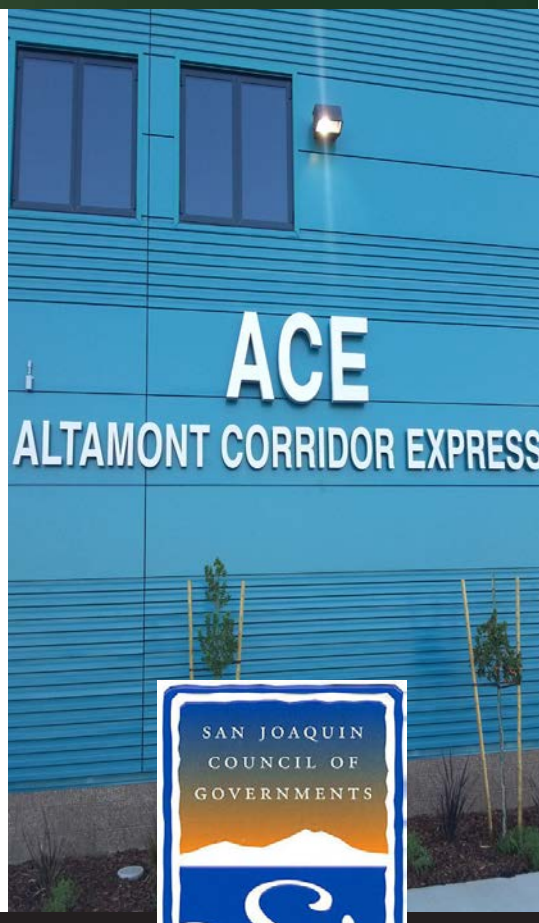
San Joaquin County

Regional Congestion Management Program

2020 MONITORING AND CONFORMANCE REPORT

June 2020



SAN JOAQUIN COUNCIL OF GOVERNMENTS

2020 Monitoring and Conformance Report

San Joaquin Council of Governments

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EXECUTIVE SUMMARY

As the designated Congestion Management Agency (CMA) for San Joaquin County, the San Joaquin Council of Governments (SJCOG) is responsible for updating County's Regional Congestion Management Program (RCMP) and monitoring its implementation. Pursuant to Section 65089.3 of the California Government Code, SJCOG must determine if each City and the County is conforming to the following RCMP requirements:

- Consistency with the RCMP LOS standards;
- Implementation of the RCMP Land Use Analysis Program to mitigate impacts to RCMP designated roadways and intersections from local land use decisions;
- Progress towards implementing the RCMP Regional Deficiency Plan action list as identified in SJCOG's Regional TDM Plan (August, 2010).

In addition to the above state requirements governing congestion management compliance, this RCMP Monitoring and Conformance Assessment Report also serves to track and report the following:

- Monitoring of SJCOG's RCMP performance measures;
- Compliance with the SJCOG's Measure K renewal requirements to implement a state compliant Congestion Management Program;
- Compliance with the federal FAST Act required congestion management process[1].

This report provides a snapshot of the "state of congestion" on the County's designated RCMP roadway network including segments, intersections, multi-modal corridors, bicycle network and transit network. To inform this assessment, SJCOG performed a comprehensive data collection effort in 2018. Where congestion problems are identified, this monitoring process establishes the need for development of RCMP deficiency plans to remedy such locations. However, State statutes require that the CMA first examine if vehicle trips outside the control of local land use decisions are the cause of the deficiency[2]. The primary RCMP trip exemption types applicable to San Joaquin County include: interregional trips (trips that do not originate in San Joaquin County); and, trip diversion associated with construction related activity. Two additional factors that obviate the need for development of deficiency plans include: improvements associated with the deficient facility are already programmed in SJCOG's Federal Transportation Improvement Program; and/or, the deficient facility was identified as RCMP exempt per

[1] The federal Congestion Management Process requires an increased multimodal travel demand management (TDM) and system management emphasis at both the local and regional level to comply. Noncompliance with any of these directives can have local and regional funding implications.

[2] State statutes requires local agencies to prepare RCMP Deficiency Plans specific to the deficient facilities that identify capital improvements that will either directly remedy the capacity deficiency or provide multi-modal system-wide benefits to circulation and air quality. Unlike the direct fix approach, a system-wide deficiency plan CIP list must receive concurrence from the San Joaquin Valley Unified Air Pollution Control District before it can be approved by the local agency and SJCOG (Section 65089.4(c)(3).

state statute in the 1992 RCMP (i.e., program initiation) because they were already operating at LOS E or F. Pre-existing deficient segments at the time of program initiation are deemed "grandfathered."

Table 1: "Grandfathered" Segments

LOS Standard of "E"		
County	SR-26	SR-99 to Cardinal Ave.
County	SR-88	Brandt Rd. to Sierra Drive (through Lockeford)
County	SR-99	Cherokee Rd. to Wilson Way
County	I-205	MacArthur Drive to I-5
Stockton	March Lane	West Lane to Pacific Avenue
Stockton	SR-4	SR-99 to .66 mi. east of Wilson Way
Stockton	SR-4	.66 mi. east of Wilson Way to Navy Drive
LOS Standard of "F"		
County	I-205	Alameda Co. line to Tracy Blvd.
Escalon	SR-120	Escalon-Bellota Rd. to east of Mitchell Ave.
Manteca	SR-120	Yosemite Ave. undercrossing to SR-99

Source: SJCOG 2007 RCMP Policy Document

If SJCOG determines that a local jurisdiction is not conforming to the requirements of the RCMP, the agency will have 90 days to correct any issues of non-conformance. If the local agency fails to resolve these issues, SJCOG is required to notify the State Controller, who shall then withhold all apportionments of Section 2105 gas tax subvention funds to the nonconforming jurisdiction until the issue of nonconformance is resolved. If the local jurisdiction has not resolved the issue of nonconformance after 12 months, the State Controller must allocate the withheld gas tax apportionment to SJCOG who is then required to spend the apportionment on regionally significant projects identified in the RCMP's Capital Improvement Program or improvements identified in adopted deficiency plans (i.e., *SJCOG Regional Deficiency Plan*, August 2010). In addition, the Metropolitan Planning Organization (SJCOG) shall not program federal Surface Transportation Program (STP) or Congestion Mitigation and Air Quality (CMAQ) funds for any project in the nonconforming jurisdiction unless it is considered a regionally significant project or is identified in an adopted deficiency plan.

SUMMARY OF FINDINGS

The 2020 conformance findings indicate that all jurisdictions in San Joaquin County are currently conforming to the RCMP. SJCOG is deferring the need for the San Joaquin County to prepare RCMP Deficiency Plans for one deficient RCMP local arterial segment at this time to allow another monitoring round to confirm these findings. As monitoring continues, greater documentation of local agency compliance with the RCMP LUAP is anticipated. A summary of the monitoring results is provided below.

RCMP Roadway Network Intersections

RCMP Intersections were established by SJCOG with input from its member agencies, focusing primarily on state highway ramp termini and state/local arterial intersections of regional importance. A total of 108 intersections are currently designated as RCMP intersections. A total of 93 intersections were analyzed in 2020. Based on 2018 AM/PM intersection turn movement counts, the Highway Capacity Manual operational method was applied to determine intersection operations. Results indicate that all intersections operate at acceptable LOS during both weekday a.m. and p.m. peak hours, with the exception of 13 intersections that were determined to be operating at LOS E or F. These 13 intersections were then subject to an Exemption Analysis to determine if the intersection could be exempted from the observed LOS deficiency due to interregional trips, optimized signal timing, construction impacts, programmed improvements, and/or "grandfathered" segments. These exemptions are described further in Section 3.4 of this report. A summary of these RCMP intersection results are provided in **Table 2**.

Table 2. Intersection Deficiency Assessment

			No Exemption		With Interregional Exemption		Interregional + Optimized Signal Timing		
ID	Intersection	Control	Delay	LOS	Delay	LOS	Delay	LOS	Exemption Type or Deficiency
AM Peak Period									
8	Matthews Road &I-5 NB	TWSC	90.9	F	21.2	C	21.2	C	Interregional Trip
9	99 Frontage (s/o Eight Mile Road) & Hwy 99 NB Ramps	TWSC	39.3	E	19.1	C	19.1	C	Interregional Trip
22	McHenry Avenue & E River Road	AWSC	319.0	F	18.8	C	18.8	C	Interregional Trip
33	Yosemite Avenue & French Camp Road	TWSC	48.5	E	13.0	B	13.0	B	Interregional Trip
35	Jack Tone Road & Mariposa Avenue	AWSC	43.9	E	10.1	B	10.1	B	Interregional Trip
41	Lathrop Road & I-5 NB Ramps	Signal	126.7	F	78.1	E	67.0	E	Programmed Improvement
90	Thornton Rd & Lower Sacramento Road	Signal	65.5	E	62.8	E	62.8	E	Programmed Improvement
100	Corral Hollow Road & Linne Rd	TWSC	147.3	F	16.9	C	16.9	C	Interregional Trip
107	Mountain House Parkway & I-580 WB Ramps	TWSC	53.8	F	6.4	A	6.4	A	Interregional Trip
PM Peak Period									
8	Matthews Road & I-5 NB	TWSC	186.1	F	26.2	D	26.2	D	Interregional Trip
22	McHenry Avenue & E River Road	ASWC	299.7	F	88.8	F	88.8	F	Programmed Improvement
29	Vernalis Road & SR-132/ Vernalis Road	TWSC	126.5	F	11.1	B	11.1	B	Interregional Trip
33	Yosemite Avenue & French Camp Road	TWSC	347.8	F	21.7	C	21.7	C	Interregional Trip
53	Hutchins Street &Harney Lane	Signal	60.7	E	53.8	D	53.8	D	Interregional Trip
62	Jack Tone Rd & River Rd	TWSC	73.1	F	22.0	C	22.0	C	Interregional Trip
104	Austin Road & French Camp Road	AWSC	104.0	F	13.2	B	13.2	B	Interregional Trip

>Cap=Over Capacity. Highway Capacity Manual methods cannot calculate delay with volumes this high.

Basic Freeway Segments

Based on the most recent published volumes by Caltrans (2017), portions of I-5, SR-99, SR-120, SR-4 and I-205 were determined to be operating at LOS E or F during the a.m. or p.m. peak hours. After accounting for locally generated trips (interregional trip exemption), only one segment of SR-99 would operate at LOS E or worse. Staff deferred the request for a RCMP Deficiency Plan from SJCOG, "the responsible party," at this time.A summary of these results are provided in **Table 3**.

Table 3. Freeway Deficiency Analysis

			No Exemption				With Interregional Exemption		
	From	To	AM LOS	PM LOS	AM II/IX* Share	PM II/IX* Share	AM LOS	PM LOS	Exemption Type
Northbound / Eastbound Segments									
5	Jct. Rte. 205 West	Jct. Rte. 120 East	D	F	42%	35%	B	B	Interregional Trip
	Lathrop Road	French Camp Overcrossing	C	E	41%	43%	A	B	Interregional Trip
	French Camp Overcrossing	Mathews Road	D	E	43%	43%	B	B	Interregional Trip
	Mathews Road	French Camp Turnpike	D	E	43%	46%	B	B	Interregional Trip
	French Camp Turnpike	Eighth St	D	F	52%	56%	B	C	Interregional Trip
	Eighth St.	Jct. Rte. 4	D	F	52%	57%	B	C	Interregional Trip
	Country Club Boulevard	Plymouth Rd/Ryde Ave	C	F	48%	63%	A	C	Interregional Trip
	March Lane	Benjamin Holt Drive	B	E	51%	63%	A	C	Interregional Trip
	Benjamin Holt Drive	Hammer Lane	D	F	40%	88%	A	D	Interregional Trip
99	Stanislaus County Line	Main Street	F	C	13%	10%	A	A	Interregional Trip
	Main Street	Milgeo Avenue	F	C	18%	15%	A	A	Interregional Trip
	Milgeo Avenue	Jacktone Road	F	C	21%	21%	A	A	Interregional Trip
	Jacktone Road	South Jct. Rte. 120	E	C	16%	26%	A	A	Interregional Trip
	South Jct. Rte. 120	N. Jct. Rte. 120	E	B	28%	30%	A	A	Interregional Trip
	Mariposa Rd	Jct. Rte. 4 East	E	C	44%	57%	B	A	Interregional Trip
	Jct. Rte. 4 East	Jct. Rte. 26 West	F	C	41%	57%	F	B	Deficiency
	Jct. Rte. 26 West	Jct. Rte. 4 West	F	C	44%	60%	C	B	Interregional Trip
	Jct. Rte. 88 Northeast	Cherokee Road	E	E	42%	64%	B	C	Interregional Trip
	Cherokee Road	Wilson Way	E	E	43%	66%	B	C	Interregional Trip
	Wilson Way	Hammer Lane	D	E	48%	69%	B	C	Interregional Trip
	South Lodi Interchange	Lodi, Jct. Rte. 12 West	D	E	38%	58%	B	C	Interregional Trip
120	Jct. Rte. 5	Yosemite Ave Undercrossing	D	E	98%	89%	C	D	Interregional Trip
	Yosemite Ave Undercrossing	Airport Way	C	E	65%	28%	B	A	Interregional Trip
205	Alameda County Line	Patterson Pass Road	C	F	15%	1%	A	A	Interregional Trip
	Patterson Pass Road	Old Route 50	B	F	15%	1%	A	A	Interregional Trip
	Old Route 50	Mac Arthur Drive	C	E	30%	10%	A	A	Interregional Trip
	Mac Arthur Drive	Jct. Rte. 5	A	F	41%	20%	A	A	Interregional Trip

			No Exemption				With Interregional Exemption		
	From	To	AM LOS	PM LOS	AM II/IX* Share	PM II/IX* Share	AM LOS	PM LOS	Exemption Type
Southbound / Westbound Segments									
5	Jct. Rte. 205 West	Jct. Rte. 120 East	F	D	36%	73%	B	C	Interregional Trip
	French Camp Overcrossing	Mathews Road	D	E	32%	71%	A	C	Interregional Trip
	Mathews Road	French Camp Turnpike	D	E	33%	71%	A	C	Interregional Trip
	French Camp Turnpike	Eighth St	D	E	39%	68%	B	C	Interregional Trip
	Eighth Street	Jct. Rte. 4	D	E	40%	71%	B	C	Interregional Trip
99	Stanislaus County Line	Main Street	B	F	62%	71%	A	D	Interregional Trip
	Main Street	Milgeo Avenue	C	F	61%	68%	B	D	Interregional Trip
	Milgeo Avenue	Jack Tone Road	C	F	61%	68%	B	D	Interregional Trip
	Jack Tone Road	South Jct. Rte. 120	B	F	64%	68%	A	D	Interregional Trip
	Jct. Rte. 26 West	Jct. Rte. 4 West	C	E	44%	65%	A	C	Interregional Trip
	Jct. Rte. 26 East	Jct. Rte. 88 Northeast	C	E	54%	71%	B	D	Interregional Trip
	Jct. Rte. 88 Northeast	Cherokee Road	D	E	57%	66%	C	C	Interregional Trip
	Wilson Way	Hammer Lane	E	D	54%	66%	C	C	Interregional Trip
	South Lodi Interchange	Lodi, Jct. Rte. 12 West	F	D	38%	44%	B	B	Interregional Trip
	Lodi, Turner Road	Woodbridge Road	E	D	35%	38%	B	A	Interregional Trip
205	Alameda County Line	Patterson Pass Road	F	B	30%	62%	B	A	Interregional Trip
	Patterson Pass Road	Old Route 50	F	B	28%	72%	B	A	Interregional Trip
	Old Route 50	Mac Arthur Drive	F	B	29%	71%	B	B	Interregional Trip
	Mac Arthur Drive	Jct. Rte. 5	F	D	34%	75%	B	C	Interregional Trip

*II stands for Internal to Internal, or trips that both originate and end within San Joaquin County, while IX stands for Internal to External, or trips that originate in San Joaquin County, but end elsewhere.

Merge / Diverge Analysis

A merge /diverge analysis was introduced to this report as an informational item. At the November 2016 TAC Meeting, City of Manteca expressed a concern that the 2016 RCMP Monitoring Report did not show SR-120 segment between Airport Way and SR-99 deficient before exemptions for interregional trips. This additional layer of analysis was added as a result.

Merge / diverge analysis assesses the average speed, capacity (passenger cars per mile per lane), and LOS in select freeway interchanges during AM and PM peak commute periods. Segments analyzed included SR-99 near middle to northern San Joaquin County, I-5 near City of Lathrop and Stockton, and all of SR-120. It is important to note that the merge/diverge analysis could not performed at the following interchanges due to a lack of current Caltrans and turning movement data.

- I-5 & Pershing Avenue
- I-5 & Fremont Street
- SR-99 & Armstrong Road
- SR-99 & Harney Lane
- SR-120 & Guthmiller Rd
- SR-120 & Main Street

The results found 13 merge/diverge locations rated LOS E or F, 5 during AM peak commute period and 8 during PM peak commute period. The majority of locations with unfavorable conditions (i.e. LOS E or F) in the merge/diverge analysis lied along segments rated LOS D or better in the standard RCMP LOS analysis. For example, the eastbound merge at SR-120 and Airport Way was rated LOS F while SR-120 between Airport Way and Main Street received a LOS D rating during PM peak period. Eastbound merge at SR-120 and Union Road also received LOS F rating while the same above segment receiving LOS D rating during PM peak period.

As an informational analysis, LOS ratings of E or F in the merge/diverge analysis are not classified as RCMP deficiencies and do not trigger the need for a Deficiency Plan. However, SJCOG and member agencies may still program state, federal, and local funds to remedy the congestion in the area.

Table 4: Deficient Merge/Diverge Basic Freeway Segments

Freeway	Intersection	Direction	Ramp Type	Freeway Section Type	LOS	Peak Period
5	Louise Avenue	NB	On	Merge	F	PM
	Lathrop Road	NB	On	Merge	F	PM
		SB	On	Merge	F	PM
	Monte Diablo Avenue	NB	On	Weave	F	PM
99	Harney Lane	NB	On	Merge	F	PM
		SB	Off	Diverge	F	AM
	Cherokee Lane	SB	On	Merge	F	PM
		SB	ON	Merge	E	AM
	Turner Road	NB	On	Weave	E	AM
	Mokelumne River	NB	Off	Weave	E	AM
	Woodbridge Road	SB	On	Merge	E	AM
120	Airport Way	EB	On	Merge	F	PM
	Union Avenue	EB	On	Merge	F	PM

Multi-Lane Highway Segments

State Route 132 (SR 132) from Interstate 580 (I-580) to I-5 is the only multi-lane highway segment evaluated for RCMP monitoring purposes. Based on a traffic operational analysis, the multi-lane highway segments of SR 132 currently operate at LOS A during both a.m. and p.m. peak hours.

Two-Lane Highway Segments

Based on 2017 published volumes by Caltrans, portions of SR-4, SR-12, SR-26, SR-88, SR-120 and SR-132 were determined to be operating at LOS E or F during the a.m. or p.m. peak hours. After accounting for locally generated trips (interregional trip exemption), all two-lane highway segments perform at LOS D or better. A summary of these results is provided in **Table 5**.

Table 5. Two-lane Segment Deficiency Analysis

			No Exemption				With Exemption		
	From	To	AM LOS	PM LOS	AM II/IX Share	PM II/IX Share	AM LOS	PM LOS	Exemption Type
4	Contra Costa/San Joaquin Co Line	Tracy Boulevard	E	E	25%	38%	C	C	Interregional Trip
	Tracy Boulevard	Inland Drive	E	D	30%	43%	C	C	Interregional Trip
	Inland Drive	Maybeck Road	E	E	31%	43%	C	C	Interregional Trip
	Maybeck Road	Roberts Island Road	E	E	28%	41%	C	C	Interregional Trip
	Roberts Island Road	Fresno Avenue	E	E	33%	46%	D	D	Interregional Trip
12	Sacramento County Line	Glasscock/Tower Parkway	E	E	29%	33%	C	C	Interregional Trip
	Glasscock/Tower Parkway	Guard Road	E	E	38%	41%	C	C	Interregional Trip
	Guard Road	Jct. Rte. 5	E	E	40%	43%	D	D	Interregional Trip
	Jct. I-5	Thornton Road	E	E	53%	58%	D	D	Interregional Trip
	Thornton Road	Lower Sacramento Road	E	E	47%	57%	D	D	Interregional Trip

			No Exemption				With Exemption		
	From	To	AM LOS	PM LOS	AM II/IX Share	PM II/IX Share	AM LOS	PM LOS	Exemption Type
26	Cardinal Avenue	Alpine Road	E	D	60%	78%	D	D	Interregional Trip
88	Wilcox Road	White Lane	E	E	49%	78%	D	D	Interregional Trip
	White Lane	Fairchild Lane	D	E	49%	79%	D	D	Interregional Trip
	Jct. Rte. 12 W	Jack Tone Road	E	E	42%	70%	D	D	Interregional Trip
	Disch Road	Mackville Road	E	E	19%	50%	C	C	Interregional Trip
120	Jack Tone Road	French Camp Road	E	E	42%	28%	C	C	Interregional Trip
	French Camp Road	Main/Kern Street	D	E	12%	38%	B	B	Interregional Trip
132	Jct. Rte. 5	Jct. Rte. 33	E	E	27%	18%	C	C	Interregional Trip
	Jct. Rte. 33	Stanislaus County Line	E	E	35%	17%	C	C	Interregional Trip

Arterial Street Segments

Based on a traffic operational analysis, portions of seven arterial street segments currently operate at LOS E or F. These include: Eight Mile Road; SR-4/Farmington Road; Byron Road; SR-12/Kettleman Lane, Airport Way, SR-120/Yosemite Avenue; SR-120; and Arch Airport Road. After accounting for locally generated trips (interregional trip exemption), five segments operate at LOS D or better and five segments operate at LOS F. Of the segments with LOS F rating, four segments were programmed in SJCOG's Regional Transportation Plan / Sustainable Communities Strategy. One deficient segment was not programmed; however, staff will not request a RCMP Deficiency Plan from San Joaquin County, "the responsible party," at this time. This segment was not found deficient in 2016 Monitoring Report. A summary of these results is provided in **Table 6**.

Table 6. Local Arterial Deficiency Analysis

Roadway	From	To	Jurisdiction	No Exemption LOS	AM II/IX Share	PM II/IX Share	AVG II/IX Share	LOS	Exemption Type
Eight Mile Road	Lower Sacramento Road	Hwy. 99	County	F	94%	89%	92%	F	**Programmed**
SR-4/Farmington Road	S. Jct. Rte. 99	Walker Lane	County	E	29%	82%	55%	D	**Interregional Trip**
Byron Road	Alameda County	Lammers Road	County/ Tracy	F	94%	91%	92%	F	**RCMP Deficiency**
SR-120	Main Street of Escalon	David Avenue of Escalon	Escalon	E	13%	36%	24%	C	**Interregional Trip**
SR-12/Kettlelman Lane	South Hutchins Street	Hwy. 99	Lodi	E	77%	85%	81%	D	**Interregional Trip**

Roadway	From	To	Jurisdiction	No Exemption LOS	AM II/IX Share	PM II/IX Share	AVG II/IX Share	LOS	Exemption Type
Airport Way	Lathrop Road	SR-120	Manteca	F	84%	93%	89%	F	**Programmed**
SR-120 /Yosemite Avenue	Fremont Street	Hwy. 99	Manteca	E	50%	79%	64%	D	**Interregional Trip**
Arch Airport Road	Highway 99	Airport Way	Stockton	F	88%	93%	90%	F	**Programmed**
Eight Mile Road	Trinity Parkway	I-5	Stockton	F	98%	95%	97%	D	**Interregional Trip**
Eight Mile Road	I-5	Thornton Road	Stockton	F	88%	82%	85%	F	**Programmed**

Jurisdiction: Reflects location – not owner/operator (e.g., SR-12/88 is owned/operated by Caltrans but traverses through the County's jurisdiction)

RCMP Regional Deficiency Plan

As applicable, local agency conformance with the following RCMP Deficiency Plan requirements is also tracked:

- Complying with the RCMP Monitoring Program traffic count sharing responsibilities;
- Local adoption and SJCOG approval of RCMP Deficiency Plans within 12 months of the RCMP deficiency finding by SJCOG (as applicable); and,
- Progress made in the implementation of previously adopted Deficiency Plan CIP improvement projects.

The only RCMP Deficiency Plan adopted in San Joaquin County was the RCMP Regional Deficiency Plan (August, 2010) prepared by SJCOG in coordination with all its member agencies. This Regional Deficiency Plan identified I-5 between French Camp to Charter Way as deficient. The following CIP projects were identified in the SJCOG Regional Deficiency Plan:

Short-term Improvements:

Park-and-Ride Lot Implementation:

- I-5 and Hammer Lane in Stockton: $1,200,000
- I-5 and Eighth Mile Road in Stockton: $1,200,000
- Stanislaus County locations along the I-5 and SR-99 corridors (2 lots): $2,400,000
- Expansion of Lots (I-5 and Ben Holt Drive) & (Kelley Dr. in Stockton): $950,000 (add 80 spaces total)
- Expansion of Lot (Junction of I-5 and SR-12) – **Implemented** $400,000 (add 40 spaces total)

Long-term Improvement:

- Widen I-5 from 6-8 lanes to add an HOV lane in each direction (French Camp to Charter Way): $64,000,000[3]

Widening I-5 to accommodate an HOV lane in each direction will provide the requisite capacity to remedy this deficiency. This project is identified in the 2018 Regional Transportation Plan and is a Measure K Renewal Project, but as of today is not programmed in the FTIP.

