

2023 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

January 16, 2024
: Eric Ladio

District 10 Mobility Performance Report

2023 Fourth Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (Merced / San Joaquin / Stanislaus) and the Sierra Nevada (Alpine / Amador / Calaveras / Mariposa / Tuolumne). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) was not including these two counties in the quarterly report. However, Alpine and Calaveras Counties were added back into the MPR beginning 2023 since detection has improved and been implemented more in rural areas.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

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 MPR presents congestion information at 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 engineering experience and District input.

FINDINGS

In the fourth quarter of 2023, total delay equaled 634 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 2 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was a 14.5 percent total delay increase in 35 mph quarterly delay and 8.2 percent total delay increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 8,921 VHD at 35 mph and 28,580 VHD at 60 mph. Compared to the same quarter the year before, there was a 14 percent increase in 35 mph average weekday quarterly delay and 8.2 percent increase in 60 mph average weekday quarterly delay. The increases in delay numbers at 35 mph and at 60 mph can be attributed to the fact that good detection has increased and additional detection has been implemented in the past year. Additionally, significant commercial, industrial, and residential growth has occurred since early 2022 in the post-Covid era. It is anticipated that the 2023 delay numbers for 35 mph and 60 mph will stabilize going into the latter part of the year.

Top Ten Bottlenecks for Quarter 3

SJ	AM	I205-W	1.69	0.761	37.74	-121.54	52	2.48	78,775	9,975
SJ	PM	SR99-S	236.56	0.776	37.74	-121.12	60	2.39	38,560	10,510
SJ	PM	SR99-S	238.76	2.971	37.76	-121.15	59	1.97	23,689	9,240
STA	PM	SR99-S	227.11	R16.07	37.64	-121.01	61	1.41	17,825	8,645
SJ	PM	I5-S	470.73	25.241	37.93	-121.30	43	1.60	17,750	4,775
SJ	PM	I205-E	12.87	R11.94	37.77	-121.34	41	1.80	9,774	3,975
SJ	PM	I5-N	468.70	R23.21	37.91	-121.29	37	2.38	8,301	2,655
SJ	PM	SR99-N	231.52	R20.459	37.69	-121.06	32	1.58	8,294	2,315
SJ	PM	I205-W	11.41	R10.48	37.77	-121.37	44	1.70	7,290	3,350
SJ	PM	I205-W	13.13	R12.195	37.77	-121.35	50	1.26	7,289	4,295

The following District 10 projects are currently being constructed or are scheduled for construction effective November 2023. These current and future (planned) projects will further relieve congestion in District 10:

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911

Convert 4 lane expressway to 6 lane freeway

Approve Construction Contract Date – 05/15/2018

On Hold (No Updates) – 07/07/2023

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors

Currently in RTL

Project Completion – Estimated to be mid 2024

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors

Currently waiting to be programmed

Project Completion – Estimated to be 2030

I-205 SMART CORRIDOR PHASE 2; EA 10-1C330

Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road

Currently RTL was Achieved in June 2021

Project Completion – Estimated to be 2025

I-205 – MOUNTAIN HOUSE PARKWAY INTERCHANGE PROJECT; EA 10-1E210

Improve the I-205 – Mountain House Parkway Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PS&E

Project Completion – Estimated to be 2028

I-205 – LAMMERS ROAD / 11TH STREET INTERCHANGE PROJECT; EA 10-0H910

Construct the I-205 – Lammers Road / 11th Street Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PS&E

Project Completion – Estimated to be 2028

I-205 – CHRISMAN ROAD INTERCHANGE PROJECT; EA 10-0H880

Construct the I-205 – Chrisman Road Interchange to accommodate planned future growth in and around the eastern commercial zone of the City of Tracy.

Currently in PA&ED

Project Completion – Estimated to be 2028

I-580 – PATTERSON PASS ROAD INTERCHANGE PROJECT; EA 10-1E220

Improve the I-205 – Patterson Pass Road Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PS&E

Project Completion – Estimated to be 2028

The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes, in the cities, and in the counties that experience the most congestion in District 10. It is expected that the projects will help reduce congestion and delay as the population and demand in District 10 grows over the next 10 years.

The next section of this report summarizes the District 10 2023 Q4 Quarterly Mobility Statistics.

