

District 10 Mobility Performance Report

2020 First Quarter

DEPARTMENT OF TRANSPORTATION

May 7, 2020
Jaime Q Quesada

District 10 Mobility Performance Report

2020 First Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly.

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 first quarter, total delay equaled 491 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 1.7 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was an 11.9 percent total delay decrease in 35 mph quarterly delay and 4.9

percent total delay increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 7,036 VHD at 35 mph and 24,711 VHD at 60 mph. Compared to the same quarter the year before, there was an 9.2 percent decrease in 35 mph average weekday quarterly delay and 3.9 percent increase in 60 mph average weekday quarterly delay. The decreased delay numbers at 35 mph can mainly be attributed the fact that beginning mid-March the State began going into lock-down mode caused by COVID-19. The increased delay numbers at 60 mph can be attributed to a 10 percent increase in the number of good detectors and a 27% percent decrease in the number of bad detectors compared to the first quarter of 2019, one year ago.

Top Ten Bottlenecks for Quarter 1

County	Fwy	Location	Type	Shift	Abs PM	CA PM	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
SJ	I205-W	W-O Mtn House Pkwy OC	ML	AM	1.691	0.761	51	2.88	91,461	10,420
SJ	I205-W	E of Hansen Rd	ML	AM	3.310	2.380	46	4.90	80,134	6,385
STA	SR132-E	E-O Kasson Rd	ML	PM	9.420	1.556	56	5.81	27,778	7,010
SJ	SR4-E	W-O SR 99	ML	PM	66.428	R18.900	44	3.14	21,962	4,205
SJ	SR99-S	N-O Off to Jack Tone Rd	ML	PM	238.756	2.971	47	1.45	15,824	6,530
SJ	I205-E	MacArthur Dr	ML	PM	9.440	R8.510	55	1.47	14,219	7,300
SJ	SR99-S	Milgeo Ave	ML	PM	237.495	1.710	26	1.80	11,703	4,495
STA	SR99-N	Whitmore Ave OC	ML	AM	222.968	R11.908	41	2.12	10,131	2,815
SJ	SR99-S	S-O On from Jack Tone Rd	ML	PM	238.179	2.394	52	0.30	4,799	9,145
SJ	SR99-S	S-O Austin Rd OC	ML	PM	240.425	4.64	40	0.79	9,254	6,620

The following District 10 projects are currently being constructed or are scheduled for construction effective January 2020. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121

Lane widening from 2 to 3 lanes

Approve Construction Contract Date – 08/01/2021

End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122

Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 01/19/2019
End Project – 10/01/2021

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
End Project – 10/01/2020

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 PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2020

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PS&E
End Project – Estimated to be 2023

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

Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road
Currently in PS&E
End Project – Estimated to be 2022

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
End Project – Estimated to be 2025

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
End Project – Estimated to be 2025

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
End Project – Estimated to be 2025

STANISLAUS COUNTY

STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300

Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Project Complete

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 increase the Vehicle Miles Traveled while reducing 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 2020 Q1 Quarterly Mobility Statistics.

2020 Q1 Quarterly Mobility Statistics

District 10

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

Measure	Graph	Percentage Change	
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p>	Over one year ago	Over last quarter
		-1.4%	-8.1%
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p>	Over one year ago	Over last quarter
		-11.9%	-32.9%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p>	Over one year ago	Over last quarter
		-9.2%	-32.3%
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p>	Over one year ago	Over last quarter
		3.9%	-16.9%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p>	Over one year ago	Over last quarter
		3.9%	-16.7%

2020 Q1 Quarterly Mobility Statistics

District 10

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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
		Tuesday -19.8% ↓	Thursday -24.6% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Wednesday 26.2% ↑	-
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
		8 AM -32.6% ↓	5 PM -45.9% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		5 AM 22.4% ↑	5 AM 21.7% ↑
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 -67.3% ↓	4 PM -63.8% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		10 PM 10.8% ↑	10 AM 16.1% ↑
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
		8 AM -53% ↓	2 PM -65% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		5 PM 21.1% ↑	5 PM 9.9% ↑