The I-5 North Stockton Improvement Project that widens the I-5 between Martin Luther King Jr. Boulevard/Charter Way and Hammer Lane from 6 to 8 lanes to add HOV lanes was completed in 2016. This relieves some congestion north of the deficient facility but does not fully remedy the issue.

All jurisdictions have complied with the RCMP LUAP and RCMP Deficiency Plan requirements. The following improvements to program implementation are recommended however:

- Both SJCOG and its member agencies need to better inform the transportation and environmental consulting community of the RCMP LUAP requirements.
- Both SJCOG and its member agencies need to improve traffic count data sharing/transmittal and better inform the transportation and environmental consulting community of the RCMP traffic count database.
- Local agencies need to more proactively consider funding opportunities for RCMP facility improvements identified as CEQA mitigation during state/federal discretionary funding cycles as well as priorities for local RTIF funding.
- SJCOG and its member agencies need to more proactively pursue opportunities to fund improvements identified in the RCMP Regional Deficiency Plan (SJCOG, 2010).

RCMP Multimodal Corridors

SJCOG, in coordination with its member agencies, has designated twelve roadways as RCMP multimodal corridors. These corridors were selected based on their "Complete Street" functionality and are generally located in "downtown" areas that are characterized by higher than average numbers of shared roadway users (pedestrians, bicyclists, transit passengers, and motorists). For more information, please refer to Appendix A.

[3] Note: Cost estimate was current as of publication of 2010 SJCOG Regional Deficiency Plan. Cost estimate for this project in the 2018 Regional Transportation Plan was $97,880,000.

Chapter 1
Introduction

CHAPTER 1. INTRODUCTION

1.1 PROGRAM BACKGROUND

California State Statute requires Congestion Management Agencies (CMAs) to create a Regional Congestion Management Program (RCMP) to manage the effects of transportation and land use. The intent of the RCMP legislation is to build on the efforts of the various jurisdictions and agencies within each county to integrate and coordinate the various components of the county transportation system.

The San Joaquin Council of Governments (SJCOG) is the designated CMA for San Joaquin County and is responsible for monitoring the RCMP roadway network. As the designated CMA, SJCOG has the responsibility to prepare and update the RCMP, and to monitor local agency compliance with the achievement of the level-of-service (LOS) standards and implementation of the RCMP Land Use Analysis Program established under the Program.

As a part of a RCMP, performance measures are also tracked to identify current and future multimodal system performance for the movement of goods and people, and a travel demand model is employed to estimate future transportation demand and needs. Once the future needs are determined, a Capital Improvement Program (CIP) is designed to promote the goals of the RCMP.

This report documents the monitoring results of the 2018 SJCOG RCMP Update. The purpose of the RCMP update is to ensure that established performance standards for the transportation system in San Joaquin County are being met and to identify facilities where standards are being exceeded. Where standards have been exceeded, State RCMP statutes also require the local CMA to conduct further evaluation and prepare an exclusions study.

1.2 RCMP IMPLEMENTATION

The RCMP Statute requires that all elements of a RCMP be monitored and that member agencies conform to the RCMP. As the designated CMA for San Joaquin County, SJCOG is required to conduct an evaluation on a basis. Nonconformance places member agencies at risk of losing local Section 2105 gas tax subvention funds created by Proposition 111 (1990). The San Joaquin County RCMP has developed a standardized process for completing the monitoring and conformance determination with SJCOG administering the program.

The Measure K Renewal Ordinance, a half-cent sales tax measure extension dedicated to transportation projects in San Joaquin County passed by voters in November 2006, also required the adoption of a congestion management process. Thus, in addition to the RCMP monitoring and conformance process, SJCOG must annually determine whether its member agencies are complying with the Measure K Renewal Ordinance.

The purpose of this RCMP Monitoring and Conformance Report is to fulfill the transportation system monitoring requirements for 2019 involving vehicular LOS analysis of the County's Regional RCMP

intersections and roadways, and multimodal LOS along specific corridors. This evaluation relies on counts that were collected by SJCOG in 2018.

The coordinating local member agencies are listed below, as well as required RCMP tasks and responsibilities for SJCOG and member agencies. **Table 7** lists the role each agency is to play on the various components of the program.

California Department of Transportation
County of San Joaquin
City of Stockton
City of Lodi
City of Manteca
City of Tracy
City of Ripon
City of Escalon
City of Lathrop
San Joaquin Regional Rail Commission
San Joaquin Regional Transit District
San Joaquin Valley Air Pollution Control District

Table 7. Agency Responsibilities

RCMP Task	CMA (SJCOG)	Jurisdictions	SJV APCD	Caltrans D-10
Prepare Program/Updates	Lead Agency	Technical Support / Concurrence	Concurrence	Concurrence
Data Collection	Lead Agency	Input	Input	Input
Regional Travel Model	Lead Agency	Technical Support / Input	Concurrence	Concurrence
Land Use Analysis Program	Technical Support / Concurrence	Lead Agency	Input	Technical Support
TDM Program (Tier I or II)	Lead Agency	Lead Agency	Lead Agency	Concurrence
Performance Element	Lead Agency	Technical Support / Input	Concurrence	Input
Cap. Improvement Program	Lead Agency	Input	Concurrence	Concurrence
RCMP Compliance Analysis	Lead Agency	Input	Input	Input
Deficiency Plan	Technical Support / Concurrence	Lead Agency	Concurrence	Concurrence

SJCOG works collaboratively with its member agencies to address its federal/state/regional transportation planning and programming needs. SJCOG's RCMP process is legislatively integrated with its state and federal planning/programming processes

Chapter 2
Regional Transportation System

CHAPTER 2. REGIONAL TRANSPORTATION SYSTEM

The purpose of the RCMP is to monitor congestion, identify congestion problems, and establish a programming mechanism aimed at reducing congestion. Designation of a regional transportation system supports RCMP monitoring activities and focuses the implementation of the RCMP on a core network of key transportation facilities that facilitate regional travel within and through San Joaquin County.

The 2018 RCMP updated the Regional Transportation System. One roadway segment, SR-4 between I-5 and Navy Drive, was added to the regional transportation system. The entire Regional Transportation System is included in an ArcGIS database.

2.1 RCMP ROADWAY NETWORK

State statute requires that all state highways be designated as part of the RCMP roadway network. The inclusion of locally owned and operated principal arterials is left to the CMA, in coordination with its member agencies. Chosen local arterials must represent routes of regional significance. Per state statute, once a route is designated as part of the RCMP system, it cannot be removed. In addition, all new state highways and principal arterials must be included in the RCMP system.

The following guidelines were developed by SJCOG in coordination with its member agencies and state statutes to establish the original RCMP network in 1991:

- Principal arterials are used for travel between cities, across metropolitan areas or between key trip generators (residential areas, downtown areas, commercial centers, airports, colleges, and universities). These routes also include key access roads to downtown areas or central business districts, and east-west routes that link I-5 and SR-99 (the two primary north-south routes in the county);

- Access to principal arterials from abutting property is generally limited to interchanges and major intersections;

- Traffic volumes on principal arterials vary, depending on the nature of the road (urban or rural). But, in general, these segments carry higher volumes than neighboring roadways;

- The RCMP system should display “connectivity.” Virtually all routes link with another principal arterial or state highway to form a comprehensive system rather than merely a collection of segments.

The following guidelines are used to help determine if and when additional roadways should be amended to the RCMP network needs to be expanded:

- The roadway is designated as a regional facility on the Regional Transportation Impact Fee (RTIF) network;

- A local roadway functions as a principal arterial, as described by the Federal Highway Administration's Functional Classification Guidelines;
- A minor arterial is reclassified as a major arterial in a jurisdiction's general plan; or
- An existing RCMP roadway is extended or realigned.

As shown in **Figure 1**, the San Joaquin County CMP Roadway Network is classified into freeway segments, multi-lane highway segments, two-lane segments, and urban street segments within San Joaquin County.

The following freeways are included:

- I-5
- I-205
- I-580
- SR 99
- SR 120: I-5 to SR 99
- SR 4: Navy Drive to SR 99

The following multi-lane highway segment is included:

- SR 132: I-5 to I-580

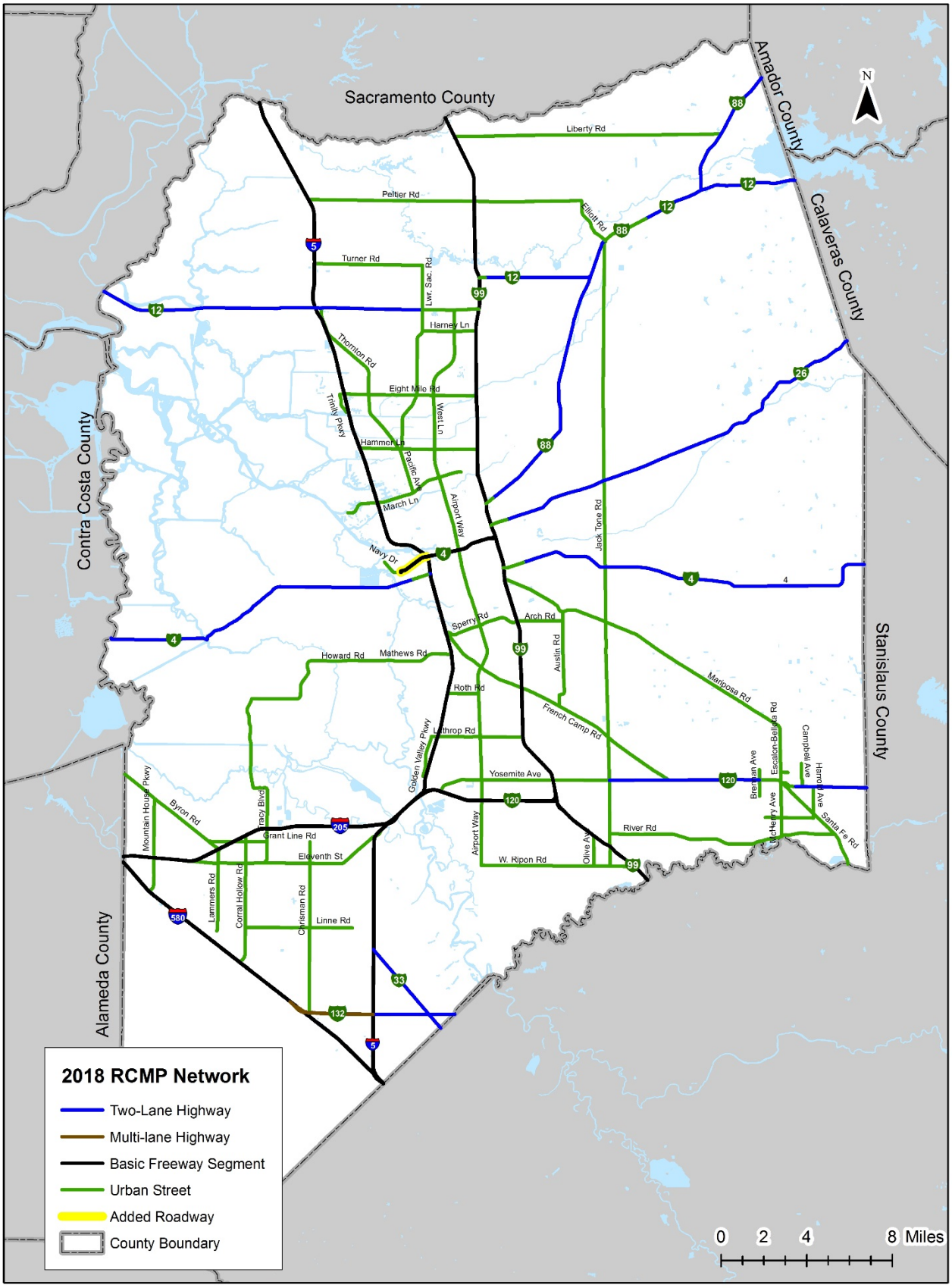
The following two-lane highway segments are included:

- SR 4: west of I-5 and east of SR 99
- SR 12: segments outside of City of Lodi and City of Lockeford
- SR 26: Cardinal Ave to County Line
- SR 33
- SR 88: segments outside of City of Lockeford
- SR 120: segments east of SR 99 and outside of City of Escalon
- SR 132: East of I-5

In addition, most major arterial roadway segments in San Joaquin County are included.

The RCMP GIS database containing the RCMP Roadway Network layers including the freeway segments layer, the multi-lane segments layer, the two-lane segments layer and the urban street segments layer that were evaluated for monitoring purposes was updated as part of the 2018 RCMP update to include newly added RCMP facilities and to reflect changes to the network caused by roadway realignments.

Figure 1: San Joaquin County CMP Roadway Segments



2.2 RCMP ROADWAY NETWORK INTERSECTIONS

A total of 108 intersections within the incorporated and unincorporated areas of San Joaquin County have been designated as part of the RCMP system. Designation of RCMP intersections adds greater resolution for congestion monitoring and appropriately focuses attention on locations where operational constraints are most typically experienced.

The RCMP intersections that are included in the 2018 RCMP Update are listed in **Table 8**. and shown in **Figure 2**. The intersection IDs have been established to coordinate analysis results with the intersection layer in the RCMP GIS database. Four intersections previously included in the RCMP were removed – two due to an interchange reconstruction, and two were found to be duplicates in the list. See notes on Table 8.

All 108 RCMP intersections were evaluated using the recently collected 2018 data. 93 intersections were counted for this update cycle, while the remaining 15 were reanalyzed to account for updates to intersection characteristics. Interchange reconstruction and duplicate locations will remove 4 interchanges in the next update. Intersections that lie on a jurisdictional boundary list both in **Table 8**.

Table 8. RCMP Intersections

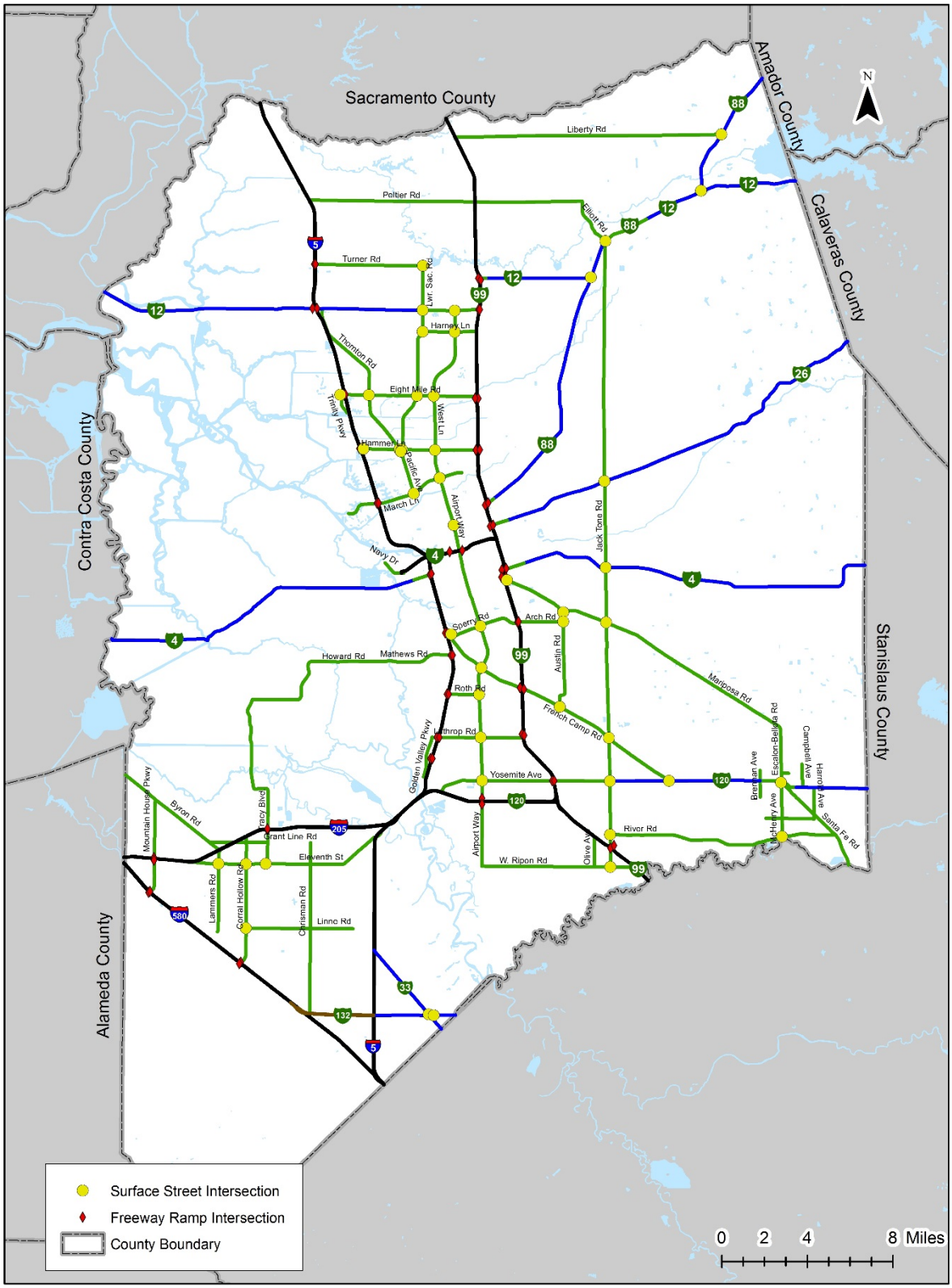
ID	North/South	East/West	Jurisdiction	Last Counted
1	I-5 SB Ramps	Turner Rd	County	2018
2	I-5 NB Ramps	Turner Rd	County	2018
3	I-5 SB Ramps	SR-12	County	2015
4	I-5 NB Ramps	SR-12	County	2018
5	I-5 SB Ramps	French Camp Rd	Stockton/County	2018
6	I-5 NB Ramps	French Camp Rd	Stockton/County	2018
7	I-5 SB Ramps	Matthews Rd	County	2018
8	I-5 NB Ramps	Matthews Rd	County	2018
9	99 Frontage (south of Eight Mile Rd)	Hwy 99 NB Ramps	County	2018
10	Hwy 99 SB Ramps	Hammer Ln	County	2018
11	Hwy 99 NB Ramps	Hammer Ln	County	2018
12	Hwy 99 SB Ramps	SR-88/Waterloo Rd	County	2015
13	Hwy 99 NB Ramps	SR-88/Waterloo Rd	County	2015
14	Hwy 99 SB Ramps	SR-26/Fremont St	County	2015
15	Hwy 99 NB Ramps	SR-26/Fremont St	County	2015
16	Hwy 99 NB Ramps	SR-4/Farmington Rd	County	2018
17	Hwy 99 SB Ramps	French Camp Rd	County	2018
18	Hwy 99 NB Ramps	French Camp Rd	County	2018
19	Hwy 99 SB Ramps	99 Frontage (north of Lathrop Rd)	County	2015
20	Hwy 99 NB Ramps	99 Frontage (north of Lathrop Rd)	County	2018
21	Hwy 99 Ramps	Arch Airport Rd (at freeway)	Stockton/County	2018
22	SR-88	SR-12	County	2018
23	SR-88	SR-12/Victor Rd	County	2018
24	McHenry Ave	River Rd	County	2018
25	SR-12/SR-88/Main St	Elliott Rd/Tully Rd	County	2015
26	West Ln	Eight Mile Rd	County	2018
27	Airport Wy	French Camp Rd	County	2018
28	Lower Sacramento Rd	Harney Ln	Lodi/County	2018
29	SR-33/Ahern Rd	Vernalis Rd	County	2018
30	Vernalis Rd	SR-132/Vernalis Rd	County	2018
31	Airport Way	Roth Rd	Manteca/County	2018
32	French Camp Rd	SR-120/Yosemite Ave	County	2018
33	Jack Tone Rd	SR-120	County	2018
34	Jack Tone Rd	French Camp Rd	County	2018
35	Jack Tone Rd	Mariposa Rd	County	2018

ID	North/South	East/West	Jurisdiction	Last Counted
36	Jack Tone Rd	SR-4/ Farmington Rd	County	2018
37	Jack Tone Rd	SR-26	County	2018
38	SR-88	Liberty Rd	County	2018
39	Escalon-Bellota Rd/ McHenry Ave	SR-120	Escalon	2018
40	I-5 SB Ramps	Lathrop Rd	Lathrop	2018
41	I-5 NB Ramps	Lathrop Rd	Lathrop	2018
42	I-5 SB Ramps	Roth Rd	Lathrop	2018
43	I-5 NB Ramps	Roth Rd	Lathrop	2018
44	I-5 SB Ramps	Louise Ave	Lathrop	2018
45	I-5 NB Ramps	Louise Ave	Lathrop	2018
46	Hwy 99 SB Ramps	SR-12/ Victor Rd	Lodi	2018
47	Hwy 99 NB Ramps	SR-12/ Beckman Rd	Lodi	2018
48	Hwy 99 SB Ramps	SR-12/ Kettleman Ln	Lodi	2018
49	Hutchins St	SR-12/ Kettleman Ln	Lodi	2018
~~50~~	~~Hutchins St~~	~~Harney Ln~~	~~Lodi~~	~~See Below~~
51	Lower Sacramento Rd	Turner Rd	Lodi	2015
52	Lower Sacramento Rd	SR-12/ Kettleman Ln	Lodi	2018
~~53~~	~~Lower Sacramento Rd~~	~~Harney Ln~~	~~Lodi~~	~~See Below~~
54	Hwy 99 NB Ramps	SR-12/Kettleman Ln	Lodi	2018
55	West Ln/Hutchins St	Harney Ln	Lodi	2018
56	Airport Wy	SR-120 WB Ramps	Manteca	2015
57	Airport Wy	SR-120 EB Ramps	Manteca	2018
58	Hwy 99 SB Ramps	SR-120/Yosemite Ave	Manteca	2018
59	Hwy 99 NB Ramps	SR-120/Yosemite Ave	Manteca	2018
60	Airport Wy	Lathrop Rd	Manteca	2018
61	Airport Wy	Yosemite Ave	Manteca	2018
62	Jack Tone Rd	Hwy 99 SB Ramps	Ripon	2018
63	Hwy 99 NB Ramps	Colony Rd	Ripon	2018
64	Jack Tone Rd	River Rd	Ripon	2018
65	Jack Tone Rd	West Ripon Rd	Ripon	2018
66	99 Frontage (south of Eight Mile Rd)	Hwy 99 SB Ramps	Stockton	2018
67	I-5 SB Ramps	Eight Mile Rd	Stockton	2018
68	I-5 NB Ramps	Eight Mile Rd	Stockton	2018
69	I-5 SB Ramps	Hammer Ln	Stockton	2018
70	I-5 NB Ramps	Hammer Ln	Stockton	2015
71	I-5 SB Ramps	March Ln	Stockton	2018
72	I-5 NB Ramps	March Ln	Stockton	2018
73	I-5 SB Ramps	SR-4/ Charter Wy	Stockton	2018
74	I-5 NB Ramps	SR-4/Charter Wy	Stockton	2015
75	Stanislaus St	SR-4 WB Ramps/Washington St	Stockton	2018
76	Wilson Wy	SR-4 EB Ramps	Stockton	2018
77	Hwy 99 SB Ramps	Mariposa Rd	Stockton	2015
78	Hwy 99 NB Off- Ramps	Mariposa Rd	Stockton	2015
~~79~~	~~99 Frontage (north of Mariposa)~~	~~Hwy 99 NB Ramps~~	~~Stockton~~	~~See Below~~
~~80~~	~~99 Frontage Rd~~	~~Mariposa Rd~~	~~Stockton~~	~~See Below~~
81	West Ln	Hammer Ln	Stockton	2018
82	West Ln	March Ln	Stockton	2018
83	Airport Wy	Sperry Rd/ Arch-Airport Rd	Stockton	2018
84	Lower Sacramento Rd	Eight Mile Rd	Stockton	2018
85	Thornton Rd	Eight Mile Rd	Stockton	2018
86	Thornton Rd	Hammer Ln	Stockton	2018
87	Pacific Ave	March Ln	Stockton	2018
88	Kelley Dr	Hammer Ln	Stockton	2018
89	West Ln/ Airport Wy	Harding Wy	Stockton	2018
90	Lower Sacramento Rd	Hammer Ln	Stockton	2018
91	Thornton Rd/Pacific Ave	Lower Sacramento Rd	Stockton	2018
92	French Camp Rd	Sperry Rd	Stockton	2015
93	Hwy 99 NB Ramps	Arch Rd (east of freeway)	Stockton	2018
94	Trinity Pkwy	Eight Mile Rd	Stockton/County	2018
95	Tracy Blvd	I-205 EB Ramps	Tracy	2018
96	Tracy Blvd	I-205 WB Ramps	Tracy	2018
97	Corral Hollow Rd	I-580 WB Ramps	Tracy	2015
98	Corral Hollow Rd	I-580 EB Ramps	Tracy	2018

ID	North/South	East/West	Jurisdiction	Last Counted
99	Tracy Blvd	11th Street	Tracy	2018
100	Corral Hollow Rd	11th Street	Tracy	2018
101	Corral Hollow Rd	Linne Rd	Tracy	2018
102	Lammers Rd	11th Street	Tracy	2018
103	Austin Road	Mariposa Road	County	2018
104	Austin Road	Arch Road	County	2018
105	Austin Road	French Camp Road	County	2018
106	SR-99	Golden Gate Ave	County	2018
107	SR-99	French Camp Rd	County	2018
108	SR-99	Mariposa Rd	County	2018
109	Mountain House Parkway	I-205 WB Ramps	County	2018
110	Mountain House Parkway	I-205 EB Ramps	County	2018
111	Mountain House Parkway	I-580 WB Ramps	County	2018
112	Mountain House Parkway	I-580 EB Ramps	County	2018

Notes:
Former intersections 79 and 80 were part of the SR 99 interchanges which have been reconstructed. Post reconstruction, these intersections no longer exist.
Intersection 50 is a duplicate of intersection 55. Intersection 53 is duplicate of intersection 28.