2023 Q4 Quarterly Mobility Statistics District 10

Data may change in coming months due to on-going reconciliation process

Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <thead> <tr> <th>Quarter</th> <th>VMT (Billions)</th> </tr> </thead> <tbody> <tr> <td>2022 Q4</td> <td>1.92</td> </tr> <tr> <td>2023 Q3</td> <td>2.04</td> </tr> <tr> <td>2023 Q4</td> <td>1.98</td> </tr> </tbody> </table>	Quarter	VMT (Billions)	2022 Q4	1.92	2023 Q3	2.04	2023 Q4	1.98	Over one year ago	Over last quarter
Quarter	VMT (Billions)										
2022 Q4	1.92										
2023 Q3	2.04										
2023 Q4	1.98										
	3.1%	-3.3%									
	↑	↓									
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <thead> <tr> <th>Quarter</th> <th>VHD (Thousands)</th> </tr> </thead> <tbody> <tr> <td>2022 Q4</td> <td>553.7</td> </tr> <tr> <td>2023 Q3</td> <td>710.5</td> </tr> <tr> <td>2023 Q4</td> <td>633.9</td> </tr> </tbody> </table>	Quarter	VHD (Thousands)	2022 Q4	553.7	2023 Q3	710.5	2023 Q4	633.9	Over one year ago	Over last quarter
Quarter	VHD (Thousands)										
2022 Q4	553.7										
2023 Q3	710.5										
2023 Q4	633.9										
	14.5%	-10.8%									
	↑	↓									
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1"> <thead> <tr> <th>Quarter</th> <th>VHD (Hours)</th> </tr> </thead> <tbody> <tr> <td>2022 Q4</td> <td>7823</td> </tr> <tr> <td>2023 Q3</td> <td>9710</td> </tr> <tr> <td>2023 Q4</td> <td>8921</td> </tr> </tbody> </table>	Quarter	VHD (Hours)	2022 Q4	7823	2023 Q3	9710	2023 Q4	8921	Over one year ago	Over last quarter
Quarter	VHD (Hours)										
2022 Q4	7823										
2023 Q3	9710										
2023 Q4	8921										
	14%	-8.1%									
	↑	↓									
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <thead> <tr> <th>Quarter</th> <th>VHD (Millions)</th> </tr> </thead> <tbody> <tr> <td>2022 Q4</td> <td>1.9</td> </tr> <tr> <td>2023 Q3</td> <td>2.3</td> </tr> <tr> <td>2023 Q4</td> <td>2</td> </tr> </tbody> </table>	Quarter	VHD (Millions)	2022 Q4	1.9	2023 Q3	2.3	2023 Q4	2	Over one year ago	Over last quarter
Quarter	VHD (Millions)										
2022 Q4	1.9										
2023 Q3	2.3										
2023 Q4	2										
	8.2%	-9.7%									
	↑	↓									
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <thead> <tr> <th>Quarter</th> <th>VHD (Thousands)</th> </tr> </thead> <tbody> <tr> <td>2022 Q4</td> <td>26</td> </tr> <tr> <td>2023 Q3</td> <td>31</td> </tr> <tr> <td>2023 Q4</td> <td>29</td> </tr> </tbody> </table>	Quarter	VHD (Thousands)	2022 Q4	26	2023 Q3	31	2023 Q4	29	Over one year ago	Over last quarter
Quarter	VHD (Thousands)										
2022 Q4	26										
2023 Q3	31										
2023 Q4	29										
	8.7%	-7.6%									
	↑	↓									

For further information regarding the content of this report, contact:
Eric Ladio at Eric.Ladio@dot.ca.gov

2023 Q3 Quarterly Mobility Statistics District 10

Data may change in coming months due to on-going reconciliation process

<p style="text-align: center;">Average Vehicle Hours of Delay by Day of Week at 60 mph</p>		<p style="text-align: center;">Largest Magnitude Decrease over one year ago</p> <p style="text-align: center;">-</p>	<p style="text-align: center;">Largest Magnitude Decrease over last quarter</p> <p style="text-align: center;">Monday -19.6% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays</p>		<p style="text-align: center;">Largest Magnitude Increase over one year ago</p> <p style="text-align: center;">Wednesday 14.9% </p>	<p style="text-align: center;">Largest Magnitude Increase over last quarter</p> <p style="text-align: center;">Wednesday 3.4% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays</p>		<p style="text-align: center;">Largest Magnitude Weekday Decrease over one year ago</p> <p style="text-align: center;">5 AM -7.5% </p>	<p style="text-align: center;">Largest Magnitude Weekday Decrease over last quarter</p> <p style="text-align: center;">7 AM -25.4% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</p>		<p style="text-align: center;">Largest Magnitude Weekday Increase over one year ago</p> <p style="text-align: center;">5 PM 29.7% </p>	<p style="text-align: center;">Largest Magnitude Weekday Increase over last quarter</p> <p style="text-align: center;">5 PM 28.9% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays</p>		<p style="text-align: center;">Largest Magnitude Saturday Decrease over one year ago</p> <p style="text-align: center;">6 PM -13.6% </p>	<p style="text-align: center;">Largest Magnitude Saturday Decrease over last quarter</p> <p style="text-align: center;">7 PM -55.1% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</p>		<p style="text-align: center;">Largest Magnitude Saturday Increase over one year ago</p> <p style="text-align: center;">1 PM 94.3% </p>	<p style="text-align: center;">Largest Magnitude Saturday Increase over last quarter</p> <p style="text-align: center;">5 PM 114.8% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</p>		<p style="text-align: center;">Largest Magnitude Sun./Holiday Decrease over one year ago</p> <p style="text-align: center;">2 PM -35.2% </p>	<p style="text-align: center;">Largest Magnitude Sun./Holiday Decrease over last quarter</p> <p style="text-align: center;">8 PM -51.9% </p>
<p style="text-align: center;">Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</p>		<p style="text-align: center;">Largest Magnitude Sun./Holiday Increase over one year ago</p> <p style="text-align: center;">9 PM 455.5% </p>	<p style="text-align: center;">Largest Magnitude Sun./Holiday Increase over last quarter</p> <p style="text-align: center;">5 PM 41.5% </p>