For further information regarding the content of this report, contact: Jaime Q. Quesada at jquesada@dot.ca.gov

5/27/2020

2020 Q1 Quarterly Mobility Statistics

District 10

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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
		Stanislaus -41.7% ↓	Stanislaus -56% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		San Joaquin 2.7% ↑	Mariposa 399.8% ↑
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
		AM Peak -17.5% ↓	PM Peak -36.9% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
			Off-Peak Night 0.6% ↑
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		10% ↑	3%
		Change in Bad over one year ago	Change in Bad over last quarter
		-27% ↑	3% ↓

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Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2020 Q1-2019 Q1		Difference 2020 Q1-2019 Q4		Rank		
		2019 Q1	2019 Q4	2020 Q1	Absolute	Percentage	Absolute	Percentage	2019 Q1	2019 Q4	2020 Q1
I205	San Joaquin	326,954	294,577	254,036	-72,918	-22.3%	-40,541	-13.8%	1	1	1
I580	San Joaquin	84,781	108,957	122,783	38,001	44.8%	13,826	12.7%	3	3	2
SR99	Stanislaus	144,129	191,063	73,703	-70,426	-48.9%	-117,360	-61.4%	2	2	3
SR99	San Joaquin	46,922	81,795	58,588	11,666	24.9%	-23,208	-28.4%	4	5	4
I5	San Joaquin	38,052	99,537	53,632	15,580	40.9%	-45,905	-46.1%	5	4	5
SR4	San Joaquin	20,354	30,513	25,463	5,109	25.1%	-5,050	-16.6%	6	6	6
SR132	Stanislaus	17,455	24,585	21,372	3,917	22.4%	-3,213	-13.1%	8	8	7
SR120	San Joaquin	20,191	25,581	15,140	-5,051	-25.0%	-10,442	-40.8%	7	7	8
SR99	Merced	14,144	17,464	12,255	-1,890	-13.4%	-5,209	-29.8%	9	9	9
SR132	San Joaquin	9,833	6,638	4,254	-5,579	-56.7%	-2,384	-35.9%	11	11	10
I5	Stanislaus	10,859	12,872	4,021	-6,838	-63.0%	-8,851	-68.8%	10	10	11
SR12	San Joaquin	6,364	5,800	3,916	-2,448	-38.5%	-1,884	-32.5%	12	12	12
SR219	Stanislaus	2,887	4,017	3,160	273	9.5%	-857	-21.3%	13	13	13
SR49	Mariposa	471	467	2,332	1,861	394.7%	1,865	399.8%	18	17	14
SR108	Tuolumne	1,645	3,568	2,207	562	34.1%	-1,360	-38.1%	16	14	15
I5	Merced	234	782	1,155	921	394.1%	372	47.6%	19	15	16
SR165	Merced	550	696	201	-349	-63.4%	-495	-71.1%	17	16	17
SR120	Tuolumne	2,462	0	72	-2,390	-97.1%	72		14		18
SR88	Amador	199	1	47	-152	-76.6%	46	5725.0%	20	23	19
SR152	Merced	1,787	35	41	-1,746	-97.7%	6	16.3%	15	20	20
SR16	Amador	14	201	26	12	85.6%	-175	-87.2%	21	18	21
SR49	Tuolumne	1	75	25	24	3983.3%	-50	-67.2%	24	19	22
SR124	Amador	4	15	6	2	50.0%	-8	-56.8%	23	21	23
SR104	Amador	5	3	3	-2	-37.8%	0	-3.4%	22	22	24
SR120	Stanislaus	0	0	0	0		0				
TOTALS		750,297	909,241	658,436	-91,861	-12.2%	-250,805	-27.6%			