Figure 2: San Joaquin County Regional RCMP Intersections



2.3 RCMP MULTIMODAL CORRIDORS

State and federal mandates require the consideration of all major modes of travel as part of a RCMP. Additionally, the California Complete Streets Act (AB 1358) requires counties and cities to include policies that take all roadway users into consideration (bicyclists, pedestrians, transit riders, motorists) as part of their general plan updates. In recognition of these legislative mandates, SJCOG, in coordination with its member agencies, has identified a sub-set of the RCMP network to be designated as RCMP multimodal corridors. RCMP multimodal corridors are defined as sections of the RCMP roadway network where pedestrian, bicyclist, transit passenger, and motorist levels of service are analyzed. This designation also allows for the use of an expanded toolbox of options to address congestion related deficiencies that do not rely on increasing vehicular capacity. In addition to the baseline segments that are currently designated, the RCMP also identifies future segments that have a high likelihood of meeting multimodal corridor criteria as they develop.

The multimodal corridors were established using the following criteria:

- Roadway is a state highway that serves as a city's or community's main street;
- Roadway possess "Complete Streets" characteristics, meaning they have limited additional right-of-way and the existing right-of-way is shared by many types of users (motorists, pedestrians, bicyclists, and transit passengers);
- Roadway traverses areas with existing or future urbanized development patterns; and/or,
- Roadway is currently operating at LOS D or worse.

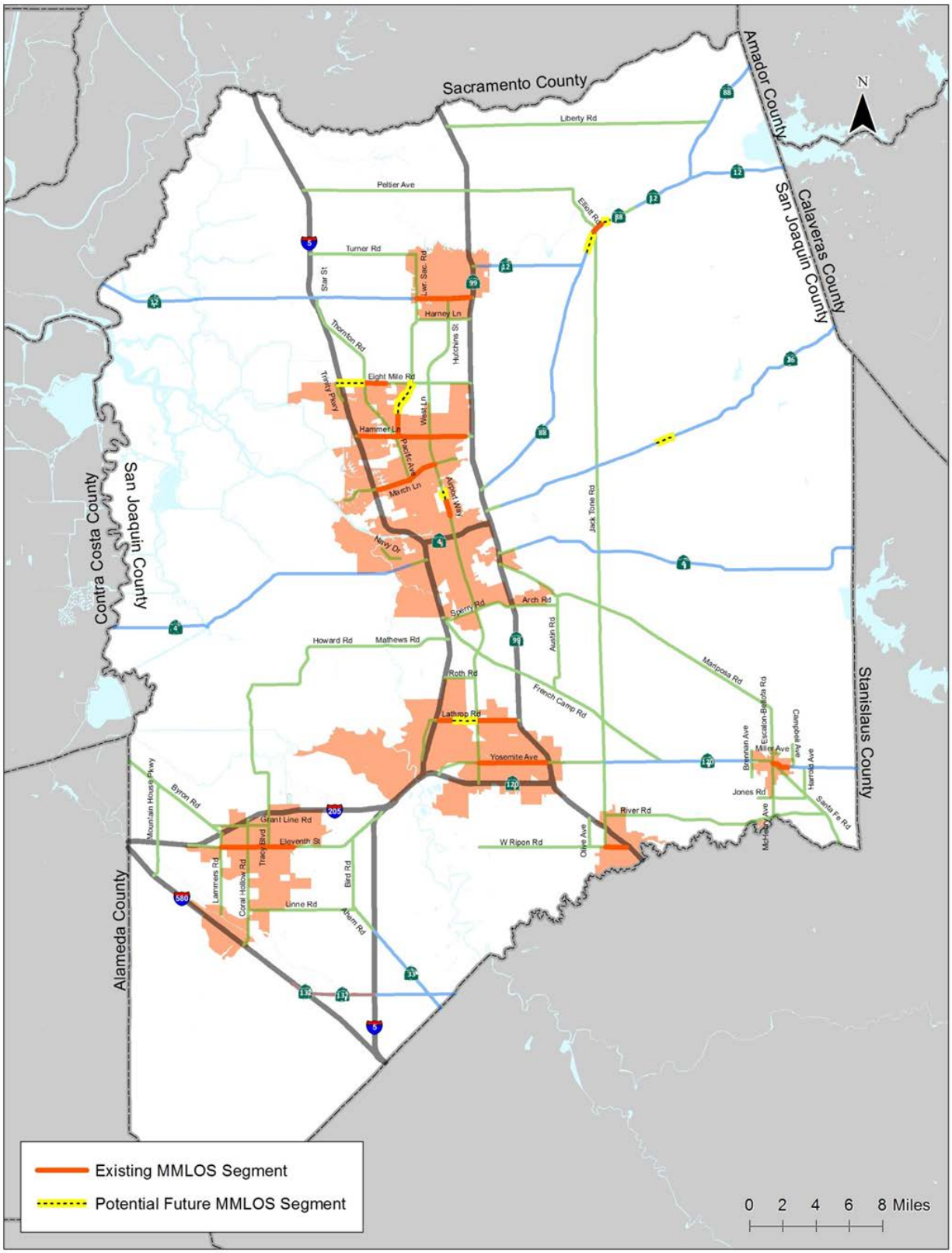
Thirteen baseline RCMP multimodal corridors and six future corridors were designated in the 2012 RCMP. For the 2016 RCMP update, the 13 baseline RCMP multimodal corridors were evaluated. These baseline RCMP multimodal corridors are listed in and shown in **Table 9**.

Table 9. RCMP Multimodal Corridors

ID	Roadway	Multimodal Segment	Status	Jurisdiction
1	SR-88	Locke Rd to North Sierra Dr	Baseline	County
		Brandt Rd to eastern town limit of Lockeford	Future	County
2	SR-120	McHenry Ave-Escalon Bellota Rd to David Dr	Baseline	Escalon
3	Lathrop Rd	Crestwood Ave to S Airport Wy	Baseline	Manteca
		S Harlan Rd to 7th St	Baseline	Lathrop
		S Harlan Rd to Crestwood Ave	Future	Lathrop/ County/ Manteca
4	SR-12/Kettleman Ln	Lower Sacramento Rd to Cherokee Ln	Baseline	Lodi
5	Yosemite Ave	Airport Wy to Northwoods Ave-Commerce Ave	Baseline	Manteca
6	Main St	Jack Tone Rd to Stockton Ave	Baseline	Ripon
7	March Ln	Da Vinci Dr-Quail Lakes Dr to West Ln	Baseline	Stockton
8	Eight Mile Rd	Thornton Rd to Davis Rd	Baseline	Stockton
		Trinity Pkwy to Davis Rd	Future	Stockton
9	Hammer Ln	Kelley Dr to Maranatha Dr	Baseline	Stockton
10	Lower Sacramento Rd	Royal Oaks Dr to Hammer Ln	Baseline	Stockton
		Eight Mile Rd to Hammer Ln	Future	Stockton
11	West Ln-Airport Wy	El Pinal Dr to Roosevelt St	Baseline	Stockton
		E Alpine Ave to E Roosevelt St	Future	Stockton
12	11th St	Lammers Rd to N MacArthur Dr (west)	Baseline	Tracy
13	SR-26	N Granada Ln to N Market St	Future	County

Source: SJCOG RCMP Update Report, 2018

Figure 3: San Joaquin County RCMP Baseline Multimodal Corridors



2.4 RCMP BICYCLE NETWORK

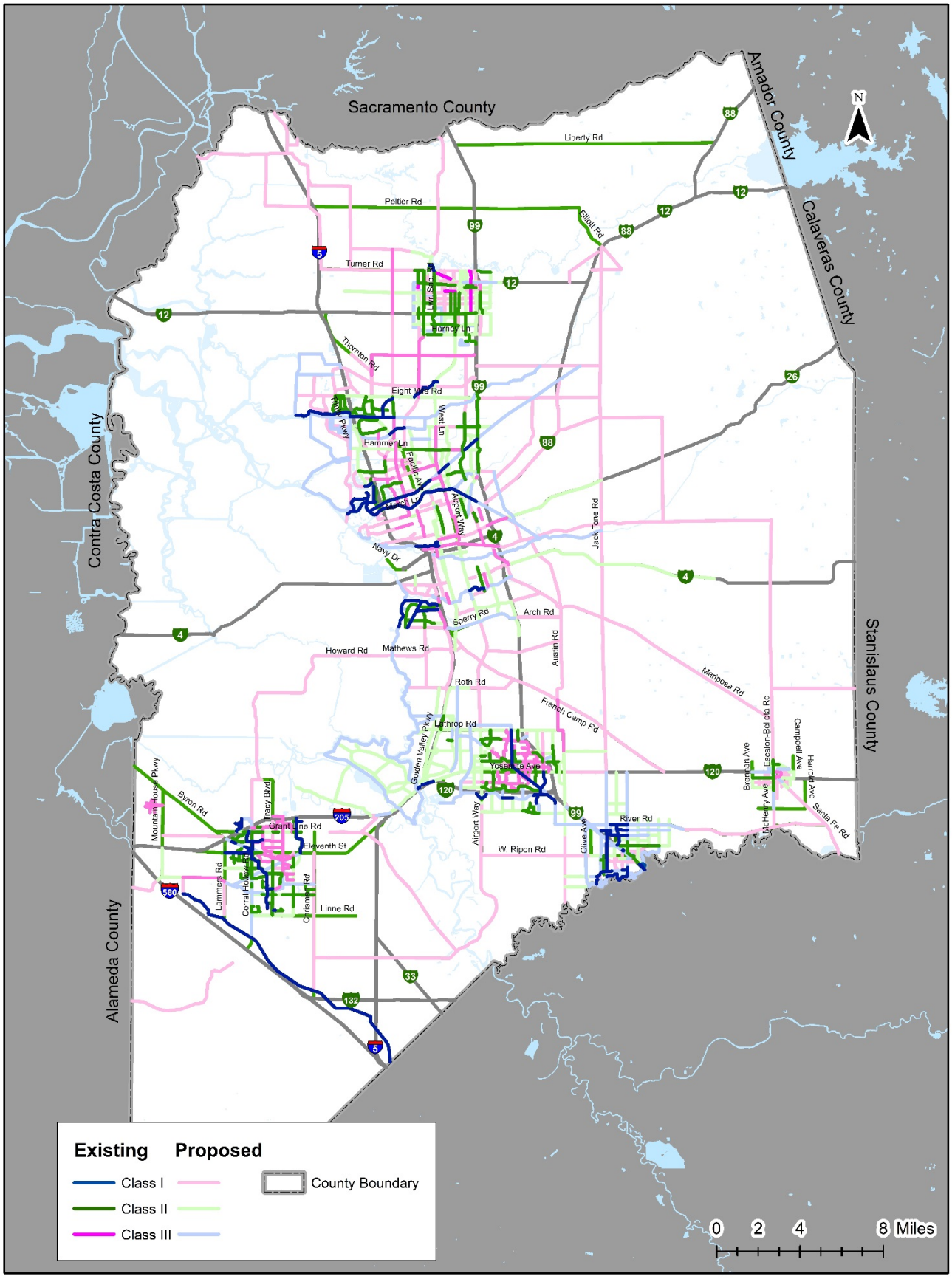
SJCOG has developed a regional bikeway network as part of the Bicycle, Pedestrian, and Safe Routes to School Plan. The network establishes routes of regional significance for bicyclists. There are many other elements that create a supportive environment for bicycling, including bikeway facilities, parking, shower and locker facilities, and wayfinding signage that are best addressed in the Regional Transportation Plan. The RCMP performance measure will focus on the bikeway network's completion.

Figure 4: San Joaquin County RCMP Bikeways Network shows the RCMP bicycle network for both the existing and planned future networks. The total mileage for each class of bicycle lanes is summarized in **Table 10**.

Table 10. RCMP Bicycle Network Mileage Summary

Scenarios	Total Mileage
Existing	**282**
Bike Path (Class I)	83
Bike Lane (Class II)	113
Shared Route (Class III)	86
Planned	**875**
Bike Path (Class I)	190
Bike Lane (Class II)	256
Shared Route (Class III)	429
Grand Total	***1157***

Figure 4: San Joaquin County RCMP Bikeways Network



2.5 RCMP TRANSIT NETWORK

San Joaquin County is diverse with respect to types of transit service offered and land use types. While Stockton is the most urbanized area in the County, many areas of Stockton and other cities in the County are predominantly suburban, while much of the unincorporated areas of the County are rural. As such, transit providers must tailor their services to balance diverse residents' needs while managing funding constraints.

San Joaquin County is served by a number of local and regional bus transit providers including:

- San Joaquin Regional Transit District which provides local bus service for the City of Stockton and regional connections between San Joaquin County Cities, Bay Area Rapid Transit (BART), Alameda County employment centers, and Sacramento.
- Lodi Grapeline which provides local bus service for the City of Lodi
- TRACER which provides local bus services for the City of Tracy
- Manteca Transit which provides local bus service for the City of Manteca
- eTrans which provides service between Escalon and Modesto's Vintage Faire Mall
- Ripon Blossom Express Transit Services which provides local bus service for the City of Ripon and service to Modesto.
- Modesto Area Express which provides commuter connections between Modesto and the Manteca ACE train station
- South County Transit which provides a connection between Lodi and Galt

Each fixed route provider also offers complementary paratransit services for the elderly and persons with disabilities.

Rail services in San Joaquin County are provided by The Altamont Corridor Express (ACE) commuter rail service and the Amtrak San Joaquin passenger rail service. ACE service has stations in Stockton, Tracy, and Manteca, and extends to Santa Clara County via Alameda County. The Amtrak San Joaquin provides intercity rail services from Oakland and Sacramento to Bakersfield via San Joaquin County, with two stations in Stockton and one in Lodi and bus connections to the Lathrop-Manteca ACE Station and Tracy.

Chapter 3
Level of Service (LOS) Assessment

CHAPTER 3. LEVEL OF SERVICE (LOS) ASSESSMENT

3.1 RCMP ROADWAY NETWORK INTERSECTION LOS

LOS for roadways is a qualitative measure of traffic operating conditions or system adequacy. A general scale for LOS has been defined using the letters A through F (best to worst). LOS A equates to free-flow conditions with little or no delay. LOS E characterizes flow conditions with traffic volumes at or near the designed capacity (i.e., high density conditions). LOS F represents unstable forced flow where operating traffic volumes exceed the capacity, resulting in greatly reduced travel speeds (on freeway, highway, or arterial segments) or excessive queues and delays (at intersections). Thus, a poor LOS or a monitored deterioration in LOS is a good indication of congestion.

The LOS standard adopted for the San Joaquin County RCMP is LOS D. Hence, when a monitored intersection or roadway segment is found to be operating at LOS E or F during consecutive monitoring periods, the county or the city in which the deficient segment or intersection is located must prepare a deficiency plan specific to that location. This includes state-owned facilities located within the jurisdiction. The 2010 HCM Operational Method is described in Chapter 4 of the *SJCOG Regional Congestion Management Program*, April 2018.

The weekday a.m. and p.m. peak hour turning movement volume counts for 93 RCMP intersections were collected by SJCOG in 2018. Signal timing plans for many RCMP signalized intersections were provided by the jurisdictions. In lieu of actual signal plans, signal timing was optimized using Synchro 8 software. The a.m. and p.m. peak hour LOS for 108 RCMP Intersections were analyzed with the collected counts and signal timing information using Synchro software based on the HCM 2010 LOS methodology.

As shown in **Table 12**, most intersections operate at acceptable LOS during both a.m. and p.m. peak hours, with the exception of 10 intersections during the a.m. peak hour, 7 intersections during the p.m. peak hour, and 6 intersections during the a.m. & p.m. peak hour that are operating at LOS E or F. These are shown in **Table 11**.

Intersections operating at LOS E or F during either the a.m. or p.m. peak hour are listed below:

Table 11. Intersection Operational Deficiencies

#	Intersection	Jurisdiction	AM Peak LOS	PM Peak LOS
8	I-5 NB Ramps & Matthews Road	County	F	F
9	99 Frontage (s/o Eight Mile Rd) & Hwy 99 NB Ramps	County	E	D
24	McHenry Avenue & River Road	County	F	F
30	Vernalis Road & SR-132/ Vernalis Road	County	C	F
32	French Camp Road & SR-120/ Yosemite Avenue	County	E	F
35	Jack Tone Road & Mariposa Road	County	E	D
41	I-5 NB Ramps & Lathrop Road	Lathrop	F	D
44	I-5 SB Ramps & Louise Avenue	Lathrop	E	C
45	I-5 NB Ramps & Louise Avenue	Lathrop	B	F
55	West Ln/ Hutchins Street & Harney Lane	Lodi	D	E
64	Jack Tone Road & River Road	Ripon	D	F
71	I-5 SB Ramps & March Lane	Stockton	F	F
83	Airport Way & Sperry Road/Arch-Airport Road	Stockton	E	E
87	Pacific Avenue & March Lane	Stockton	C	E
88	Kelley Drive & Hammer Lane	Stockton	E	D
91	Thornton Rd/Pacific Avenue & Lower Sacramento Road	Stockton	E	D
93	SR-99 NB Ramps & Arch Road (east of freeway)	Stockton	D	E
94	Trinity Parkway & Eight Mile Road	County_Stockton	E	F
100	Corral Hollow Road & 11th Street	Tracy	E	D
101	Corral Hollow Road & Linne Road	Tracy	F	C
102	Lammers Road & 11th Street	Tracy	F	C
105	Austin Road & French Camp Road	County	C	F
111	Mountain House Parkway & I-580 WB Ramps	County	F	A

The intersection layer in the RCMP database was updated with the newly collected traffic turning movement counts for all modes. **Figure 5** and **Figure 6** show the LOS results for all RCMP intersections during the a.m. peak hour and the p.m. peak hour, respectively.

Table 12. 2020 RCMP Intersection Level of Service (LOS)

ID	North-South Roadway	East – West Roadway	Jurisdiction	Traffic Control	AM		PM	
					Avg. Delay	LOS	Avg. Delay	LOS
1	I-5 SB Ramps	Turner Road	County	TWSC	13.9	B	12.5	B
2	I-5 NB Ramps	Turner Road	County	TWSC	10.3	B	10.3	B
3	I-5 SB Ramps	SR-12	County	Signal	-	-	-	-
4	I-5 NB Ramps	SR-12	County	Signal	15.5	B	12.5	B
5	I-5 SB Ramps	French Camp Road	Stockton/County	Signal	7.4	A	7.4	A
6	I-5 NB Ramps	French Camp Road	Stockton/County	Signal	13.9	B	9.9	A
7	I-5 SB Ramps	Matthews Road	County	TWSC	34.1	D	12.8	B
8	I-5 NB Ramps	Matthews Road	County	TWSC	90.9	F	186.1	F

ID	North-South Roadway	East – West Roadway	Jurisdiction	Traffic Control	AM		PM	
					Avg. Delay	LOS	Avg. Delay	LOS
9	99 Frontage (south of Eight Mile Rd)	Hwy 99 NB Ramps	County	TWSC	39.3	E	34.1	D
10	Hwy 99 SB Ramps	Hammer Lane	County	Signal	11.8	B	11.1	B
11	Hwy 99 NB Ramps	Hammer Lane	County	Signal	20	B	22.5	C
12	Hwy 99 SB Ramps	SR-88/ Waterloo Road	County	Signal	-	-	-	-
13	Hwy 99 NB Ramps	SR-88/ Waterloo Road	County	Signal	-	-	-	-
14	Hwy 99 SB Ramps	SR-26/ Fremont Street	County	Signal	-	-	-	-
15	Hwy 99 NB Ramps	SR-26/ Fremont Street	County	Signal	-	-	-	-
16	Hwy 99 NB Ramps	SR-4/ Golden Gate Avenue	County	TWSC	15.1	C	13.7	B
17	Hwy 99 SB Ramps	French Camp Road	County	TWSC	15.2	C	19.8	C
18	Hwy 99 NB Ramps	French Camp Road	County	TWSC	34.3	D	28.4	D
19	Hwy 99 SB Ramps	99 Frontage (north of Lathrop Road)	County	TWSC	-	-	-	-
20	Hwy 99 NB Ramps	99 Frontage (north of Lathrop Road)	County	TWSC	10.2	B	7.9	A
21	Hwy 99 Ramps	Arch Airport Road (at freeway)	Stockton/County	Signal	18.6	B	19.6	B
22	SR-88	SR-12	County	Signal	16.1	B	14.6	B
23	SR-88	SR-12/ Victor Road	County	Signal	12.2	B	13.6	B
24	McHenry Avenue	River Road	County	AWSC	319	F	299.7	F
25	SR-12/ SR-88/ Main Street	Elliott Road/ Tully Road	County	Signal	-	-	-	-
26	West Lane	Eight Mile Road	County	Signal	47.4	D	41	D
27	Airport Way	French Camp Road	County	Signal	29.1	C	29	C
28	Lower Sacramento Road	Harney Lane	Lodi/County	Signal	14.8	B	20.6	C
29	SR-33/ Ahern Road	Vernalis Road	County	TWSC	15.4	C	19.8	C
30	Vernalis Road	SR-132/ Vernalis Road	County	TWSC	21.3	C	126.5	F
31	Airport Way	Roth Road	Manteca/County	Signal	13.8	B	14.9	B
32	French Camp Road	SR-120/ Yosemite Avenue	County	TWSC	48.5	E	347.8	F
33	Jack Tone Road	SR-120	County	Signal	38.2	D	38	D
34	Jack Tone Road	French Camp Road	County	AWSC	17.3	C	19.7	C
35	Jack Tone Road	Mariposa Road	County	AWSC	43.9	E	27.8	D
36	Jack Tone Road	SR-4/ Farmington Road	County	AWSC	10.4	B	13.9	B
37	Jack Tone Road	SR-26	County	Signal	5.7	A	5.9	A
38	SR-88	Liberty Road	County	TWSC	16.2	C	17.1	C
39	Escalon-Bellota Road/ McHenry Avenue	SR-120	Escalon	Signal	21.5	C	21	C
40	I-5 SB Ramps	Lathrop Road	Lathrop	Signal	22.9	C	25	C
41	I-5 NB Ramps	Lathrop Road	Lathrop	Signal	168.8	F	57	E
42	I-5 SB Ramps	Roth Road	Lathrop	TWSC	22.3	C	20	C
43	I-5 NB Ramps	Roth Road	Lathrop	TWSC	13.8	B	13	B
44	I-5 SB Ramps	Louise Avenue	Lathrop	Signal	70.2	E	34.7	C
45	I-5 NB Ramps	Louise Avenue	Lathrop	Signal	12.6	B	81.8	F