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2023 Q3 Quarterly Mobility Statistics District 10

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<p>Total Vehicle Hours of Delay (VHD) by County at 35 mph</p>		<p style="text-align: center;">Largest Magnitude Decrease over one year ago</p>	<p style="text-align: center;">Largest Magnitude Decrease over last quarter</p>
		<p>STA -10.1% </p>	<p>TUO -97.2% </p>
		<p style="text-align: center;">Largest Magnitude Increase over one year ago</p>	<p style="text-align: center;">Largest Magnitude Increase over last quarter</p>
		<p>SJ 19% </p>	<p>MER 7.1% </p>
<p>Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph</p>		<p style="text-align: center;">Largest Magnitude Decrease over one year ago</p>	<p style="text-align: center;">Largest Magnitude Decrease over last quarter</p>
		<p>–</p>	<p>AM Peak -10.5% </p>
		<p style="text-align: center;">Largest Magnitude Increase over one year ago</p>	<p style="text-align: center;">Largest Magnitude Increase over last quarter</p>
		<p>PM Peak 10.2% </p>	<p>PM Peak 0.3% </p>
<p>Average Number of Good and Bad Detectors</p>		<p style="text-align: center;">Change in Good over one year ago</p>	<p style="text-align: center;">Change in Good over last quarter</p>
		<p>10% </p>	<p>4% </p>
		<p style="text-align: center;">Change in Bad over one year ago</p>	<p style="text-align: center;">Change in Bad over last quarter</p>
		<p>-6% </p>	<p>-5% </p>

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**2023 Q3 Quarterly Mobility Statistics
District 10**

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Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2023 Q4-2022 Q4		Difference 2023 Q4-2023 Q3		Rank		
		2022 Q4	2023 Q3	2023 Q4	Absolute	Percentage	Absolute	Percentage	2022 Q4	2023 Q3	2023 Q4
I205	SJ	138,131	195,179	143,386	5,255	3.8%	-51,793	-26.5%	1	1	1
SR09	SJ	113,248	121,342	120,720	7,472	6.6%	-622	-0.5%	2	2	2
I5	SJ	76,792	91,682	110,057	33,264	43.3%	18,374	20.0%	4	4	3
SR09	STA	109,214	104,349	99,127	-10,087	-9.2%	-5,222	-5.0%	3	3	4
SR4	SJ	4,079	42,169	35,911	31,832	780.4%	-6,257	-14.8%	12	5	5
SR09	MER	5,418	23,386	29,506	24,088	444.6%	6,120	26.2%	11	8	6
SR132	STA	22,851	26,026	27,766	4,915	21.5%	1,741	6.7%	6	7	7
SR120	SJ	32,722	19,762	23,868	-8,855	-27.1%	4,106	20.8%	5	9	8
I580	SJ	10,712	14,022	12,671	1,959	18.3%	-1,351	-9.6%	8	11	9
SR132	SJ	3,512	3,600	7,893	4,382	124.8%	4,294	119.3%	13	15	10
SR152	MER	9,562	6,499	6,355	-3,208	-33.5%	-145	-2.2%	9	13	11
I5	STA	15,827	16,235	4,972	-10,855	-68.6%	-11,263	-69.4%	7	10	12
SR12	SJ	5,516	4,943	4,506	-1,010	-18.3%	-437	-8.8%	10	14	13
I5	MER	1,670	2,037	3,139	1,469	88.0%	1,102	54.1%	16	16	14
SR165	MER	1,044	6,524	2,179	1,135	108.7%	-4,345	-66.6%	18	12	16
SR4	CAL	0	0	1,497	1,497		1,497				17
SR108	TUO	2,165	36,463	689	-1,476	-68.2%	-35,775	-98.1%	14	6	18
SR49	MPA	105	227	534	429	409.9%	307	134.9%	20	21	19
SR120	TUO	327	561	363	36	11.1%	-198	-35.3%	19	19	20
SR4	STA	0	53	176	176		123	232.2%		23	21
SR16	AMA	1,421	649	141	-1,280	-90.1%	-509	-78.4%	17	18	22
SR12	CAL	11	503	33	21	186.8%	-470	-93.5%	24	20	23
SR88	ALP	43	107	27	-16	-36.1%	-79	-74.3%	22	22	24
SR104	AMA	19	15	10	-10	-49.5%	-6	-36.4%	23	25	25
SR124	AMA	3	1	9	6	228.6%	9	1740.0%	27	29	26
SR88	SJ	3	6	6	3	103.7%	0	-5.2%	28	27	27
SR140	MER	1	0	2	1	220.0%	1	433.3%	29	30	28
SR49	TUO	89	47	0	-89	-99.9%	-47	-99.8%	21	24	30
SR140	MPA	0	4	0	0		-4	-100.0%		28	
SR88	AMA	11	0	0	-11	-100.0%	0	-100.0%	25	31	
TOTALS		556,290	718,337	637,999	81,709	14.7%	-80,338	-11.2%			

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