ID	North-South Roadway	East – West Roadway	Jurisdiction	Traffic Control	AM		PM	
					Avg. Delay	LOS	Avg. Delay	LOS
46	Hwy 99 SB Ramps	SR-12/ Victor Road	Lodi	TWSC	12	B	17.9	C
47	Hwy 99 NB Ramps	SR-12/ Beckman Road	Lodi	TWSC	25.4	D	21.7	C
48	Hwy 99 SB Ramps	SR-12/ Kettleman Lane	Lodi	Signal	31	C	46.8	D
49	Hutchins Street	SR-12/ Kettleman Lane	Lodi	Signal	33.5	C	31.1	C
50	Hutchins Street	Harney Lane	Lodi	-	-	-	-	-
51	Lower Sacramento Road	Turner Road	Lodi	Signal	-	-	-	-
52	Lower Sacramento Road	SR-12/ Kettleman Lane	Lodi	Signal	21	C	23.4	C
53	Lower Sacramento Road	Harney Lane	Lodi	-	-	-	-	-
54	Hwy 99 NB Ramps	SR-12/ Kettleman Lane	Lodi	Signal	33.2	C	19.5	B
55	West Lane/ Hutchins Street	Harney Lane	Lodi	Signal	48.7	D	69.8	E
56	Airport Way	SR-120 WB Ramps	Manteca	Signal	-	-	-	-
57	Airport Way	SR-120 EB Ramps	Manteca	Signal	26.3	C	16.2	B
58	Hwy 99 SB Ramps	SR-120/ Yosemite Avenue	Manteca	Signal	33.2	C	21.1	C
59	Hwy 99 NB Ramps	SR-120/ Yosemite Avenue	Manteca	Signal	32	C	37.3	D
60	Airport Way	Lathrop Road	Manteca	Signal	23.1	C	29.7	C
61	Airport Way	Yosemite Avenue	Manteca	Signal	41.8	D	43.2	D
62	Jack Tone Road	Hwy 99 SB Ramps	Ripon	Signal	6.7	A	7.3	A
63	Hwy 99 NB Ramps	Colony Road	Ripon	TWSC	11.7	B	8.4	A
64	Jack Tone Road	River Road	Ripon	TWSC	34.3	D	73.1	F
65	Jack Tone Road	West Ripon Road	Ripon	Signal	17.3	B	10.7	B
66	99 Frontage (south of Eight Mile Road)	Hwy 99 SB Ramps	Stockton	TWSC	10.4	B	10.1	B
67	I-5 SB Ramps	Eight Mile Road	Stockton	Signal	18.4	B	10.4	B
68	I-5 NB Ramps	Eight Mile Road	Stockton	Signal	27.8	C	22.2	C
69	I-5 SB Ramps	Hammer Lane	Stockton	Signal	23.3	C	26.1	C
70	I-5 NB Ramps	Hammer Lane	Stockton	Signal	-	-	-	-
71	I-5 SB Ramps	March Lane	Stockton	Signal	137.2	F	108	F
72	I-5 NB Ramps	March Lane	Stockton	Signal	34.4	C	39.8	D
73	I-5 SB Ramps	SR-4/ Charter Way	Stockton	Signal	25.5	C	27.6	C
74	I-5 NB Ramps	SR-4/ Charter Way	Stockton	Signal	-	-	-	-
75	Stanislaus Street	SR-4 WB Ramps/ Washington Street	Stockton	Signal	26.1	C	11.8	B
76	Wilson Way	SR-4 EB Ramps	Stockton	Signal	27.3	C	37.5	D
77	HWy99 SB Ramps	Mariposa Road	Stockton	Signal	13.7	B	13.1	B
78	HWy99 NB Off-Ramps	Mariposa Road	Stockton	Signal	13.2	B	10.7	B
79	99 Frontage (north of Mariposa)	Hwy 99 NB Ramps	Stockton	-	-	-	-	-
80	99 Frontage Road	Mariposa Road	Stockton	-	-	-	-	-
81	West Lane	Hammer Lane	Stockton	Signal	38.7	D	44.7	D
82	West Lane	March Lane	Stockton	Signal	46.7	D	53.4	D
83	Airport Way	Sperry Road/ Arch-Airport Road	Stockton	Signal	73.6	E	79.4	E

ID	North-South Roadway	East – West Roadway	Jurisdiction	Traffic Control	AM		PM	
					Avg. Delay	LOS	Avg. Delay	LOS
84	Lower Sacramento Road	Eight Mile Road	Stockton	Signal	44.9	D	51.1	D
85	Thornton Road	Eight Mile Road	Stockton	Signal	39.3	D	30.9	C
86	Thornton Road	Hammer Lane	Stockton	Signal	26	C	36	D
87	Pacific Avenue	March Lane	Stockton	Signal	34.9	C	60.6	E
88	Kelley Drive	Hammer Lane	Stockton	Signal	56.5	E	52.1	D
89	West Lane/ Airport Way	Harding Way	Stockton	Signal	49	D	29.5	C
90	Lower Sacramento Road	Hammer Lane	Stockton	Signal	32.2	C	49.9	D
91	Thornton Road/Pacific Avenue	Lower Sacramento Road	Stockton	Signal	146.5	F	61.4	E
92	French Camp Road	Arch-Airport Road	Stockton	Signal	-	-	-	-
93	Hwy 99 NB Ramps	Arch Road (east of freeway)	Stockton	Signal	35.8	D	60.5	E
94	Trinity Parkway	Eight Mile Road	Stockton/County	Signal	57.6	E	180	F
95	Tracy Boulevard	I-205 EB Ramps	Tracy	Signal	11.8	B	31.5	C
96	Tracy Boulevard	I-205 WB Ramps	Tracy	Signal	44	D	19.4	B
97	Corral Hollow Road	I-580 WB Ramps	Tracy	TWSC	-	-	-	-
98	Corral Hollow Road	I-580 EB Ramps	Tracy	TWSC	1.1	A	6.1	A
99	Tracy Boulevard	11th Street	Tracy	Signal	36.6	D	36.7	D
100	Corral Hollow Road	11th Street	Tracy	Signal	63.8	E	47.1	D
101	Corral Hollow Road	Linne Road	Tracy	TWSC	147.3	F	16.9	C
102	Lammers Road	11th Street	Tracy	Signal	128.9	F	23	C
103	Austin Road	Mariposa Road	County	Signal	12.6	B	15.1	B
104	Austin Road	Arch Road	County	Signal	14.5	B	15.4	B
105	Austin Road	French Camp Road	County	AWSC	16	C	104	F
106	SR 99 SB	Golden Gate Avenue	Stockton	TWSC	9.5	A	14.3	B
107	SR 99 SB	Mariposa Road	County	Signal	13.7	B	13.1	B
108	SR 99 NB	Mariposa Road	County	Signal	13.2	B	10.7	B
109	Mountain House Parkway	I-205 WB Ramps	County	Signal	20.3	C	13.8	B
110	Mountain House Parkway	I-205 EB Ramps	County	Signal	3.7	A	5.2	A
111	Mountain House Parkway	I-580 WB Ramps	County	TWSC	53.8	F	1.6	A
112	Mountain House Parkway	I-580 EB Ramps	County	TWSC	8.9	A	5.5	A

Notes:
AWSC = All-Way-Stop-Control TWSC = Two-Way-Stop-Control
Intersections that lie on jurisdictional boundaries list both agencies under Jurisdiction
Intersection 50 is a duplicate of intersection 55 and will be removed during the next RCMP Update.
Intersection 53 is a duplicate of intersection 28 and will be removed during the next RCMP Update.
Intersections 79 and 80 no longer exist and will be removed during the next RCMP Update.
Intersections 3, 12, 13, 14, 15, 19, 25, 51, 54, 68, 72, 75, 76, 17, 23, 50, 56, 70, 74, 77, 78, 92, and 97 were not monitored this cycle after receiving LOS ratings of A or B during AM and PM peak hours in 2016 Monitoring Report.
Source: SJCOG Traffic Count Program; Synchro

Figure 5: San Joaquin County RCMP Intersections – 2020 A.M. Peak Hour Level of Service

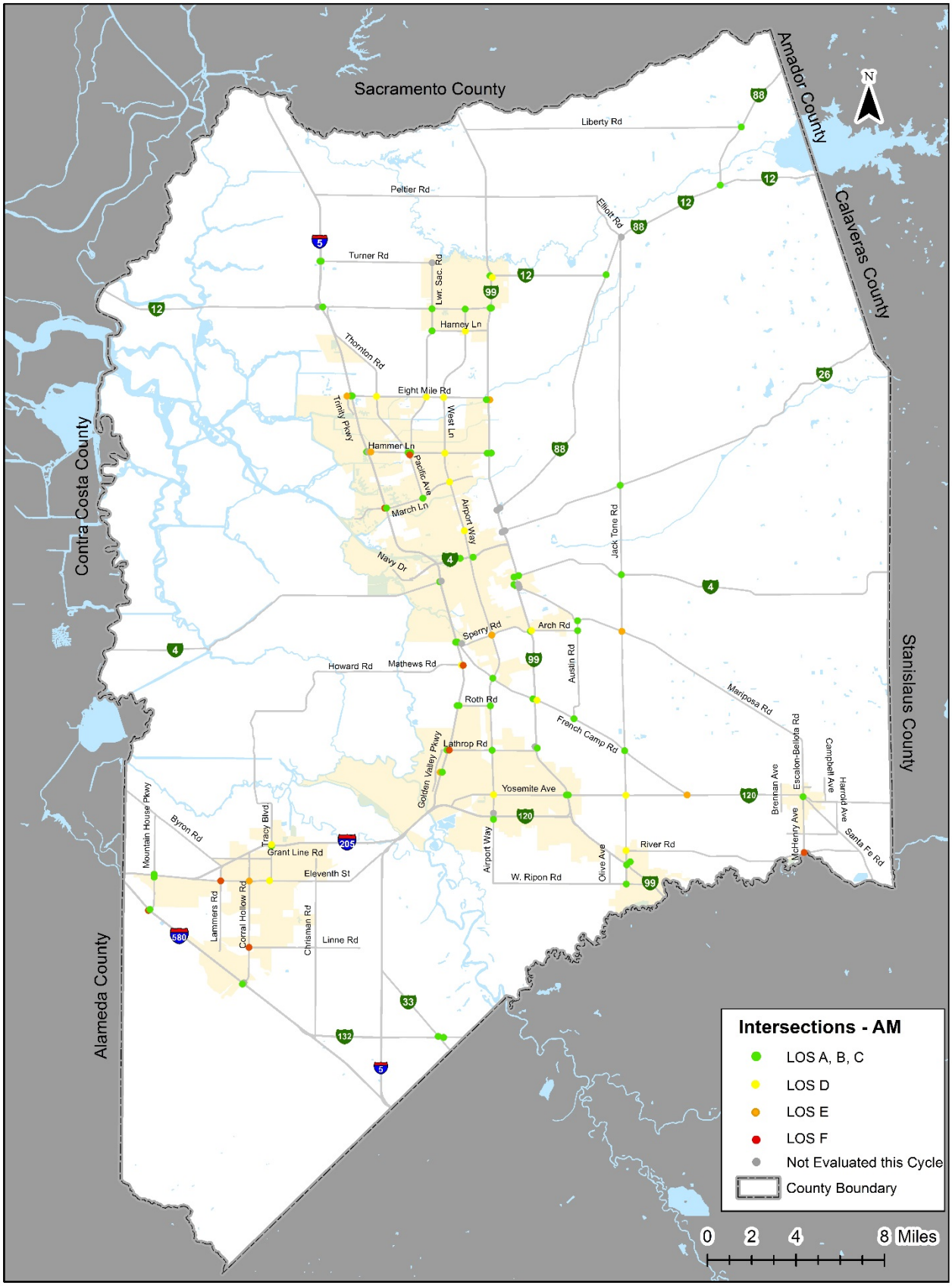
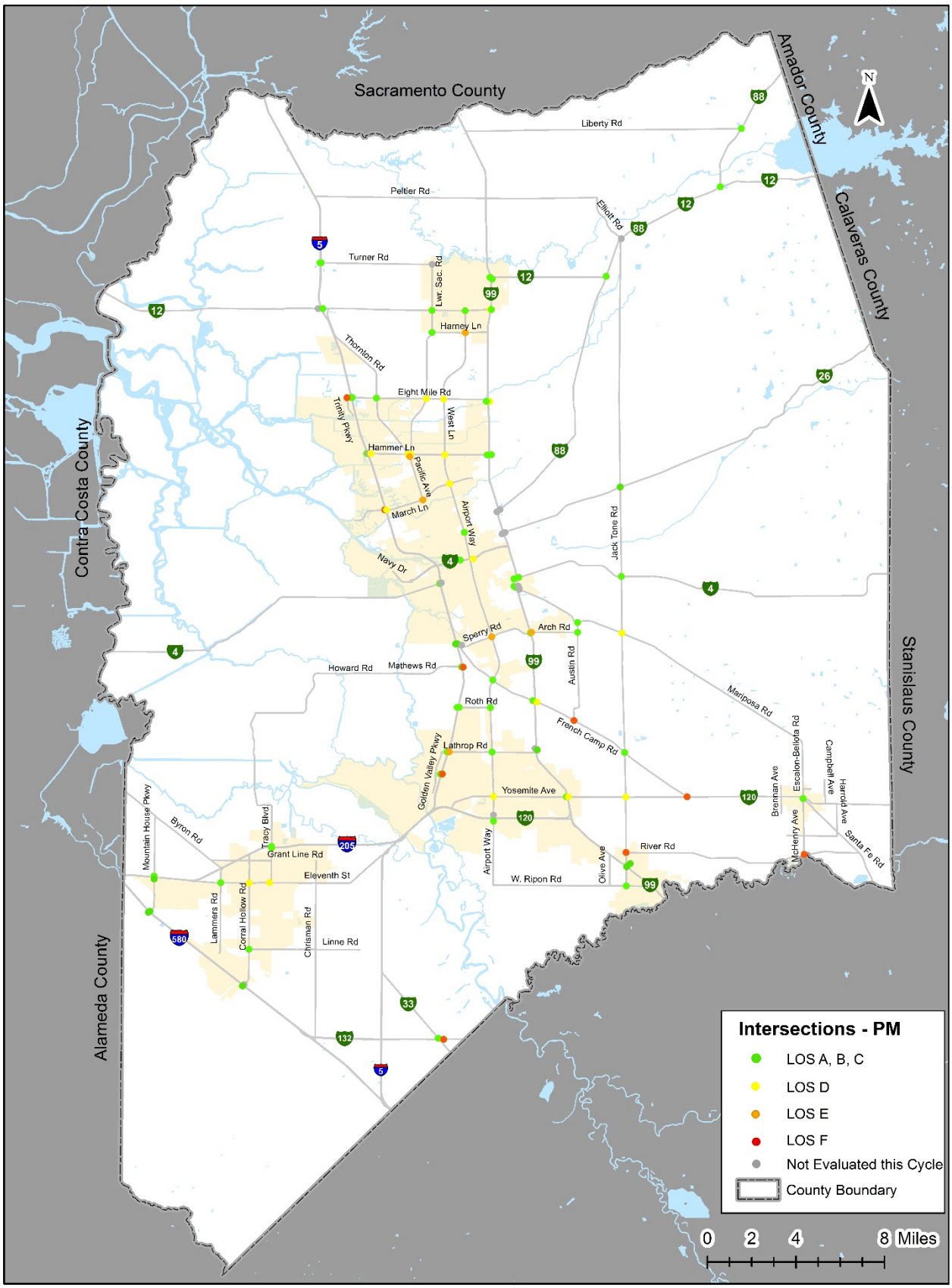


Figure 6: San Joaquin County RCMP Intersections – 2020 P.M. Peak Hour Level of Service



3.2 RCMP ROADWAYS

An RCMP LOS Workbook was developed to calculate roadway segment LOS for each RCMP roadway class. The workbook was updated for the 2018 RCMP Update to include the latest traffic counts and published volumes by Caltrans. The workbook is currently consistent with HCM 2010 methodology as described below in section 3.2.1. The update also included the latest Caltrans information on average daily traffic (ADT) counts, K-factors, and other factors.

3.2.1 LOS Measures

To assess the current LOS on the state highway system for average weekday peak period conditions, the most recent traffic volume data published by Caltrans was used to estimate LOS for basic freeway and multi-lane highway segments (2010 Highway Capacity Manual (HCM) Operational Analysis methodology). The LOS for these facility types is based on the vehicle density of the traffic stream, expressed in passenger cars per lane per mile (pcplpm). The LOS ranking or density range also relates to a volume to capacity (v/c) ratio range. The LOS parameters for these two facility types are described in Chapter 5 of the *SJCOG Regional Congestion Management Program*, April 2018.

For rural two-lane highways and local arterial RCMP roadways, LOS is based on the 2010 HCM planning method. The LOS is based on daily volume to capacity (v/c) ratios combining both directions of travel. Inputs for the two-lane highway LOS planning method include direction split (D Factor) and percent of peak hour traffic to ADT (K factor) as well as generalized assumptions for roadway geometric characteristics, percent of heavy trucks, and free flow speed. For arterial streets, this also includes intersection channelization characteristics, intersection control types and signal spacing etc. The LOS parameters for two-lane highways and local arterial streets are described in Chapter 5 of the *SJCOG Regional Congestion Management Program*, April 2018.

3.2.2 Basic Freeway Segments

The latest traffic information published on the Caltrans website were collected and input into the worksheet, including AADT (2017), Truck percentages (2017), K Factor (2017) and D Factor (2017). **Table 13** shows the freeway segments currently operating at LOS E or F during the a.m. or p.m. peak period, while **Table 14** and **Table 15** respectively show the LOS results for the northbound/eastbound RCMP freeway segments and the southbound/westbound RCMP freeway segments under both a.m. and p.m. peak hours. As shown, below, 19 segments operate at LOS E or F during the a.m. peak period while 29 segments operate at LOS E or F during the p.m. peak period.

The basic freeway segment layer in the ArcGIS RCMP database was updated with the newly collected traffic information. The LOS results were also added to the database. **Figure 7** and **Figure 8** illustrates the LOS results for all RCMP basic freeway segments. The worst LOS for either direction under either a.m. or p.m. peak hour are shown.

Table 13. Basic Freeway Segment Operational Deficiencies

Route	Segment		SB/WB		NB/EB	
	From	To	AM	PM	AM	PM
5	Jct. Rte. 205 West	Jct. Rte. 120 East	F	D	D	F
	Lathrop Road	French Camp Overcrossing	C	D	C	E
	French Camp Overcrossing	Mathews Road	D	E	D	E
	Mathews Road	French Camp Turnpike Interchange	D	E	D	E
	French Camp Turnpike Interchange	Stockton, Eighth Street	D	E	D	F
	Stockton, Eighth Street	Stockton, Jct. Rte. 4	D	E	D	F
	Country Club Boulevard	Plymouth Rd/Ryde Ave	D	D	C	F
	Stockton, March Lane	Benjamin Holt Drive Interchange	D	C	B	E
	Benjamin Holt Drive Interchange	Stockton, Hammer Lane	C	C	B	E
99	Stanislaus/San Joaquin County Line	Ripon, Main Street	B	F	F	C
	Ripon, Main Street	Milgeo Avenue	C	F	F	C
	Milgeo Avenue	Jack Tone Road	C	F	F	C
	Jack Tone Road	South Jct. Rte. 120	B	F	E	C
	South Jct. Rte. 120	Manteca, North Jct. Rte. 120	B	D	E	B
	Stockton, Mariposa Road	Jct. Rte. 4 East	B	C	E	C
	Jct. Rte. 4 East	Jct. Rte. 26 West	C	D	F	C
	Jct. Rte. 26 West	Jct. Rte. 4 West	C	E	F	C
	Jct. Rte. 26 East	Jct. Rte. 88 Northeast	C	E	D	D
	Jct. Rte. 88 Northeast	Cherokee Road Interchange	D	E	E	E
	Cherokee Road Interchange	Wilson Way	E	D	E	E
	Wilson Way	Hammer Lane	F	D	D	E
	South Lodi Interchange	Lodi, Jct. Rte. 12 West	E	D	D	E
	Lodi, Turner Road	Woodbridge Road	C	E	D	D
120	Mossdale, Jct. Rte. 5	Yosemite Avenue Undercrossing	D	C	D	E
	Yosemite Avenue Undercrossing	Airport Way	D	C	C	E
205	Alameda/San Joaquin County Line	Patterson Pass Road Interchange	F	B	C	F
	Patterson Pass Road Interchange	Old Route 50	F	B	B	F
	Old Route 50	Tracy, Mac Arthur Drive	F	B	C	E
	Tracy, Mac Arthur Drive	Jct. Rte. 5	F	D	A	F

Figure 7: San Joaquin County RCMP 2020 Basic Freeway Segment LOS AM

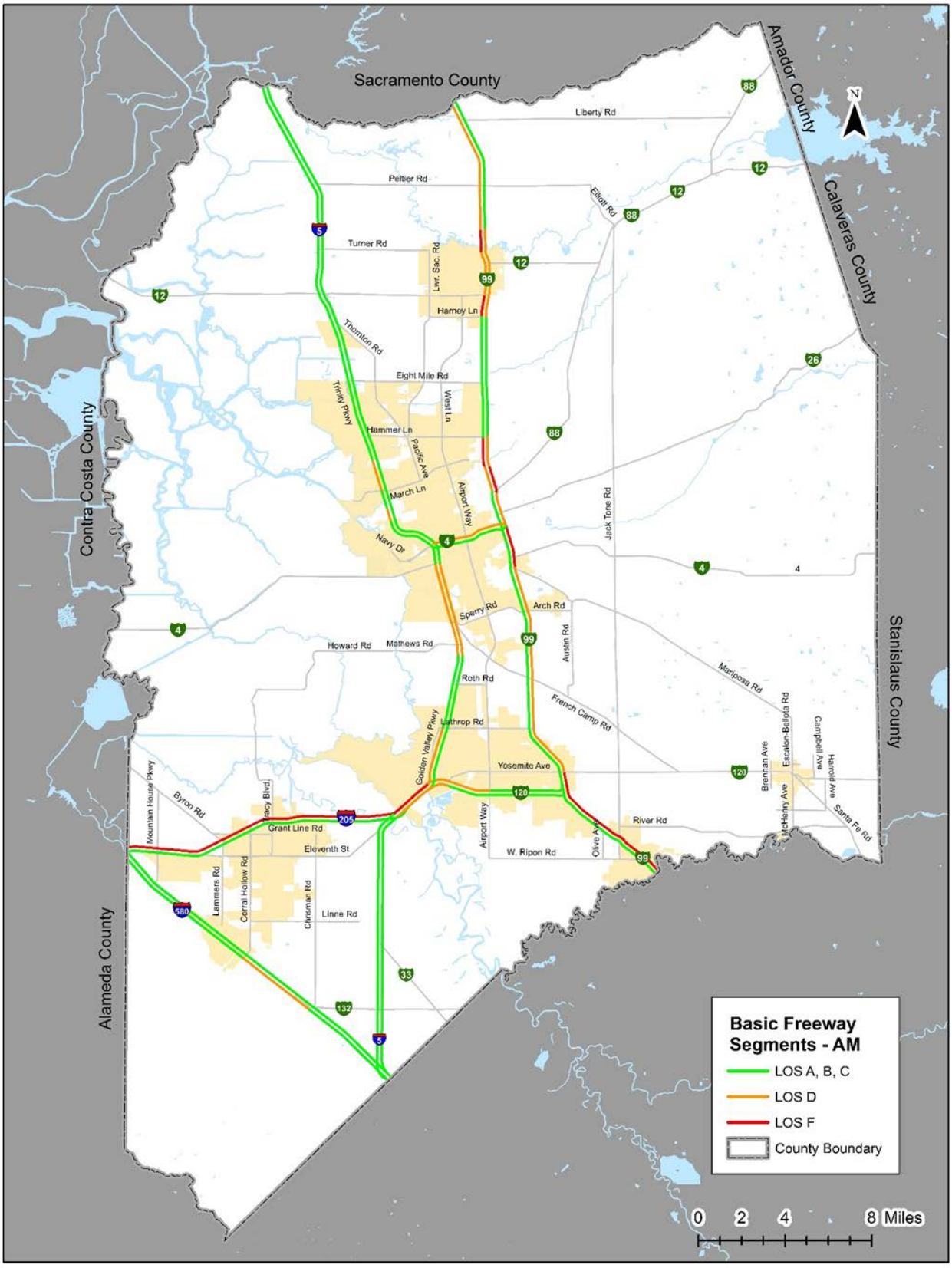


Figure 8: San Joaquin County RCMP 2020 Basic Freeway Segment LOS PM

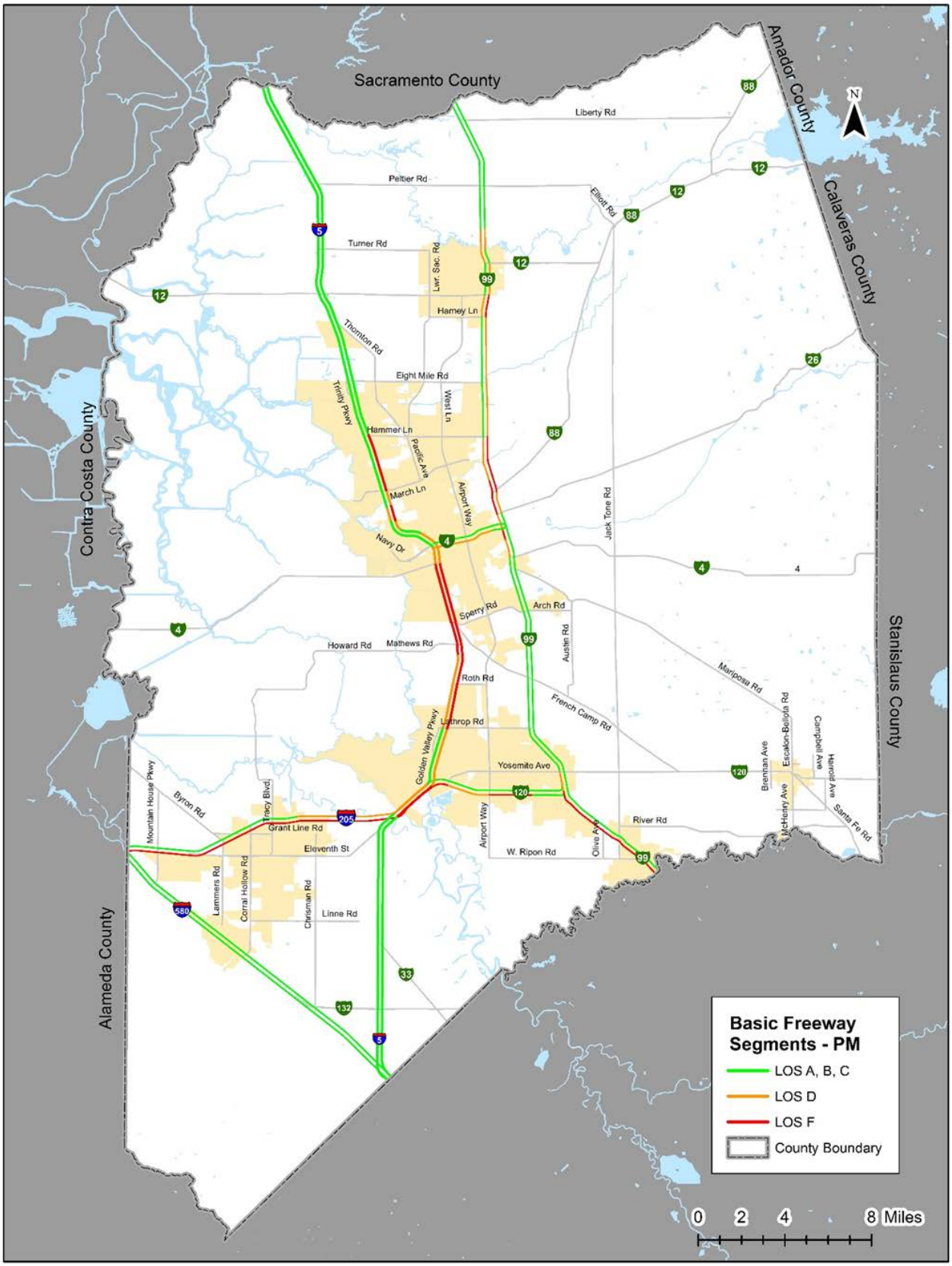


Table 14. 2020 RCMP Freeway Segment Level of Service (LOS) (Northbound / Eastbound)

Route	ID	From		To		AM		PM	
		Post Mile	Location	Post Mile	Location	Density[1] (pc/mi/ln)	LOS[2]	Density[1] (pc/mi/ln)	LOS[2]
4	4Cross01EB	16.059	Stockton, North Jct Rte 5	17.052	Stanislaus Street	23.08	C	26.13	D
	4Cross02EB	17.052	Stanislaus Street	17.706	Stockton, Wilson Way	22.80	C	28.64	D
	4Cross03EB	17.706	Stockton, Wilson Way	18.773	Stockton, Filbert Street	19.77	C	28.27	D
	4Cross04EB	18.773	Stockton, Filbert Street	19.44	North Jct. Rte. 99	16.87	B	22.98	C
5	5Fwy01NB	0	Stanislaus/San Joaquin County Line	0.68	Jct. Rte. 580 West	10.75	A	3.70	A
	5Fwy02NB	0.68	Jct. Rte. 580 West	3.444	Jct. Rte. 132	14.51	B	17.09	B
	5Fwy03NB	3.444	Jct. Rte. 132	6.467	Jct. Rte. 33 South	18.20	C	13.71	B
	5Fwy04NB	6.467	Jct. Rte. 33 South	11.056	Kasson Road Interchange	14.15	B	12.00	B
	5Fwy05NB	11.056	Kasson Road Interchange	11.801	Old Route 50; 11Th Street	8.48	A	15.25	B
	5Fwy06NB	11.801	Old Route 50; 11Th Street	12.623	Jct. Rte. 205 West	8.37	A	19.50	C
	5Fwy07NB	12.623	Jct. Rte. 205 West	14.834	Jct. Rte. 120 East	29.01	D	>45	F
	5Fwy08NB	14.834	Jct. Rte. 120 East	17.516	Lathrop Road	19.02	C	32.75	D
	5Fwy09NB	17.516	Lathrop Road	20.951	French Camp Overcrossing	24.27	C	38.90	E
	5Fwy10NB	20.951	French Camp Overcrossing	21.439	Mathews Road	31.21	D	39.94	E
	5Fwy11NB	21.439	Mathews Road	22.508	French Camp Turnpike Interchange	29.68	D	38.26	E
	5Fwy12NB	22.508	French Camp Turnpike Interchange	24.637	Stockton, Eighth Street	29.75	D	>45	F
	5Fwy13NB	24.637	Stockton, Eighth Street	25.365	Stockton, Jct. Rte. 4	29.62	D	>45	F
	5Fwy14NB	25.365	Stockton, Jct. Rte. 4	26.185	Stockton, Jct. Rte. 4	24.97	C	33.10	D
	5Fwy15NB	26.185	Stockton, Jct. Rte. 4	26.991	Pershing Avenue Interchange	18.37	C	27.63	D
	5Fwy16NB	26.991	Pershing Avenue Interchange	27.906	Stockton, Monte Diablo Avenue Interchange	11.60	B	23.90	C
	5Fwy17NB	27.906	Stockton, Monte Diablo Avenue Interchange	28.533	Country Club Boulevard	14.22	B	27.56	D
	5Fwy18NB	28.533	Country Club Boulevard	29.516	Plymouth Rd/Ryde Ave	22.78	C	>45	F
	5Fwy19NB	29.516	Plymouth Road/Ryde Avenue	29.99	Stockton, March Lane	16.57	B	29.98	D
	5Fwy20NB	29.99	Stockton, March Lane	31.451	Benjamin Holt Drive Interchange	15.31	B	43.94	E
	5Fwy21NB	31.451	Benjamin Holt Drive Interchange	32.664	Stockton, Hammer Lane	16.60	B	36.14	E
	5Fwy22NB	32.664	Stockton, Hammer Lane	35.302	Atherton/Eight Mile Roads Interchange	14.98	B	25.86	C
	5Fwy23NB	35.302	Atherton/Eight Mile Roads Interchange	39.573	Jct. Rte. 12	20.26	C	16.89	B
	5Fwy24NB	39.573	Jct. Rte. 12	44.712	Peltier Road	16.58	B	13.40	B
	5Fwy25NB	44.712	Peltier Road	47.602	Walnut Grove Road	12.17	B	2.52	A
	5Fwy26NB	47.602	Walnut Grove Road	49.819	San Joaquin/Sacramento County Line	7.40	A	6.26	A
99	99Fwy01NB	0	Stanislaus/San Joaquin County Line	0.888	Ripon, Main Street	>45	F	19.34	C
	99Fwy02NB	0.888	Ripon, Main Street	1.708	Milgeo Avenue	>45	F	20.47	C
	99Fwy03NB	1.708	Milgeo Avenue	2.374	Jacktone Road	>45	F	22.42	C
	99Fwy04NB	2.374	Jacktone Road	5.822	South Jct. Rte. 120	42.21	E	18.32	C
	99Fwy05NB	5.822	South Jct. Rte. 120	6.654	Manteca, North Jct. Rte. 120	39.68	E	16.48	B
	99Fwy06NB	6.654	Manteca, North Jct. Rte. 120	8.829	North Manteca Interchange	28.78	D	9.11	A
	99Fwy07NB	8.829	North Manteca Interchange	11.468	Turner Station/French Camp Road	34.99	D	9.55	A
	99Fwy08NB	11.468	Turner Station/French Camp Road	16.698	Stockton, Mariposa Road	27.66	D	13.45	B
	99Fwy09NB	16.698	Stockton, Mariposa Road	17.216	Jct. Rte. 4 East	38.86	E	18.27	C

Route	ID	From		To		AM		PM	
		Post Mile	Location	Post Mile	Location	Density[1] (pc/mi/ln)	LOS[2]	Density[1] (pc/mi/ln)	LOS[2]
	99Fwy10NB	17.216	Jct. Rte. 4 East	18.022	Jct. Rte. 26 West	>45	F	21.05	C
	99Fwy11NB	18.022	Jct. Rte. 26 West	18.683	Jct. Rte. 4 West	>45	F	23.23	C
	99Fwy12NB	18.683	Jct. Rte. 4 West	19.29	Jct. Rte. 26 East	27.57	D	24.80	C
	99Fwy13NB	19.29	Jct. Rte. 26 East	20.336	Jct. Rte. 88 Northeast	34.72	D	27.57	D
	99Fwy14NB	20.336	Jct. Rte. 88 Northeast	20.876	Cherokee Road Interchange	43.58	E	35.54	E
	99Fwy15NB	20.876	Cherokee Road Interchange	21.674	Wilson Way	36.88	E	40.97	E
	99Fwy16NB	21.674	Wilson Way	22.922	Hammer Lane	29.31	D	36.63	E
	99Fwy17NB	22.922	Hammer Lane	24.033	Morada Lane	16.02	B	26.70	D
	99Fwy18NB	24.033	Morada Lane	29.004	South Lodi Interchange	16.31	B	27.54	D
	99Fwy19NB	29.004	South Lodi Interchange	29.499	Lodi, Jct. Rte. 12 West	30.47	D	37.09	E
	99Fwy20NB	29.499	Lodi, Jct. Rte. 12 West	30.974	Lodi, Jct. Rte. 12 East	26.13	D	27.73	D
	99Fwy21NB	30.974	Lodi, Jct. Rte. 12 East	31.578	Lodi, Turner Road	26.60	D	25.60	C
	99Fwy22NB	31.578	Lodi, Turner Road	32.573	Woodbridge Road	27.09	D	27.68	D
	99Fwy23NB	32.573	Woodbridge Road	33.573	Acampo Road Interchange	22.00	C	23.55	C
	99Fwy24NB	33.573	Acampo Road Interchange	35.597	Jahant Road	22.38	C	24.33	C
	99Fwy25NB	35.597	Jahant Road	38.783	San Joaquin/Sacramento County Line	23.29	C	24.34	C
120	120FwyW01EB	0.493	Mossdale, Jct. Rte. 5	1.328	Yosemite Avenue Undercrossing	26.47	D	39.15	E
	120FwyW02EB	1.328	Yosemite Avenue Undercrossing	3.323	Airport Way	21.96	C	35.71	E
	120FwyW03EB	3.323	Airport Way	5.31	Manteca Road/Main Street	23.32	C	34.35	D
	120FwyW04EB	5.31	Manteca Road/Main Street	6.197	North Jct. Rte. 99	13.27	B	20.65	C
205	205Fwy01EB	0	Alameda/San Joaquin County Line	1.377	Patterson Pass Road Interchange	19.14	C	>45	F
	205Fwy02EB	1.377	Patterson Pass Road Interchange	3.369	Old Route 50	17.52	B	>45	F
	205Fwy03EB	3.369	Old Route 50	8.127	Tracy, Mac Arthur Drive	21.63	C	41.31	E
	205Fwy04EB	8.127	Tracy, Mac Arthur Drive	12.686	Jct. Rte. 5	6.72	A	>45	F
580	580Fwy01EB	0	Jct. Rte. 5	4.329	Jct. Rte. 132 East	18.91	C	2.54	A
	580Fwy02EB	4.329	Jct. Rte. 132 East	8.149	Corral Hollow Road Interchange	34.27	D	6.58	A
	580Fwy03EB	8.149	Corral Hollow Road Interchange	15.34	San Joaquin/Alameda Cnty Line	2.78	A	16.06	B

1 Density expressed in pc/mi/ln, passenger cars per mile per lane

2 Level of service is based on density as described in Basic Freeway Segment, Chapter 11, HCM 2010

Density > 45 reflects unstable flow conditions (i.e., LOS F). Conditions beyond this density level are not measured by the Highway Capacity Manual methods

Source: SJCOG LOS Workbook, 2020

Table 15. 2020 RCMP Freeway Segment Level of Service (LOS) (Southbound / Westbound)

Route	ID	From		To		AM		PM	
		Post Mile	Location	Post Mile	Location	Density[1] (pc/mi/ln)	LOS[2]	Density[1] (pc/mi/ln)	LOS[2]
4	4Cross01WB	16.059	Stockton, North Jct Rte 5	17.052	Stanislaus Street	31.56	D	23.60	C
	4Cross02WB	17.052	Stanislaus Street	17.706	Stockton, Wilson Way	26.97	D	23.30	C
	4Cross03WB	17.706	Stockton, Wilson Way	18.773	Stockton, Filbert Street	31.45	D	21.43	C
	4Cross04WB	18.773	Stockton, Filbert Street	19.44	North Jct. Rte. 99	31.10	D	19.68	C
5	5Fwy01SB	0	Stanislaus/San Joaquin County Line	0.68	Jct. Rte. 580 West	3.52	A	11.10	B
	5Fwy02SB	0.68	Jct. Rte. 580 West	3.444	Jct. Rte. 132	20.75	C	14.46	B
	5Fwy03SB	3.444	Jct. Rte. 132	6.467	Jct. Rte. 33 South	7.43	A	14.92	B
	5Fwy04SB	6.467	Jct. Rte. 33 South	11.056	Kasson Road Interchange	6.20	A	12.11	B
	5Fwy05SB	11.056	Kasson Road Interchange	11.801	Old Route 50; 11Th Street	11.63	B	7.28	A
	5Fwy06SB	11.801	Old Route 50; 11Th Street	12.623	Jct. Rte. 205 West	18.68	C	10.80	A
	5Fwy07SB	12.623	Jct. Rte. 205 West	14.834	Jct. Rte. 120 East	>45	F	30.32	D
	5Fwy08SB	14.834	Jct. Rte. 120 East	17.516	Lathrop Road	27.09	D	22.93	C
	5Fwy09SB	17.516	Lathrop Road	20.951	French Camp Overcrossing	26.00	C	34.14	D
	5Fwy10SB	20.951	French Camp Overcrossing	21.439	Mathews Road	30.14	D	39.64	E
	5Fwy11SB	21.439	Mathews Road	22.508	French Camp Turnpike Interchange	29.52	D	35.11	E
	5Fwy12SB	22.508	French Camp Turnpike Interchange	24.637	Stockton, Eighth Street	34.33	D	37.96	E
	5Fwy13SB	24.637	Stockton, Eighth Street	25.365	Stockton, Jct. Rte. 4	32.48	D	37.09	E
	5Fwy14SB	25.365	Stockton, Jct. Rte. 4	26.185	Stockton, Jct. Rte. 4	23.93	C	29.56	D
	5Fwy15SB	26.185	Stockton, Jct. Rte. 4	26.991	Pershing Avenue Interchange	18.58	C	24.58	C
	5Fwy16SB	26.991	Pershing Avenue Interchange	27.906	Stockton, Monte Diablo Avenue Interchange	14.30	B	17.58	B
	5Fwy17SB	27.906	Stockton, Monte Diablo Avenue Interchange	28.533	Country Club Boulevard	17.17	B	21.07	C
	5Fwy18SB	28.533	Country Club Boulevard	29.516	Plymouth Road/Ryde Avenue	27.63	D	34.72	D
	5Fwy19SB	29.516	Plymouth Road/Ryde Avenue	29.99	Stockton, March Lane	18.68	C	23.57	C
	5Fwy20SB	29.99	Stockton, March Lane	31.451	Benjamin Holt Drive Interchange	27.28	D	20.29	C
	5Fwy21SB	31.451	Benjamin Holt Drive Interchange	32.664	Stockton, Hammer Lane	24.07	C	21.20	C
	5Fwy22SB	32.664	Stockton, Hammer Lane	35.302	Atherton/Eight Mile Roads Interchange	16.26	B	18.37	C
	5Fwy23SB	35.302	Atherton/Eight Mile Roads Interchange	39.573	Jct. Rte. 12	13.66	B	15.48	B
	5Fwy24SB	39.573	Jct. Rte. 12	44.712	Peltier Road	8.18	A	10.97	A
	5Fwy25SB	44.712	Peltier Road	47.602	Walnut Grove Road	-0.11	A	4.74	A
	5Fwy26SB	47.602	Walnut Grove Road	49.819	San Joaquin/Sacramento County Line	-1.15	A	8.08	A
99	99Fwy01SB	0	Stanislaus/San Joaquin County Line	0.888	Ripon, Main Street	16.95	B	>45	F
	99Fwy02SB	0.888	Ripon, Main Street	1.708	Milgeo Avenue	18.20	C	>45	F
	99Fwy03SB	1.708	Milgeo Avenue	2.374	Jacktone Road	19.83	C	>45	F
	99Fwy04SB	2.374	Jacktone Road	5.822	South Jct. Rte. 120	16.54	B	>45	F
	99Fwy05SB	5.822	South Jct. Rte. 120	6.654	Manteca, North Jct. Rte. 120	13.03	B	31.87	D
	99Fwy06SB	6.654	Manteca, North Jct. Rte. 120	8.829	North Manteca Interchange	8.42	A	23.14	C
	99Fwy07SB	8.829	North Manteca Interchange	11.468	Turner Station/French Camp Road	6.43	A	22.22	C
	99Fwy08SB	11.468	Turner Station/French Camp Road	16.698	Stockton, Mariposa Road	11.15	B	18.78	C
	99Fwy09SB	16.698	Stockton, Mariposa Road	17.216	Jct. Rte. 4 East	15.87	B	24.88	C

Route	ID	From		To		AM		PM	
		Post Mile	Location	Post Mile	Location	Density[1] (pc/mi/ln)	LOS[2]	Density[1] (pc/mi/ln)	LOS[2]
	99Fwy10SB	17.216	Jct. Rte. 4 East	18.022	Jct. Rte. 26 West	19.07	C	31.87	D
	99Fwy11SB	18.022	Jct. Rte. 26 West	18.683	Jct. Rte. 4 West	20.17	C	39.12	E
	99Fwy12SB	18.683	Jct. Rte. 4 West	19.29	Jct. Rte. 26 East	22.58	C	32.60	D
	99Fwy13SB	19.29	Jct. Rte. 26 East	20.336	Jct. Rte. 88 Northeast	24.93	C	42.28	E
	99Fwy14SB	20.336	Jct. Rte. 88 Northeast	20.876	Cherokee Road Interchange	33.26	D	43.39	E
	99Fwy15SB	20.876	Cherokee Road Interchange	21.674	Wilson Way	31.67	D	29.68	D
	99Fwy16SB	21.674	Wilson Way	22.922	Hammer Lane	36.17	E	30.00	D
	99Fwy17SB	22.922	Hammer Lane	24.033	Morada Lane	21.10	C	19.65	C
	99Fwy18SB	24.033	Morada Lane	29.004	South Lodi Interchange	20.83	C	21.62	C
	99Fwy19SB	29.004	South Lodi Interchange	29.499	Lodi, Jct. Rte. 12 West	>45	F	31.69	D
	99Fwy20SB	29.499	Lodi, Jct. Rte. 12 West	30.974	Lodi, Jct. Rte. 12 East	34.23	D	25.32	C
	99Fwy21SB	30.974	Lodi, Jct. Rte. 12 East	31.578	Lodi, Turner Road	32.98	D	28.55	D
	99Fwy22SB	31.578	Lodi, Turner Road	32.573	Woodbridge Road	35.51	E	28.24	D
	99Fwy23SB	32.573	Woodbridge Road	33.573	Acampo Road Interchange	28.33	D	23.05	C
	99Fwy24SB	33.573	Acampo Road Interchange	35.597	Jahant Road	29.00	D	23.47	C
	99Fwy25SB	35.597	Jahant Road	38.783	San Joaquin/Sacramento County Line	27.54	D	24.85	C
120	120FwyW01WB	0.493	Mossdale, Jct. Rte. 5	1.328	Yosemite Avenue Undercrossing	34.23	D	25.63	C
	120FwyW02WB	1.328	Yosemite Avenue Undercrossing	3.323	Airport Way	27.80	D	20.82	C
	120FwyW03WB	3.323	Airport Way	5.31	Manteca Road/Main Street	24.70	C	23.58	C
	120FwyW04WB	5.31	Manteca Road/Main Street	6.197	North Jct. Rte. 99	15.40	B	12.87	B
205	205Fwy01WB	0	Alameda/San Joaquin County Line	1.377	Patterson Pass Road Interchange	-328.55	F	14.54	B
	205Fwy02WB	1.377	Patterson Pass Road Interchange	3.369	Old Route 50	>45	F	13.89	B
	205Fwy03WB	3.369	Old Route 50	8.127	Tracy, Mac Arthur Drive	>45	F	16.35	B
	205Fwy04WB	8.127	Tracy, Mac Arthur Drive	12.686	Jct. Rte. 5	>45	F	26.68	D
580	580Fwy01WB	0	Jct. Rte. 5	4.329	Jct. Rte. 132 East	0.97	A	13.60	B
	580Fwy02WB	4.329	Jct. Rte. 132 East	8.149	Corral Hollow Road Interchange	4.69	A	22.38	C
	580Fwy03WB	8.149	Corral Hollow Road Interchange	15.34	San Joaquin/Alameda Cnty Line	17.72	B	7.09	A

1 Density expressed in pc/mi/ln, passenger cars per mile per lane

2 Level of service is based on density as described in Basic Freeway Segment, Chapter 11, HCM 2010

Density > 45 reflects unstable flow conditions (i.e., LOS F). Conditions beyond this density level are not measured by the Highway Capacity Manual methods

Source: SJCOG LOS Workbook, 2020

3.2.2.1 Merge / Diverge Analysis

A merge /diverge analysis was introduced to this report as an informational item. City of Manteca expressed a concern that the 2016 RCMP Monitoring Report did not show SR-120 segment between Airport Way and SR-99 deficient before exemptions for interregional trips during the November 2016 TAC Meeting. This additional layer of analysis was added as a result.

Merge / diverge analysis assesses the average speed, capacity (passenger cars per mile per lane), and LOS in select freeway interchanges during AM and PM peak commute periods. Segments analyzed included a portion of SR-99 near middle to northern San Joaquin County, I-5 near City of Lathrop and Stockton, and all of SR-120. It is important to note that the merge/diverge analysis could not performed at the following interchanges due to a lack of current Caltrans and turning movement data.

- I-5 and Pershing Avenue
- I-5 and Fremont Street
- SR 99 and Armstrong Road
- SR 99 and Harney Lane
- SR 120 and Guthmiller Road
- SR 120 and Main Street

As shown in **Table 16**, there are 5 merge/diverge locations during AM peak commute period and 8 during PM peak commute period with a rating of LOS E of F. In these occurrences, average speed was deemed “unstable” due the high density of passenger cars per mile per lane. There are 4 occurrences on I-5, 7 on SR-99, and 2 on SR-120. The majority of locations found the on/off ramps with unfavorable conditions (i.e. LOS E or F) lied along segments rated LOS D or better. For example, the eastbound merge at SR-120 and Airport Way was rated LOS F while SR-120 between Airport Way and Main Street received a LOS D rating during PM peak period. Eastbound merge at SR-120 and Union Road also received LOS F rating while the same above segment receiving LOS D rating during PM peak period.

As an informational analysis, LOS ratings of E or F in the merge/diverge analysis are not classified as RCMP deficiencies and do not trigger the need for a Deficiency Plan. However, SJCOG and member agencies may still program state, federal, and local funds to remedy the congestion in the area.

Table 16: Merge / Diverge Analysis of Specific Basic Freeway Segments

Route	Interchange	Direction	Ramp type	Freeway Section Type	AM Peak			PM Peak		
					Average Speed (mph)	Density[1] (pc/mi/ln)	LOS[2]	Average Speed (mph)	Density[1] (pc/mi/ln)	LOS[2]
5	Louise Ave	NB	On	Merge	57	19.6	B	Unstable	>35	F
			Off	Diverge	54	14.9	B	53	25.2	C
		SB	On	Merge	55	27.3	C	56	24.0	C
			Off	Diverge	54	22.5	C	54	19.3	B
	Lathrop Rd	NB	On	Merge	57	24.8	C	Unstable	>35	F
			Off	Diverge	54	13.6	B	54	23.9	C
		SB	On	Merge	55	26.6	C	Unstable	>35	F
			Off	Diverge	54	21.2	C	54	18.1	B
	Monte Diablo	NB	On	Weave	49	25.5	C	Unstable	>35	F
			Off	Diverge	53	14.0	B	53	26.5	C
		SB	On	Merge	57	6.9	A	55	22.5	C
			Off	Weave	47	31.3	D	45	33.9	D
99	Armstrong Rd	NB	On	Merge	58	18.2	B	56	28.5	D
			Off	Diverge	55	17.3	B	55	27.4	C
		SB3	Off	Diverge	55	22.0	C	55	22.8	C
	Harney Ln	NB	On	Merge	50	32.9	D	Unstable	>35	F
			Off	Diverge	55	17.9	B	55	27.8	C
		SB3	Off	Diverge	Unstable	>35	F	55	23.3	C
	Victor Rd	NB	On	Merge	51	30.6	D	51	29.5	D
		SB	On	Merge	50	32.6	D	51	28.0	D
			Off	Diverge	52	25.2	C	53	21.3	C
	South Lodi OC	NB	Off	Diverge	51	19.7	B	55	17.3	B
	Cherokee Ln	SB	On	Merge	44	39.4	E	Unstable	>35	F
	Turner Rd	NB	On	Weave	46	37.4	E	48	27.5	C
			Off	Diverge	51	19.9	B	51	18.8	B
		SB	Off	Weave	46	32.0	D	47	26.1	C
	Mokelumne River	NB	On	Merge	51	30.8	D	51	31.3	D

Route	Interchange	Direction	Ramp type	Freeway Section Type	AM Peak			PM Peak		
					Average Speed (mph)	Density[1] (pc/mi/ln)	LOS[2]	Average Speed (mph)	Density[1] (pc/mi/ln)	LOS[2]
			Off	Weave	46	37.4	E	48	27.5	C
	Woodbridge Rd	NB	On	Merge	52	23.8	C	52	25.2	C
			Off	Diverge	51	28.4	D	51	29.0	D
		SB	On	Merge	49	36.3	E	52	25.7	C
			Off	Diverge	51	29.7	D	51	29.7	D
	Acampo Rd	NB	On	Merge	54	23.9	C	52	25.1	C
			Off	Diverge	51	23.2	C	51	24.9	C
		SB	On	Merge	51	30.3	D	54	25.5	C
			Off	Diverge	53	28.9	D	51	22.5	C
	Peltier Rd	NB	On	Merge	54	24.4	C	54	26.3	C
			Off	Diverge	52	23.4	C	52	25.5	C
		SB	On	Merge	52	31.9	D	54	26.5	C
			Off	Diverge	52	30.4	D	52	24.5	C
	Jahant Rd	NB	On	Merge	55	27.3	C	55	28.3	D
			Off	Diverge	52	23.5	C	52	25.6	C
	Collier Rd	NB	On	Merge	55	27.7	C	55	28.8	D
			Off	Diverge	54	22.1	C	54	23.3	C
		SB	On	Merge	54	32.3	D	54	30.0	D
			Off	Diverge	54	30.1	D	54	27.5	C
	Liberty Rd	SB	On	Merge	53	32.5	D	54	30.1	D
			Off	Diverge	54	27.9	C	54	25.2	C
120	Airport Way	EB	On	Merge	55	20.6	C	Unstable	>35	F
			Off	Diverge	53	15.6	B	53	27.8	C
		WB	On	Merge	54	25.5	C	57	18.9	B
			Off	Diverge	53	21.7	C	53	14.2	B
	Union Ave	EB	On	Merge	55	20.5	C	Unstable	>35	F
			Off	Diverge	52	16.5	B	52	27.2	C
		WB	On	Merge	54	23.1	C	54	22.5	C

Route	Interchange	Direction	Ramp type	Freeway Section Type	AM Peak			PM Peak		
					Average Speed (mph)	Density[1] (pc/mi/ln)	LOS[2]	Average Speed (mph)	Density[1] (pc/mi/ln)	LOS[2]
			Off	Diverge	52	18.7	B	52	17.4	B
	Main St	EB3	Off	Diverge	52	14.9	B	52	25.7	C
		WB	On	Merge	54	23.1	C	54	22.5	C
			Off	Diverge	52	18.7	B	52	17.4	B

1 Density expressed in pc/mi/ln, passenger cars per mile per lane

2 Level of service is based on density as described in Freeway Merge and Diverge Segments, Chapter 14, HCM 6

3 The adjacent ramp volumes are unavailable, therefore the LOS may be worse then presented here

3.2.3 Multi-Lane Highway Segments

To calculate LOS for multi-lane highway segments the latest traffic information published on the Caltrans website was added to the LOS Workbook, including AADT (2017), truck percentages (2017), K Factor (2017) and D Factor (2017).

Table 17 shows the a.m. and p.m. peak hour LOS results for the RCMP multi-lane highway segments. All RCMP multi-lane highway segments currently operate at LOS A in both a.m. and p.m. peak hours.

The multi-lane highway segment layer in the ArcGIS RCMP database was updated with the new traffic information. **Figure 8** illustrates the LOS results for all RCMP multi-lane highway segments.

Figure 8: San Joaquin County RCMP 2020 Multi-Lane Highway Segment LOS

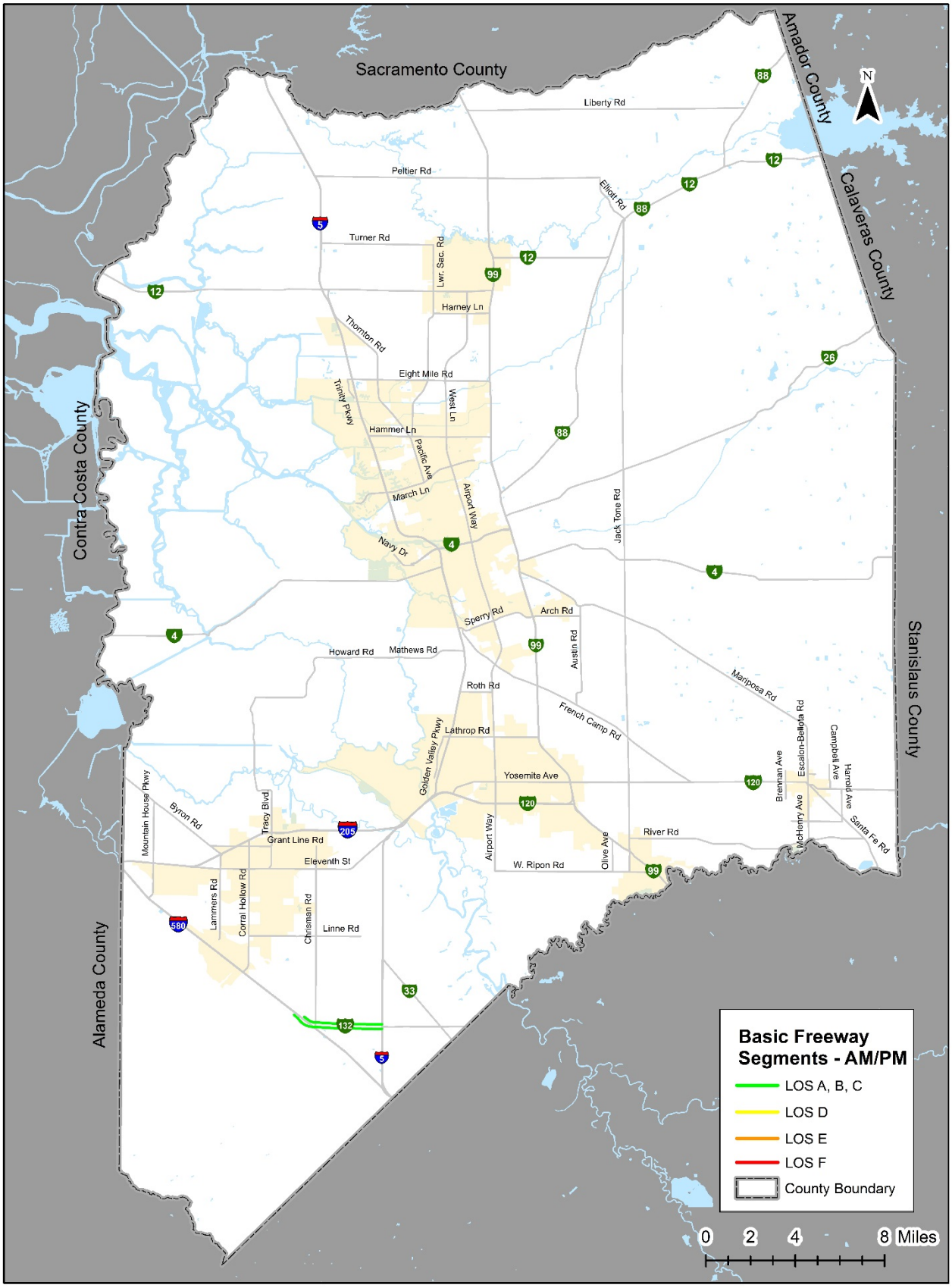


Table 17. 2020 RCMP Multi-Lane Highway Segment Level of Service (LOS)

Route No.	Dir.	From		To		AM		PM	
		Post Mile	Location	Post Mile	Location	Density[1] (pc/mi/ln)	LOS[2]	Density[1] (pc/mi/ln)	LOS[2]
132	EB	0	Jct. Rte. 580	0.243	Chrisman Road Interchange	5.1	A	6.7	A
	WB	0.243	Chrisman Road Interchange	0	Jct. Rte. 580	10.9	A	4.7	A
	EB	0.243	Chrisman Road Interchange	3.24	Jct. Rte. 5	6.3	A	7.3	A
	WB	3.24	Jct. Rte. 5	0.243	Chrisman Road Interchange	8.5	A	5.0	A

1 Density expressed in pc/mi/ln, passenger cars per mile per lane

2 Level of service is based on density as described in Basic Freeway Segment, Chapter 11, HCM 2010

Source: SJCOG LOS Workbook, 2020

3.2.4 Two-Lane Highway

The LOS calculations for the two-lane highway segments were updated in the LOS Workbook to include the latest available traffic data. The most recent information published on the Caltrans website were collected and inputted to the worksheet, including AADT (2017), K Factor (2017) and D Factor (2017).

Table 18 lists the two-lane highway segments operating at LOS E or F, while Table 16 shows the LOS results for RCMP two-lane highway segments. Based on this analysis, 14 two-lane highway segments operate at LOS E during either the a.m. or p.m. peak period.

Table 18. 2020 Two-Lane Highway Segments Operational Deficiencies

Route	From	To	LOS	
			AM	PM
4	Contra Costa/San Joaquin Co Line	Tracy Boulevard	E	E
	Tracy Boulevard	Inland Drive	E	D
	Inland Drive	Maybeck Road	E	E
	Maybeck Road	Roberts Island Road	E	E
	Roberts Island Road	Fresno Avenue	E	E
12	Sacramento/San Joaquin Co Line	Glasscock/Tower Parkway	E	E
	Glasscock/Tower Parkway	Guard Road	E	E
	Guard Road	Jct. Rte. 5	E	E
	Jct. I-5	Thornton Road	E	E
	Thornton Road	Lower Sacramento Road	E	E
26	Cardinal Avenue	Alpine Road	E	D
88	Wilcox Road	White Lane	E	E
	White Lane	Fairchild Lane	D	E
	Lockeford, Jct. Rte. 12 W	Jacktone Road	E	E
	Disch Road	Mackville Road	E	E
120	Jacktone Road	French Camp Road	E	E
	French Camp Road	Escalon, Main/Kern Street	D	E
132	Jct. Rte. 5	Vernalis, Jct. Rte. 33	E	E
	Vernalis, Jct. Rte. 33	San Joaquin/Stanislaus Co Line	E	E

The two-lane highway segment layer in the database was updated with the newly collected traffic information. **Figure 9** and **Figure 10** illustrates the LOS results for all RCMP two-lane highway segments. The worse LOS for either a.m. or p.m. peak hour is shown.

Figure 9: San Joaquin County RCMP 2020 Two-Lane Highway Segment LOS – AM Peak

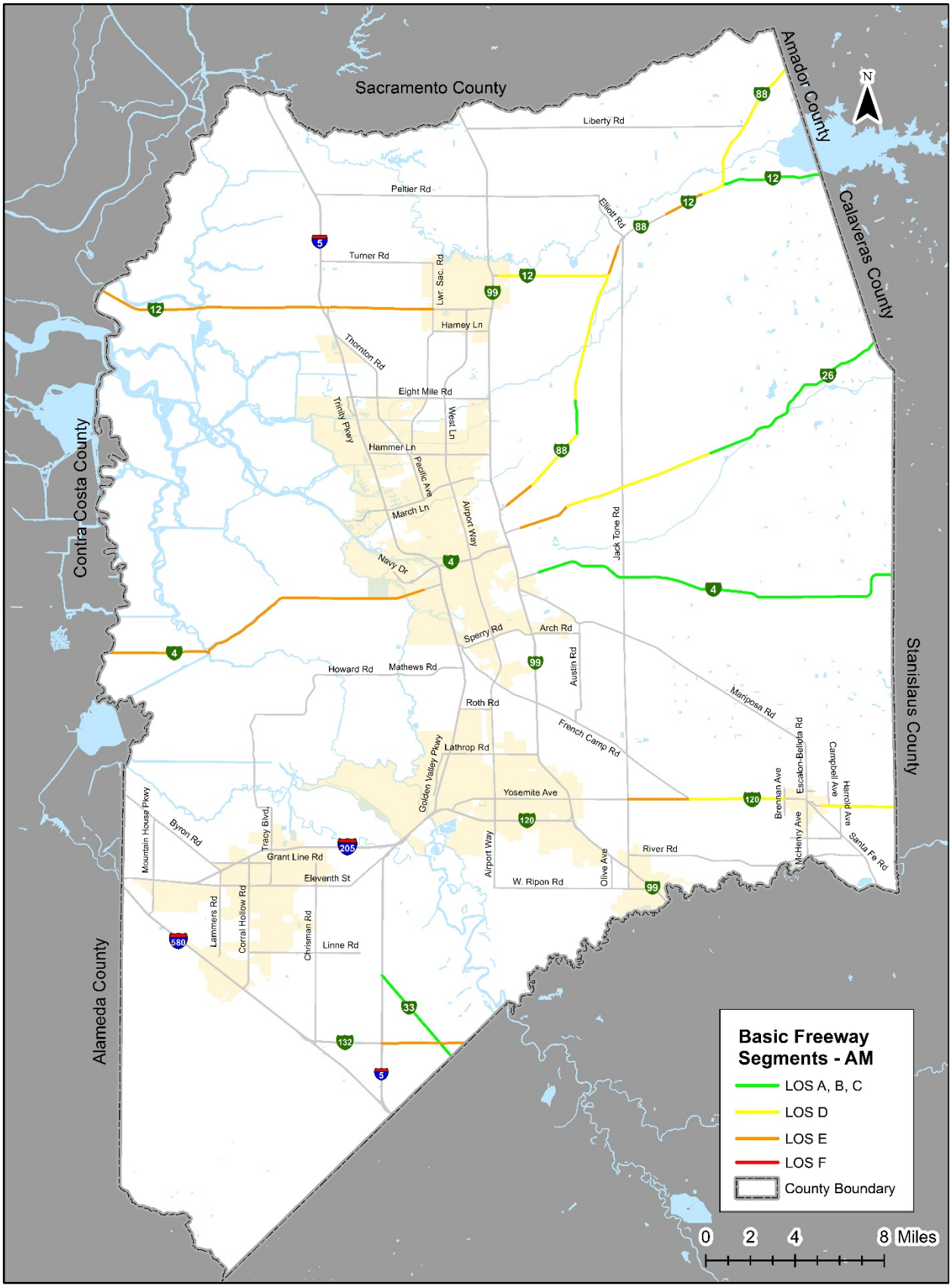


Figure 10: San Joaquin County RCMP 2020 Two-Lane Highway Segment LOS – PM Peak

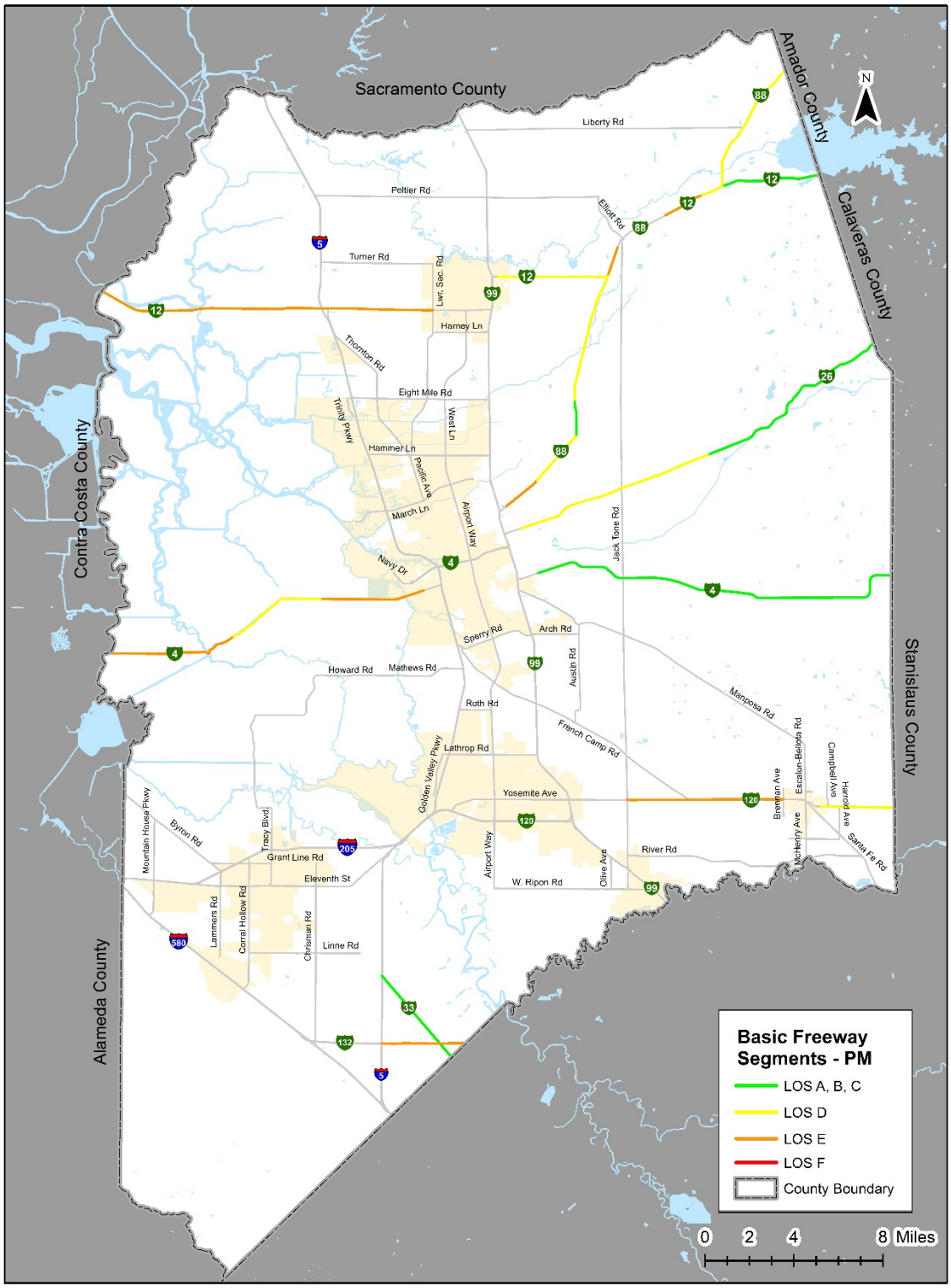


Table 19. 2020 RCMP Two-Lane Highway Segment Level of Service (LOS)

Route No.	From		To		Highway Class/Terrain	AADT	LOS	
	Post Mile	Location	Post Mile	Location			AM Peak	PM Peak
4	0	Contra Costa/San Joaquin Co Line	5.96	Tracy Boulevard	Class I - Level	12300	E	E
	5.96	Tracy Boulevard	10.49	Inland Drive	Class I - Level	10500	E	D
	10.49	Inland Drive	11.68	Maybeck Road	Class I - Level	12500	E	E
	11.68	Maybeck Road	14.045	Roberts Island Road	Class I - Level	12700	E	E
	14.045	Roberts Island Road	15.09	Fresno Avenue	Class I - Level	17050	E	E
	20.69	Walker Lane	24.87	Jack Tone Road	Class I - Level	5250	C	C
	24.87	Jack Tone Road	33.1	Farmington CDP	Class I - Level	5365	C	C
	33.1	Farmington CDP	34.14	Sonora Road	Class I - Level	4750	C	C
	34.14	Sonora Road	38.059	San Joaquin/Stanislaus Co Line	Class I - Level	3650	C	C
12	0	Sacramento/San Joaquin Co Line	5.39	Glasscock/Tower Parkway	Class I - Level	16900	E	E
	5.39	Glasscock/Tower Parkway	8.83	Guard Road	Class I - Level	15550	E	E
	8.83	Guard Road	10.167	Jct. Rte. 5	Class I - Level	16600	E	E
	10.167	Jct. I-5	10.3	Thornton Road	Class I - Level	15000	E	E
	10.3	Thornton Road	15.155	Lower Sacramento Road	Class I - Level	14250	E	E
	18.36	Lodi, Cluff Avenue	20.9	Victor Bruella Road	Class I - Level	9650	D	D
	20.9	Victor Bruella Road	23.168	Lockeford, Jct. Rte. 88	Class I - Level	10850	D	D
	23.168	Lockeford, Jct. Rte. 88	27.642	San Joaquin/Calaveras Co Line	Class I - Level	5850	C	C
26	1.897	Cardinal Avenue	4.217	Alpine Road	Class I - Level	9875	E	D
	4.217	Alpine Road	6.85	Jacktone Road	Class I - Level	6850	D	D
	6.85	Jacktone Road	10	Duncan Road	Class I - Level	6550	D	D
	10	Duncan Road	10.7	Mill Street	Class I - Level	7150	D	D
	10.7	Mill Street	11.08	Linden, Flood/Front	Class I - Level	6300	D	D
	11.08	Linden, Flood/Front	15.06	Escalon/Bellota Road	Class I - Level	5450	C	C
	15.06	Escalon/Bellota Road	20.506	San Joaquin/Calaveras Co Line	Class I - Level	5125	C	C
33	0	Stanislaus/San Joaquin Co Line	0.818	Vernalis, Jct. Rte. 132	Class I - Level	4625	C	C
	0.818	Vernalis, Jct. Rte. 132	3.51	New Jerusalem, Durham Ferry	Class I - Level	3600	B	B
	3.51	New Jerusalem, Durham Ferry	4.826	Jct. Rte. 5	Class I - Level	3150	C	C
88	0.4	Wilcox Road	1.77	White Lane	Class I - Level	16250	E	E
	1.77	White Lane	2.22	Fairchild Lane	Class I - Level	13800	D	E
	2.22	Fairchild Lane	4.94	Waterloo, Ferguson/Comstock	Class I - Level	10600	D	D
	4.94	Waterloo, Ferguson/Comstock	6.518	Eight Mile Road	Class I - Level	7275	C	C
	6.518	Eight Mile Road	9.61	Harney Lane	Class I - Level	9150	D	D
	9.61	Harney Lane	12.24	Lockeford, Jct. Rte. 12 W	Class I - Level	10350	D	D
	12.24	Lockeford, Jct. Rte. 12 W	13.6	Jacktone Road	Class I - Level	14950	E	E
	16.27	Disch Road	18.08	Mackville Road	Class I - Level	11750	E	E
	18.08	Mackville Road	19.174	Clements, Jct. Rte. 12 E	Class I - Level	12050	D	D
	19.174	Clements, Jct. Rte. 12 E	22.093	Liberty Road	Class I - Level	11675	D	D
	22.093	Liberty Road	25.365	San Joaquin/Amador Co Line	Class I - Level	8400	D	D

Route No.	From		To		Highway Class/Terrain	AADT	LOS	
	Post Mile	Location	Post Mile	Location			AM Peak	PM Peak
120	8.84	Jacktone Road	11.64	French Camp Road	Class I - Level	13400	E	E
	11.64	French Camp Road	16.922	Escalon, Main/Kern Street	Class I - Level	16200	D	E
	17.885	Escalon, David Avenue	21.184	San Joaquin/Stanislaus Co Line	Class I - Level	9350	D	D
132	3.24	Jct. Rte. 5	5.86	Vernalis, Jct. Rte. 33	Class I - Level	13850	E	E
	5.86	Vernalis, Jct. Rte. 33	7.108	San Joaquin/Stanislaus Co Line	Class I - Level	13300	E	E

Source: SJCOG LOS Workbook, 2020

3.2.5 Arterial Street Segments

The LOS calculations for the arterial street segments were updated in the LOS Workbook with new traffic counts that were collected in fiscal year 2018-19.

Table 20 list the arterial segments operating at LOS E or F while **Table 21** shows the LOS results for all RCMP urban street segments.

Table 20. Urban Street Segments Operational Deficiencies

Roadway	From	To	Jurisdiction	AADT	LOS
SR-120	Main Street of Escalon	David Avenue of Escalon	Escalon	17044	E
Airport Way	Lathrop Road	Highway 120	Manteca	20487	F
Arch Airport Road	Highway 99	Airport Way	Stockton	21085	F
Byron Road	Alameda County	Lammers Road	County_Tracy	22607	F
Eight Mile Road	Lower Sacramento Road	Hwy. 99	County	20102	F
Eight Mile Road	Trinity Pkwy	I-5	Stockton	34207	F
Eight Mile Road	I-5	Thornton Road	Stockton	24567	F
SR-12/Kettelman Lane	South Hutchins Street	Hwy. 99	Lodi	29836	E
SR-120/Yosemite Avenue	Fremont	Hwy. 99	Manteca	30243	E
SR-4/Farmington Road	S. Jct. Rte 99	Walker Lane	County	16446	E

The ArcGIS RCMP database was updated for the urban street segments layer to be consistent with the modified LOS calculation worksheet. **Figure 11** illustrates the LOS results for all RCMP urban street segments.

Figure 11: San Joaquin County RCMP 2020 Urban Street Segment LOS

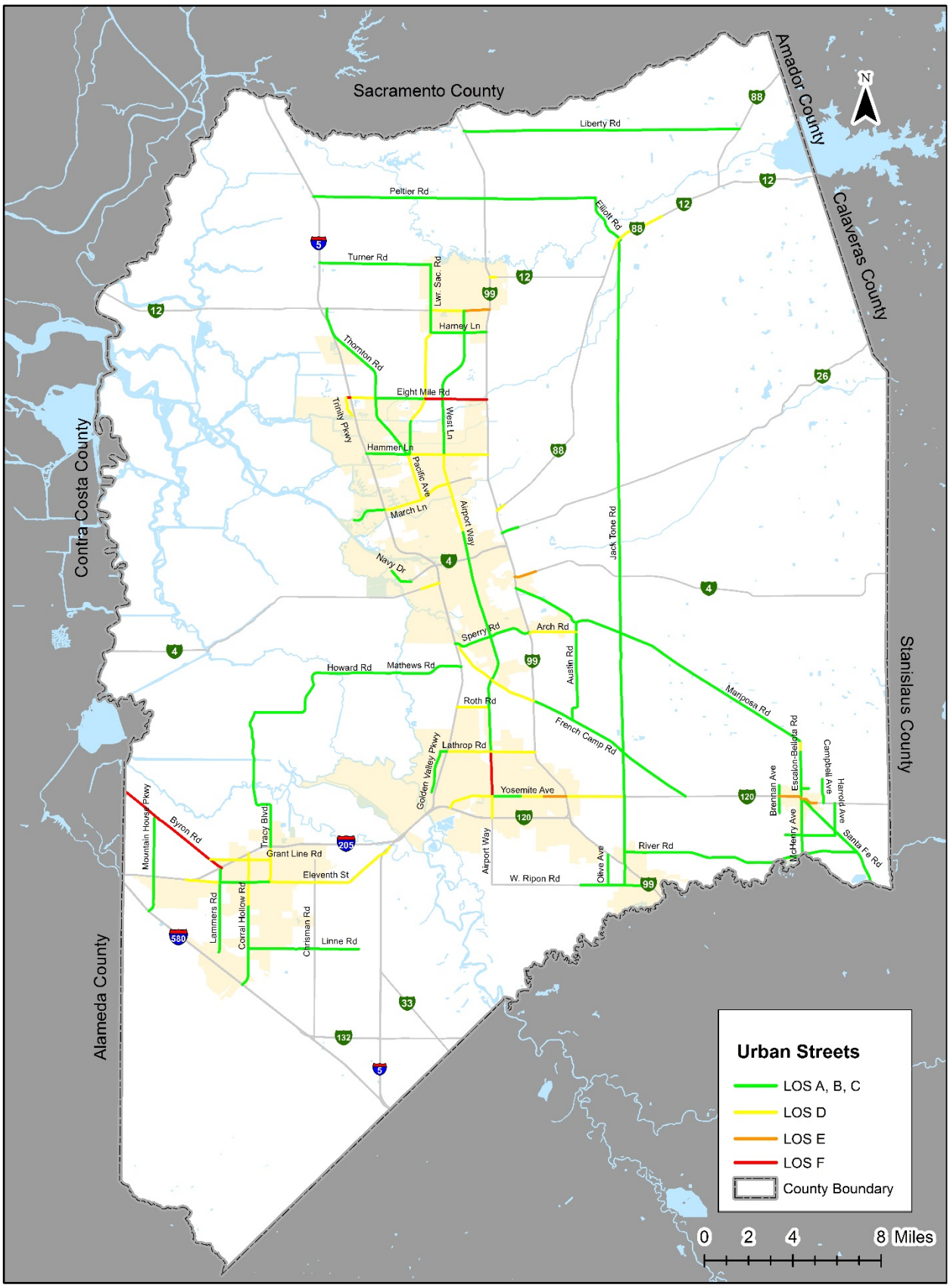


Table 21. 2020 RCMP Urban Roadway Segment Level of Service (LOS)

Roadway	From	To	Jurisdiction	AADT	LOS
SR-4	Fresno Avenue	Navy Drive/Stockton Street	Stockton	13829	D
SR-120	Main Street of Escalon	David Avenue of Escalon	Escalon	17044	E
11th Street/I-205 Bus.	Lammers Road	Alden Glen Drive	Tracy	26275	C
11th Street/I-205 Bus.	SR-205	Lammers Road	Tracy	23662	D
11th Street/I-205 Bus.	Alden Glen Drive	Tracy Boulvard	Tracy	27139	D
11th Street/I-205 Bus.	I-5	Tracy Boulevard	Tracy	22882	D
Ahern Road	SR-33	Bird Road	County_Tracy	-	-
Airport Way	Miner Avenue	Charter Way	Stockton	14556	C
Airport Way	Arch/Sperry Road	French Camp Road	County_Stockton	11804	C
Airport Way	French Camp Road	Lathrop Road	County	7934	C
Airport Way	Charter Way	Arch/Sperry Road	Stockton	13695	C
Airport Way	Lathrop Road	SR-120	Manteca	20487	F
Arch Airport Road	SR-99	Airport Way	Stockton	21085	F
Arch Road	SR-99	Airport Way	Stockton	10019	D
Arch Road	SR-99	Austin Road	County_Stockton	14866	D
Austin Road	French Camp Road	Arch Road	County_Stockton	2162	C
Austin Road	Arch Road	Mariposa Road	County_Stockton	4452	C
Bird Road	Linne Road	11th Street	County_Tracy	3587	C
Brennan Road	Ulrey Avenue	Parallel to Miller Avenue	County_Escalon	1011	C
Byron Road	Alameda County	Lammers Road	County_Tracy	22607	F
Campbell Avenue	SR-120	Parallel to Miller Avenue	County	663	C
Corral Hollow Road	Schulte Road	I-580	County_Tracy	8568	C
Corral Hollow Road	I-205	11th Street	Tracy	28799	D
Corral Hollow Road	11th Street	Schulte Road	Tracy	28939	D
East River Road	N. Ripon Road	Santa Fe Road	County	4936	C
Eight Mile Road	Thornton Road	Lower Sacramento Road	Stockton	19059	C
Eight Mile Road	Lower Sacramento Road	SR-99	County	20102	F
Eight Mile Road	Trinity Parkway	I-5	Stockton	34207	F
Eight Mile Road	I-5	Thornton Road	Stockton	24567	F
Escalon-Bellota Road/McHenry Avenue	Main Street	Lone Tree Road	Escalon	7312	C
Escalon-Bellota Road/McHenry Avenue	County Line	SR- 120	Escalon	6930	C
Escalon-Belota Road	Lone Tree Road	Mariposa Road	County	9605	D
Fremont Street/SR-26	Jct. Rte. 99	Cardinal Avenue	County	14066	C
French Camp Road	SR- 99	SR- 120	County	7480	C
French Camp Road	Airport Way	I-5	County	8140	C
French Camp Road	Sperry Road	SR-99	County	10262	D
Golden Valley Parkway	Lathrop Road	Brookhurst Boulevard	Lathrop	6189	C
Grant Line Road	Byron Road	Tracy Boulevard	Tracy	23313	D

Roadway	From	To	Jurisdiction	AADT	LOS
Hammer Lane	I-5	Thornton Road	Stockton	28392	C
Hammer Lane	Thornton Rd.	Tam O Shanter Drive	Stockton	25770	C
Hammer Lane (8 Lanes)	Tam O Shanter Drive	SR- 99	County	40537	D
Hammer Lane (8 Lanes)	Thornton Road	Tam O Shanter Drive	Stockton	34369	D
Harney Lane	Lower Sacramento Road	SR-99	County_Lodi	8136	C
Harrold Avenue	Jones Road	SR-120	County	2071	C
Howard Road	Tracy Boulevard	Roberts Road	County	6336	C
Hutchins Street	Harney Road	Kettleman Avenue	Lodi	13276	C
Hutchins Street	Harney Lane	Eight Mile Road	Lodi	14746	C
Jack Tone Road	Elliott/Tully Roads	Jct. Rte. 12 W.	County	1109	C
Jack Tone Road	Hwy. 12	Hwy. 26	County	4750	C
Jack Tone Road	Hwy. 26	Mariposa Rd.	County	3936	C
Jack Tone Road	Mariposa Road	SR- 99	County_Ripon	4714	C
Jack Tone Road	Main Street	SR-99	Ripon	7220	C
Jones Road	Dahlin Road	Harrold Avenue	County_Escalon	917	C
Lammers Road	I-205 (Byron Road)	11th Street	Tracy	7536	C
Lammers Road	11th St	I-580	Tracy	8210	C
Lathrop Road	Golden Valley Parkway	I-5	Lathrop	6450	C
Lathrop Road	I-5	Airport Way	Lathrop	13579	D
Lathrop Road	Airport Way	SR 99	Manteca	14024	D
Liberty Road	Hwy. 99	Hwy. 88	County	3644	C
Linne Road	Hwy. 33	Corral Hollow Road	Tracy	5113	C
Lower Sacramento Road	Turner Road	Harney Lane	County_Lodi	11308	C
Lower Sacramento Road	Bear Creek	Hammer Lane	Stockton	14790	C
Lower Sacramento Road	Harney Road	Eight Mile Road	County	10965	D
Lower Sacramento Road	Eight Mile Road	Bear Creek	Stockton	14527	D
March Lane	Buckley Cove Way	I-5	Stockton	21680	C
March Lane	Grouse Run Drive	Pacific Avenue	Stockton	36265	D
March Lane	Ridgeway Avenue (Extended)	West Lane	Stockton	33941	D
March Lane	Pacific Avenue	Ridgeway Avenue	Stockton	31154	D
March Lane	I-5	Grouse Run Dr.	Stockton	39967	D
Mariposa Road	Jack Tone Road	Escalon Belota Road	County	6719	C
Mariposa Road	Hwy. 99	Jack Tone Road	County_Stockton	5384	C
Matthews Road	Roberts Road	I-5	County	9587	C
McHenry Avenue	County Line	SR- 120	County	10362	D
Miller Avenue*	Escalon Avenue	The End of Miller Avenue	County_Escalon	1234	C
Mountain House Parkway	Byron Road	I-580	County	16752	C
N. Elliott Road	Hwy. 12/88	Peltier Avenue	County	3726	C
Navy Drive	Washington Street	SR-4	Stockton	5933	C

Roadway	From	To	Jurisdiction	AADT	LOS
Olive	W Ripon Road	SR- 99	County	256	C
Pacific Avenue	March Lane	Hammer Lane	Stockton	29244	D
Peltier Road	I-5	SR- 99	County	4988	C
Peltier Road	Hwy. 99	N. Elliott Road	County	3759	C
River Road	Jack Tone Road	N Ripon Road	Ripon	5336	C
Roth Road	I-5	Airport Way	Lathrop	10012	D
Santa Fe Lane	Main Street	County Line	County	6512	C
SR-12/Kettelman Lane	Lower Sacramento Road	South Hutchins Street	Lodi	27148	D
SR-12/Kettelman Lane	South Hutchins Street	Hwy. 99	Lodi	29836	E
SR-12/SR-88	Jacktone Road	Elliott/Tully Road	County	11588	D
SR-12/SR-88	Elliott/Tully Road	Disch Road	County	12785	D
SR-12/Victor Road	Jct. Rte. 99	Cluff Avenue	Lodi	12304	D
SR-120	Austin Road	Jack Tone Road	County	13279	D
SR-120	Main Street of Escalon	David Avenue of Escalon	Escalon	11421	D
SR-120/Yosemite Avenue	N. Jct. Rte. 99	Austin Road	Manteca	24295	D
SR-120/Yosemite Avenue	Fremont	Hwy. 99	Manteca	30243	E
SR-4/Charter Way	Stockton Street	S. Jct. Rte. 5	Stockton	32502	D
SR-4/Farmington Road	S. Jct. Rte 99	Walker Lane	County	16446	E
Thornton Road	South of De Broggi Road	SR-12	Lodi	1945	C
Thornton Road	Hwy. 12	Eight Mile Road	Stockton	4826	C
Thornton Road	Eight Mile Road	Pershing Avenue	Stockton	15982	C
Thornton Road	Pershing Avenue	Hammer Lane	Stockton	17941	C
Tracy Boulevard	Howard Road	I-205	Tracy	7879	C
Tracy Boulevard	I-205	11th Street	Tracy	21207	D
Trinity	Eight Mile Rd	McAuliffe Road	County_Stockton	10003	D
Turner Road	I-5	Lower Sac. Road	Lodi	5263	C
W. Ripon Rd. (Main St.)	S Austin Rd.	N Stockton Ave	County_Ripon	8724	C
Waterloo Road/SR-88	Jct. Rte. 99	Wilcox Rd.	County	26830	D
West Lane	Harney Lane	Eight Mile Road	County	14038	C
West Lane	Eight Mile Road	Morada Lane	County	16172	C
West Lane	Harding Road	Miner Avenue	Stockton	14370	C
West Lane	Morada Road	Hammer Lane	Stockton	22124	C
West Lane	March Lane	Harding Road	Stockton	24763	D
West Lane	Hammer Lane	March Lane	Stockton	35487	D
Yosemite	Walnut Avenue	Fremont Road	Manteca	10824	D
Yosemite Avenue	Airport Way	Walnut Avenue	Manteca	17789	C
Yosemite Avenue	SR-120	Airport Boulevard	Manteca	11487	D

Blank volume and LOS values exist for roadways added to the RCMP Network in 2016. These segments will be counted and evaluated at the next update.
Source: SJCOG LOS Workbook, 2020

3.3 RCMP MULTIMODAL CORRIDORS

3.3.1 LOS Measures

The designated RCMP Multimodal Corridors are generally located in areas that are characterized by a predominance of shared roadway users (pedestrians, bicyclists, transit passengers, and motorists), and where roadway widening is infeasible or undesirable. These corridors are not the only roadways on the RCMP that need to accommodate multiple, diverse roadway users. All RCMP roadways with adjacent land uses need to provide access for all roadway users. However, for purposes of this RCMP, only the designated Multimodal Corridors will be analyzed for level of service for all travel modes.

There are 13 designated Multimodal Corridors in San Joaquin County, none of which require new analysis during this monitoring report. Level of service analysis is warranted by updating the roadway geometry along any one of these designated Multimodal Corridors. Table 11 summarizes the designated Multimodal Corridors and staff's assessment of updated roadway geometry and following analysis. As no roadway geometry updates were completed at this time, staff will reanalyze these 13 Multimodal Corridors during the next monitoring report. The current Multi-Modal assessment can be found in Appendix A.

Table 22: RCMP Multi-Modal Corridor Assessment Summary

ID	Segment	Jurisdiction	Roadway Geometry Change	Analysis Needed
1	SR-88 between Locke Road and N Sierra Drive	County	No	No
2	SR-120 between McHenry Avenue – Escalon Bellota Road and David Drive	Escalon	No	No
3-1	Lathrop Road between Airport Way and Crestwood Avenue	Lathrop	No	No
3-2	Lathrop Road between Harlan Road and 7th Street	Lathrop	No	No
4	SR-12 between Lower Sacramento Road and Cherokee Lane	Lodi	No	No
5	Yosemite Avenue between Airport Way and Northwoods Avenue-Commerce Avenue	Manteca	No	No
6	W Ripon Road (Main Street) between Jack Tone Road and N Stockton Avenue	County/Ripon	No	No
7	March Lane between Da Vinci Drive-Quail Lakes Drive and West Lane	Stockton	No	No
8	Eight Mile Road between Thornton Road and David Road	County	No	No
9	Hammer Lane between Kelley Drive and Maranatha Drive	Stockton	No	No
10	Lower Sacramento Road between Royal Oaks Drive and Hammer Lane	Stockton	No	No
11	West Lane-Airport Way between El Pinal Drive and Roosevelt Street	Stockton	No	No
12	Eleventh Street between Lammers Road and MacArthur Drive	Tracy	No	No

3.4 RCMP EXEMPT TRIP ANALYSIS

As outlined in Chapter 7 of the 2018 RCMP document, for any intersections/roadways that are operating at LOS E or F, all the following criteria must be met:

1) Utilizing calibrated output from SJCOG's regional travel demand model, any estimated interregional trips are subtracted from the subject intersection or roadway segment's observed peak hour volume and LOS is recalculated according to HCM methodology. The LOS standard must continue to be exceeded.

2) The exceeded LOS standard must not be the result of roadway construction, rehabilitation or maintenance.

3) The exceeded LOS standard must not be the product of freeway ramp metering.

4) The exceeded LOS standard must not be the product of traffic signal coordination.

5) The exceeded LOS standard must not be the product of traffic generated by the provision of low income and very low income housing, as determined by counts or estimates of the housing's trip generation characteristics and assignment onto the subject road segment.

6) The exceeded LOS standard must not be the product of traffic generated by high-density residential development located within one-fourth mile of a fixed rail station, as determined by counts or estimates of the development's trip generation characteristics and assignment onto the subject road segment.

7) The exceeded LOS standard must not be the product of traffic generated by any mixed-use development located within one-fourth mile of a fixed rail passenger station, if more than half of the land area, or floor area, of the mixed use development is used for high density residential housing. Project traffic is determined by counts or estimates of the development's trip generation characteristics and assignment onto the subject road segment.

The primary RCMP trip exemption types applicable to San Joaquin County include: interregional trips (trips that do not originate in San Joaquin County); trip diversion associated with construction related activity; improvements associated with the deficient facility are already programmed in SJCOG's Federal Transportation Improvement Program; and/or, the deficient facility was identified as RCMP exempt per state statute in the 1992 RCMP (i.e., program initiation). Pre-existing deficient segments at the time of program initiation are deemed "grandfathered."

A trip exemption analysis first entails re-evaluating a deficient roadway segment or intersection's LOS operations by excluding interregional travel from observed traffic volumes. In other words, the RCMP trip

exemption analysis evaluates a deficient roadway segment or intersection based on volumes that only originate within the boundary of the agency. As defined in California Government Code Sections 65088.1 and 65089.4, any trips that originate outside the boundary of the agency are defined as "Interregional travel". For SJCOG, interregional travel includes external to external or x-x trips (those beginning and ending outside San Joaquin County) and external to internal or x-i trips (those with one trip end inside County and one trip end outside County). These interregional travel trips (x-x and x-i trips) are therefore removed for purposes of the exclusion analysis.

After the interregional trip exemption analysis is complete, those intersections and roadway segments that still show as being deficient are reviewed relative to known major construction activity, programmed improvements or grandfathered segments. If anyone of these are present, the local agency is no longer responsible to develop a deficiency plan. **Table 23** summarizes the measured deficiencies and exemptions.

Table 23. Roadway Deficiency Exemptions

	Basic Freeway Segments	Multilane Highway Segments	Two-Lane Highway Segments	Urban Street Segments	Intersections
Deficiencies before exemption analysis	46	0	19	10	13
Deficiencies after interregional exemption	1	0	0	5	3
Deficiencies after other exemptions	1	0	0	1	0

Interregional Exemption Analysis

The latest MIP 3-County SJCOG travel demand model was used to determine the proportion of local trips using each segment and intersection. A select link analysis was performed to extract the proportion of interregional travel (x-x and x-i) from each deficient segment and intersection. The extracted trips were then subtracted from the subject segment or intersection's observed roadway volume, resulting in only trips originating internally on those facilities. Segment and intersection LOS were then re-analyzed using the same HCM 2010 Methodology.

Both interregional and overall total a.m. and p.m. peak hour vehicle trips for each deficient segment and intersection are used to calculate the respective a.m. and p.m. peak hour interregional trip percentages on all study model links, as follows:

$$\% \text{ external trips} = (\text{peak period external to external trips}) + (\text{peak period external to internal trips}) / \text{total peak period trips}$$

The above calculated interregional trip percentages were multiplied by the observed total vehicle counts for each deficient segment and intersection, in order to determine interregional trips to be deducted from those facilities. The remaining internally-generated trips were then used to conduct the LOS exclusions analysis.

The LOS results of the exclusions analysis for the deficient segments and intersections are shown in **Table 24** through **Table 27**.

Table 24. Basic Freeway Segments Level of Service (LOS) Results after Exclusions Analysis

Freeway	From Location	To Location	No Trip Exclusion		AM II/IX Share	PM II/IX Share	With Trip Exclusion	
			AM LOS	PM LOS			AM LOS	PM LOS
NB / EB								
5	Jct. Rte. 205 West	Jct. Rte. 120 East	D	F	42%	35%	B	B
	Lathrop Road	French Camp Overcrossing	C	E	41%	43%	A	B
	French Camp Overcrossing	Mathews Road	D	E	43%	43%	B	B
	Mathews Road	French Camp Turnpike Interchange	D	E	43%	46%	B	B
	French Camp Turnpike Interchange	Stockton, Eighth Street	D	F	52%	56%	B	C
	Stockton, Eighth Street	Stockton, Jct. Rte. 4	D	F	52%	57%	B	C
	Country Club Boulevard	Plymouth Rd/Ryde Ave	C	F	48%	63%	A	C
	Stockton, March Lane	Benjamin Holt Drive Interchange	B	E	51%	63%	A	C
	Benjamin Holt Drive Interchange	Stockton, Hammer Lane	B	E	40%	88%	A	D
99	Stanislaus/San Joaquin County Line	Ripon, Main Street	F	C	13%	10%	A	A
	Ripon, Main Street	Milgeo Avenue	F	C	18%	15%	A	A
	Milgeo Avenue	Jacktone Road	F	C	21%	21%	A	A
	Jacktone Road	South Jct. Rte. 120	E	C	16%	26%	A	A
	South Jct. Rte. 120	Manteca, North Jct. Rte. 120	E	B	28%	30%	A	A
	Stockton, Mariposa Road	Jct. Rte. 4 East	E	C	44%	57%	B	A
	Jct. Rte. 4 East	Jct. Rte. 26 West	F	C	41%	57%	F	B
	Jct. Rte. 26 West	Jct. Rte. 4 West	F	C	44%	60%	C	B
	Jct. Rte. 88 Northeast	Cherokee Road Interchange	E	E	42%	64%	B	C
	Cherokee Road Interchange	Wilson Way	E	E	43%	66%	B	C
	Wilson Way	Hammer Lane	D	E	48%	69%	B	C
	South Lodi Interchange	Lodi, Jct. Rte. 12 West	D	E	38%	58%	B	C
120	Mossdale, Jct. Rte. 5	Yosemite Avenue Undercrossing	D	E	98%	89%	C	D
	Yosemite Avenue Undercrossing	Airport Way	C	E	65%	28%	B	A
205	Alameda/San Joaquin County Line	Patterson Pass Road Interchange	C	F	15%	1%	A	A
	Patterson Pass Road Interchange	Old Route 50	B	F	15%	1%	A	A
	Old Route 50	Tracy, Mac Arthur Drive	C	E	30%	10%	A	A
	Tracy, Mac Arthur Drive	Jct. Rte. 5	A	F	41%	20%	A	A
SB / WB								
5	Jct. Rte. 205 West	Jct. Rte. 120 East	F	D	36%	73%	B	C
	French Camp Overcrossing	Mathews Road	D	E	32%	71%	A	C
	Mathews Road	French Camp Turnpike Interchange	D	E	33%	71%	A	C
	French Camp Turnpike Interchange	Stockton, Eighth Street	D	E	39%	68%	B	C
	Stockton, Eighth Street	Stockton, Jct. Rte. 4	D	E	40%	71%	B	C

Freeway	From Location	To Location	No Trip Exclusion		AM II/IX Share	PM II/IX Share	With Trip Exclusion	
			AM LOS	PM LOS			AM LOS	PM LOS
99	Stanislaus/San Joaquin County Line	Ripon, Main Street	B	F	75%	70%	B	D
	Ripon, Main Street	Milgeo Avenue	C	F	73%	64%	B	D
	Milgeo Avenue	Jacktone Road	C	F	74%	62%	B	D
	Jacktone Road	South Jct. Rte. 120	B	F	74%	69%	B	D
	Jct. Rte. 26 West	Jct. Rte. 4 West	B	E	65%	70%	B	C
	Jct. Rte. 26 East	Jct. Rte. 88 Northeast	A	E	54%	71%	B	D
	Jct. Rte. 88 Northeast	Cherokee Road Interchange	C	E	57%	66%	C	C
	Wilson Way	Hammer Lane	D	F	54%	66%	C	C
	South Lodi Interchange	Lodi, Jct. Rte. 12 West	C	E	38%	44%	B	B
	Lodi, Turner Road	Woodbridge Road	F	F	35%	38%	B	A
205	Alameda/San Joaquin County Line	Patterson Pass Road Interchange	F	B	30%	62%	B	A
	Patterson Pass Road Interchange	Old Route 50	F	B	28%	72%	B	A
	Old Route 50	Tracy, Mac Arthur Drive	F	B	29%	71%	B	B
	Tracy, Mac Arthur Drive	Jct. Rte. 5	F	D	34%	75%	B	C

After the exclusion analysis was completed, SR-99 segment between SR-4 east and SR-26 west continues to show a LOS of E or F. The Stockton Six-Lane Project that increases the capacity from 4 to 6 lanes along SR-99 between Arch Road and SR-4 west was completed in December 2016. SJCOG ("the responsible party") will not be preparing a RCMP Deficiency Plan at this time. Staff found this segment was not deficient in the 2016 Monitoring Report after exclusion analysis.

Table 25. Two Lane Highway Segments Level of Service (LOS) Results after Exclusions Analysis

Route #	From Location	To Location	No Trip Exclusion		AM II/IX Share	PM II/IX Share	With Trip Exclusion	
			AM LOS	PM LOS			AM LOS	PM LOS
4	Contra Costa/San Joaquin Co Line	Tracy Blvd	E	E	25%	38%	C	C
	Tracy Blvd	Inland Drive	E	D	30%	43%	C	C
	Inland Drive	Maybeck Rd	E	E	31%	43%	C	C
	Maybeck Rd	Roberts Island Rd	E	E	28%	41%	C	C
	Roberts Island Rd	Fresno Ave	E	E	33%	46%	D	D
12	Sacramento/San Joaquin Co Line	Glasscock/Tower Parkway	E	E	29%	33%	C	C
	Glasscock/Tower Parkway	Guard Rd	E	E	38%	41%	C	C
	Guard Rd	Jct. Rte. 5	E	E	40%	43%	D	D

Route #	From Location	To Location	No Trip Exclusion		AM II/IX Share	PM II/IX Share	With Trip Exclusion	
			AM LOS	PM LOS			AM LOS	PM LOS
	Jct. I-5	Thornton Rd	E	E	53%	58%	D	D
	Thornton Rd	Lower Sacramento Rd	E	E	47%	57%	D	D
26	Cardinal Ave	Alpine Rd	E	D	60%	78%	D	D
88	Wilcox Rd	White Lane	E	E	34%	47%	C	C
	White Lane	Fairchild Lane	D	E	43%	54%	C	C
	Lockeford, Jct. Rte. 12 W	Jack Tone Rd	E	E	34%	47%	C	C
	Disch Rd	Mackville Rd	E	E	36%	49%	C	C
120	Jack Tone Rd	French Camp Rd	E	E	31%	55%	C	D
	French Camp Rd	Escalon, Main/Kern St	D	E	34%	56%	C	D
132	Jct. Rte. 5	Vernalis, Jct. Rte. 33	E	E	27%	18%	C	C
	Vernalis, Jct. Rte. 33	San Joaquin/Stanislaus Co Line	E	E	35%	17%	C	C

As shown in **Table 25**, all monitored two-lane roadways within the county would operate at LOS D or better during both a.m. and p.m. peak periods if used only by local traffic.

Table 26. Urban Street Segments Level of Service (LOS) Results after Exclusions Analysis

Roadway	From	To	Jurisdiction	LOS without Trip Exclusion	AM II/IX Share	PM II/IX Share	Average II/IX Share	LOS with Trip Exclusion
Eight Mile Road	Lower Sac. Rd.	Hwy. 99	County	F	94%	89%	92%	F
SR-4/Farmington Road	S. Jct. Rte 99	Walker Ln.	County	E	29%	82%	55%	D
Byron Road	Alameda County	Lammers Road	County_Tracy	F	94%	91%	92%	F
120	Main St. of Escalon	David Ave. of Escalon	Escalon	E	13%	36%	24%	C
SR-12/Kettelman Lane	South Hutchins St.	Hwy. 99	Lodi	E	77%	85%	81%	D
Airport Way	Lathrop Rd.	Highway 120	Manteca	F	84%	93%	89%	F
SR-120/Yosemite Avenue	Fremont	Hwy. 99	Manteca	E	50%	79%	64%	D
Arch Airport Road	Highway 99	Airport	Stockton	F	88%	93%	90%	F
Eight Mile Road	Trinity Pkwy	I-5	Stockton	F	98%	95%	97%	D
Eight Mile Road	I-5	Thornton Rd.	Stockton	F	88%	82%	85%	F

As shown in **Table 26**, five urban street segments within the county would operate at LOS F. Four segments are programmed in SJCOG's Regional Transportation Plan/ Sustainable Communities Strategy. One segment along Byron Road is not programmed; however, staff will not request a RCMP Deficiency Plan from San Joaquin County ("the responsible party") at this time. This segment was not found deficient during 2016 monitoring period after exclusion analysis.

Table 27: Intersection Level of Service (LOS) Results after Exclusions Analysis

			AM Peak						PM Peak					
			No Exclusion		With Exclusion		Exclusion and Optimized		No Exclusion		With Exclusion		Exclusion and Optimized	
ID	Intersection	Traffic Control	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
8	I-5 NB Ramps &Matthews Rd	TWSC	90.9	F	21.2	C	21.2	C	186.1	F	26.2	D	26.2	D
9	99 Frontage (s/o Eight Mile Rd) & Hwy 99 NB Ramps	TWSC	39.3	E	19.1	C	19.1	C	34.1	D	22.2	C	22.2	C
22	McHenry Ave & River Rd	AWSC	319.0	F	18.8	C	18.8	C	299.7	F	88.8	F	88.8	F
29	Vernalis Rd & SR-132/ Vernalis Rd	TWSC	21.3	C	11.3	B	11.3	B	126.5	F	11.1	B	11.1	B
33	French Camp Rd & SR-120/ Yosemite Ave	TWSC	48.5	E	13.0	B	13.0	B	347.8	F	21.7	C	21.7	C
35	Jack Tone Rd & Mariposa Rd	AWSC	43.9	E	10.1	B	10.1	B	27.8	D	10.6	B	10.6	B
41	I-5 NB Ramps & Lathrop Rd	Signal	126.7	F	78.1	E	67.0	E	54.8	D	17.7	B	17.7	B
53	West Ln/ Hutchins St & Harney Ln	Signal	47.7	D	44.6	D	44.6	D	60.7	E	53.8	D	53.8	D
62	Jack Tone Rd & River Rd	TWSC	34.3	D	12.4	B	12.4	B	73.1	F	22.0	C	22.0	C
90	Thornton Rd/Pacific Ave & Lower Sacramento Rd	Signal	65.5	E	62.8	E	62.8	E	52.0	D	46.5	D	46.5	D
100	Corral Hollow Rd & Linne Rd	TWSC	147.3	F	16.9	C	16.9	C	16.9	C	11.7	B	11.7	B

ID	Intersection	Traffic Control	AM Peak						PM Peak					
			No Exclusion		With Exclusion		Exclusion and Optimized		No Exclusion		With Exclusion		Exclusion and Optimized	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
104	Austin Road & French Camp Road	AWSC	16.0	C	13.1	B	13.1	B	104.0	F	13.2	B	13.2	B
107	Mountain House Parkway & I-580 WB Ramps	TWSC	53.8	F	6.4	A	6.4	A	1.6	A	0.2	A	0.2	A

As shown in **Table 27**, most of the intersections currently performing at LOS E or F could operate at LOS D or better with only local traffic and with optimized signal control. 23 intersections currently operate at LOS E or F without signal control optimization and exclusion analysis. Optimizing signal control improved the performance of 10 intersections to LOS D or better in AM and/or PM Peak Period. Exclusion analysis exempted an additional 10 intersections. Three remaining intersections after optimizing signal control and performing exclusion analysis, currently operating at E or F, are programmed for improvement.

- McHenry Avenue & East River Road is part of McHenry Avenue Corridor Improvement Project that will widen the McHenry Avenue from 2 to 3 lanes and install a traffic signal at this location
- I-5 NB Ramp & Lathrop Road is part of intersection reconstruction programmed in 2018 RTP/SCS
- Thornton Road/Pacific Avenue & Lower Sacramento Road is programmed to install a westbound left lane on Lower Sacramento Road, retime the intersection, and emergency vehicle prevention

Chapter 4
Performance Measures

CHAPTER 4. PERFORMANCE MEASURES

The identified RCMP performance measures, as shown in **Table 29**, will be monitored using analysis tools and software procedures developed to streamline their quantification and tracking. Performance measures will be tracked and their results posted on the RCMP website. The website facilitates data-sharing, provide the most up-to-date reports on the RCMP system's performance, and serves as a one-stop location for all RCMP-related materials. As RCMP program implementation continues, refinement of these measures and/or additional performance measures can be established as part of future updates; particularly relevant to evolving federal and state project evaluation priorities are measures such as travel time reliability and benefit / cost ratios.

Given that several of the RCMP performance measures listed in **Table 28** rely on the same measures of effectiveness as described in Chapter 3 (Level of Service (LOS) Assessment) – some material is repeated in this chapter. Distinguishing RCMP performance measures from RCMP standards is important given that RCMP Deficiency plans can only be required if the RCMP vehicular LOS Standard of "D" is exceeded. RCMP performance measures, as described herein, cannot in of themselves trigger the requirement for the preparation of a RCMP Deficiency Plan.

Table 28: San Joaquin RCMP Performance Measures

Category of Objectives	Objectives	Performance Measure	Analysis Tools/Data Resources	Implementation Strategies
Goods Movement				
RCMP Network	Achieve compliance with Surface Transportation Assistance Act (STAA) criteria throughout RCMP network.	Track STAA-compliant inventory of intersections listed as part of the Interregional Truck Operations on I-5 and SR-99 and STAA Routes Improvement Study	Auto TURN or manual turning template analyses performed by local agencies as part of the STAA application process	SJCOG to track STAA process through the San Joaquin County Goods Movement Task Force.
Transit System				
Coverage	Achieve and maintain 70% population coverage within 1/2 mile walking distance of fixed route or express transit service stops.	Housing developments within 1/2 mile walking distance of a transit stop.	GIS layers and schedules for transit network	SJCOG to maintain GIS tools
Frequency	Achieve and maintain 50% population coverage within 1/2 mile walking distance of fixed route or express transit service stops that provide LOS D or better frequency service.	Level of service for service frequency of transit vehicles per hour	Transit Capacity and Quality of Service Manual	SJCOG to maintain GIS tools
Bikeway System				
Regional Bikeway Network	Complete Regional Bikeway Network per 2012 Regional Bikeway Plan.	Ratio of completed to total regional bikeway miles, listed by jurisdiction.	RCMP network GIS layer Regional bikeway network GIS layer (Class I, II and III)	Track percent of regional bikeway network completed or programmed by local agencies.
Complete Streets				

Category of Objectives	Objectives	Performance Measure	Analysis Tools/Data Resources	Implementation Strategies
RCMP Multimodal Corridors	Establish RCMP multimodal (pedestrian/bicycle/transit) level of service baseline. Within 3 years, develop and begin implementation of systematic monitoring of Multimodal LOS on designated multimodal corridors to determine progress against the established baseline.	Multimodal LOS on designated RCMP multimodal corridors.	2010 HCM MMLOS procedure CompleteStreetsLOS software or Highway Capacity Software	SJCOG to establish and maintain baseline data collection.
Travel Demand Management				
Local Agency Efforts	Monitor local agency efforts to identify and implement demand and system management strategies for addressing congestion on the RCMP network.	Track implementation of Dibs Program initiatives and the 2010 Regional Travel Demand Management Program through the RCMP Land Use Analysis Program	CEQA Mitigation Monitoring and Reporting Plans	CEQA Requirements Federal CMP Process

4.1 GOODS MOVEMENT

While it is the ultimate goal that STAA compliance be achieved throughout the designated RCMP network, it is important to identify the most important facilities for goods movement and ensure that they are prioritized for improvement. I-5 and SR 99 serve the most truck traffic through San Joaquin County for pass-through freight and are important access routes for San Joaquin County communities. The 2012 Interregional Truck Operations on I-5 and SR 99 and STAA Routes Improvement Study identified several key improvement areas that would facilitate trucks to navigate safely between designated STAA routes (National Network, T-Routes and S-Routes) into local communities. The recommended improvements are listed in **Table 29**.

Table 29: Potential STAA Truck Improvements

Location	Jurisdiction	Purpose & Need	Recommended Improvements	Preliminary Cost Estimate	Notes
Liberty Road	Caltrans	**1.** Non-STAA facility with presence of STAA trucks per ATRI data and field observation **2.** Non-STAA facility reflects CHP preferred route	**1.** Channelize NB to EB right turn movement from SR-99 to Liberty Road. **2.** Add/change signs	$100,000 $4800	Allows for access to nuclear facility Connects I-5 and SR-99 providing a detour route for trucks
Turner Road	San Joaquin County/City of Lodi	**1.** Non-STAA facility with presence of STAA trucks per ATRI data and personal	**1.** Extend STAA network from termination point on Turner Road approx. 1.5 miles to I-5 interchange. **2.** Realign 2 ramps.	$800,000	Permits I-5 access to trucks already on Turner

Location	Jurisdiction	Purpose & Need	Recommended Improvements	Preliminary Cost Estimate	Notes
		observation by participants **2.** Non-STAA facility serving historic business districts	**3.** Channelize NB to EB right turn movement from I-5 to Turner Road. $100,000 **4.** Add/change signs	$50,000 $3300	
Airport Way between French Camp Road and SR 120	San Joaquin County/City of Manteca	**1.** Non-STAA facility with presence of STAA trucks per ATRI data and personal observation by participants **2.** Non-STAA facility reflects gap in STAA network **3.** Non-STAA facility reflects CHP preferred route	**1.** Channelize Airport Way/Lathrop (San Joaquin Co. and City of Manteca) to meet STAA truck standards **2.** Channelize Airport Way/Louise Ave (City of Manteca) to meet STAA truck standards **3.** Channelize Airport Way/Yosemite (City of Manteca) to meet STAA truck standards **4.** Approve STAA route from French Camp south to Yosemite, which includes the addition of STAA terminal route signage along Airport Way **5.** Add/change signs	$25,000 $25,000 $25,000 $9000	Provides complete STAA connection between I-5 and SR-99 Creates STAA network from French Camp down to ST-120 Allows trucks at UP facility to access Airport Way and SR-120
Austin/Moffatt Road between Spreckles access and SR 99	City of Manteca	**1.** Fill gaps in STAA network **2.** Improve STAA movements at intersection	**1.** Approve STAA route on Moffat Boulevard between SR-99 interchange and Main Street **2.** Approve STAA route on S Main Street between Moffat Boulevard and Industrial Park Drive **3.** Ensure that interchanges between SR-120 and SR-99 as well as between SR-99 and Moffatt/Austin that are planned for reconstruction are designed to accommodate STAA-sized trucks. **4.** Improve Yosemite Avenue and Spreckles Avenue intersection to accommodate STAA movements – NB left turn stop bar restriping and NB to EB right turn median modification **5.** Add/change signs	N/A, design consideration $25,000 $3900	Creates STAA network between industrial activity along Moffatt to SR-120 or SR-99 while avoiding downtown activity/traffic
East Grant Line Road between I-5 and MacArthur (including Paradise Road and Pescadero Road)	City of Tracy	**1.** Improve STAA movements at intersection **2.** Non-STAA facility with presence of STAA trucks **3.** Large capacity for industrial growth	**1.** Improve Grant Line Road/Paradise Road intersection – WB to NB right turn movement **2.** Restripe intersections **3.** Add/change signs	$250,000 $20,000 $9300	Creates STAA network connecting I-5 and I-205 Anticipates future growth

Source: SACOG/SJCOG 2012 Interregional Truck Operations on I-5 and SR 99 and STAA Routes Improvement Study

4.2 TRANSIT SYSTEM

The San Joaquin County RCMP contains two transit system performance measures: 1) coverage and 2) frequency. Countywide transit service coverage is evaluated using a ½-mile distance from transit stops based on linear buffers (roadway distances). The goal of evaluating peak period transit frequency is to determine the likelihood that commuter travelers would use transit regularly. For the fixed-route local

and deviated fixed-route bus services, peak period transit LOS may be best described using the thresholds for urban scheduled transit service, as shown in **Table 30**.

Table 30: Transit Frequency Level of Service Thresholds

Level of Service	Adjusted Service Frequency (veh/hour)	Headway (minutes)	Comments
A	>6.0	<10	Passengers don't need schedules
B	4.01 to 6.0	10 to 14	Frequent service, passengers consult schedules
C	3.0 to 4.0	15 to 20	Maximum desirable time to wait if transit vehicle missed
D	2.0 to 2.99	21 to 30	Service unattractive to choice riders
E	1.0 to 1.99	31 to 60	Service available during hour
F	<1.0	>60	Service unattractive to all riders

Source: FDOT Quality/Level of Service Handbook, 2013 (pg. 32)

The 2015 existing year is reflective of SJCOG's travel demand model baseline year at the time this analysis was performed. Any household or job, within ½ a mile of an equal or better than transit frequency level (e.g. LOS), is accounted for. The numbers of households and jobs in each jurisdiction at transit frequency level are shown in **Table 31** and **Table 32** respectively.

Transit accessible households and employment increased overall from the last analysis, performed for 2016 RCMP Monitoring Report. Bus service, like RTD, is ever changing to improve their service and increase their accessibility. For instance, RTD 150 changed their service to add stops in City of Tracy and Lathrop. Also, the current methodology differs from the past methodology may account for additional households and jobs near transit. Lastly, household and employment growth were projected to occur between the two monitoring periods.

11% more households and 12.1% more jobs are accessible by transit in San Joaquin County. Transit service that provides under 2 buses per hour (LOS E and F) dramatically increased while transit service providing over 2 buses per hour (LOS A – D) decreased. No transit service route that provided more than 6 buses over per hour (LOS A) was found during this assessment but was identified in 2016 Monitoring Report.

Bus transit accessibility may have changed because of the revision to bus service, with most changes observed in Regional Transit District (RTD). RTD primarily serves City of Stockton and San Joaquin County, with additional stops in most of other San Joaquin County jurisdictions and at transit/job centers outside of San Joaquin County. RTD added one service route in the City of Stockton and removed 5 commuter routes that travel outside of San Joaquin County. In addition, one route reduced its frequency from 10 to approximately 15 minutes during the AM peak commute period. Most importantly, RTD partnered with ride sharing services to connect bus riders to transit centers within San Joaquin County at ½ the ride sharing fare.

Other transit agencies did not make many changes. City of Escalon's E-Trans and City of Ripon's Blossom Express reduced their service by up to an hour. City of Lodi's Grapeline increased their service

by 20 minutes. City of Tracy's TRACER eliminated peak hour service for two of routes. City of Manteca's Transit had no change.

Table 31: Household Proximity to Transit

2015 - Existing Services											
	Rating	LOS F or Better		LOS E or Better		LOS D or Better		LOS C or Better		LOS B	
	Headway	>60 Min.		31 - 60 Min.		21 - 30 Min.		15 - 20 Min.		10 - 14 Min.	
	Tot HH	Served	%	Served	%	Served	%	Served	%	Served	%
San Joaquin County	223,027	190,997	85.6%	149,799	67.2%	49,973	22.4%	37,396	16.8%	25,711	11.5%
Escalon	2,450	1,317	53.7%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Lathrop	5,448	4,235	77.7%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Lodi	22,341	21,190	94.8%	21,014	94.1%	-	0.0%	-	0.0%	-	0.0%
Manteca	25,330	21,401	84.5%	18,181	71.8%	-	0.0%	-	0.0%	-	0.0%
Ripon	5,108	4,372	85.6%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Stockton	109,026	106,551	97.7%	90,704	83.2%	39,512	36.2%	37,366	34.3%	25,711	23.6%
Tracy	24,207	23,743	98.1%	18,944	78.3%	10,424	43.1%	-	0.0%	-	0.0%
Unincorporated	29,117	8,188	28.1%	956	3.3%	36	0.1%	30	0.1%	-	0.0%

Note: Analysis found no transit service meet LOS A threshold.

Table 32: Employment Proximity to Transit

2015 - Existing Services											
	Rating	LOS F or Better		LOS E or Better		LOS D or Better		LOS C or Better		LOS B	
	Headway	>60 Min.		31 - 60 Min.		21 - 30 Min.		15 - 20 Min.		10 - 14 Min.	
	Tot EMP	Served	%	Served	%	Served	%	Served	%	Served	%
San Joaquin County	234,983	191,836	81.6%	161,664	68.8%	77,358	32.9%	59,693	25.4%	48,714	20.7%
Escalon	1,819	1,514	83.2%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Lathrop	6,185	4,826	78.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Lodi	23,762	22,693	95.5%	21,950	92.4%	-	0.0%	-	0.0%	-	0.0%
Manteca	16,820	15,901	94.5%	14,921	88.7%	-	0.0%	-	0.0%	-	0.0%
Ripon	3,891	3,272	84.1%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Stockton	126,335	119,118	94.3%	110,093	87.1%	64,906	51.4%	59,626	47.2%	48,714	38.6%
Tracy	20,826	18,105	86.9%	14,326	68.8%	12,379	59.4%	-	0.0%	-	0.0%
Unincorporated	35,344	6,407	18.1%	375	1.1%	72	0.2%	67	0.2%	-	0.0%

Note: Analysis found no transit service meet LOS A threshold.

4.3 BIKEWAY SYSTEM

SJCOG has collected an inventory of existing and planned bicycle facilities throughout San Joaquin County. This inventory is used to observe the incremental progress of building out the desired bicycle system in the County. As facilities are constructed and moved from the planned list to the existing list, the change in bikeway mileage will be calculated. Additionally, as planned facilities are removed when built and added as conceived, the development of the planned system can also be tracked through the number, length, and class of the proposed facilities.

As of the last update to the SJCOG bikeway inventory, 282 miles of the envisioned 1,157 miles or 24.4% had been constructed. This includes 83 of 190 envisioned miles of Class I bicycle paths, 113 of 256 envisioned miles of Class II bicycle lanes, and 86 of 429 envisioned miles of Class III shared bicycle routes.

4.4 COMPLETE STREETS

The RCMP multimodal corridors are the portions of the RCMP network that are most likely to benefit from improvements other than expanding capacity for vehicles. The baseline multimodal LOS was evaluated and reported in Appendix A.

4.5 TRAVEL DEMAND MANAGEMENT

Travel Demand Management (TDM) strategies are those that attempt to reduce the number of vehicle miles traveled on the RCMP network. These can include strategies to group trips such as car/vanpooling, removing trips by encouraging telecommuting or reducing trip lengths by developing land uses that allow trips to be made by walking or bicycling, or at least shorter drives.

All of the counties in the San Joaquin valley are designated as "Severe" to "Extreme" non-attainment for health based pollutants by the EPA and are therefore required to take extra steps to improve air quality, with employer-based travel demand management as the key strategy. San Joaquin Valley Air Pollution Control District (SJVAPD) Rule 9410 or the eTrip rule requires major employers (with 100 or more employees) in the region to develop and implement TDM strategies. These strategies can include employee shuttles, staggered work hours, telecommute options, transit subsidies, car/vanpool programs, and many other strategies.

SJCOG's Dibs Program offers a number of programs and information items to support TDM in the county as well as supporting Stanislaus and Merced Counties. This inter-county collaboration is highly supportive of regional travel demand management. Its programs include employer assistance in developing trip reduction plans, emergency ride home, ridematching, vanpool subsidies, community events, and park & ride lots. It also provides information on benefits and tax credits, connections to other helpful resources, and educational links to traveler information services.

SJCOG's TDM performance measures are currently under development, in conjunction with the Dibs Program. The Dibs Program collects data on the usage of smart travel modes for work commuting through its trip planning website (dibsmyway.com), which currently has 4,890 members originating in San Joaquin County as of July 2019. 33 new vanpools have formed in 18/19 in the county. San Joaquin County members logged approximately 2,915 Smart travel trips, saved approximately $40,000, and reduced approximately 35.0 tons of CO2 emissions in FY 18/19.

Chapter 5 Study References

CHAPTER 5. STUDY REFERENCES

San Joaquin Council of Governments (SJCOG)

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References

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- 2012 SACOG / SJCOG Interregional Truck Operations Study
- 2018 SJCOG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
- Transit Capacity and Quality of Service Manual (TCQSM), Transportation Research Board, Washington, DC, 1999
- Florida Department of Transportation Transit Quality of Service Handbook, 2013
- Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, 2010

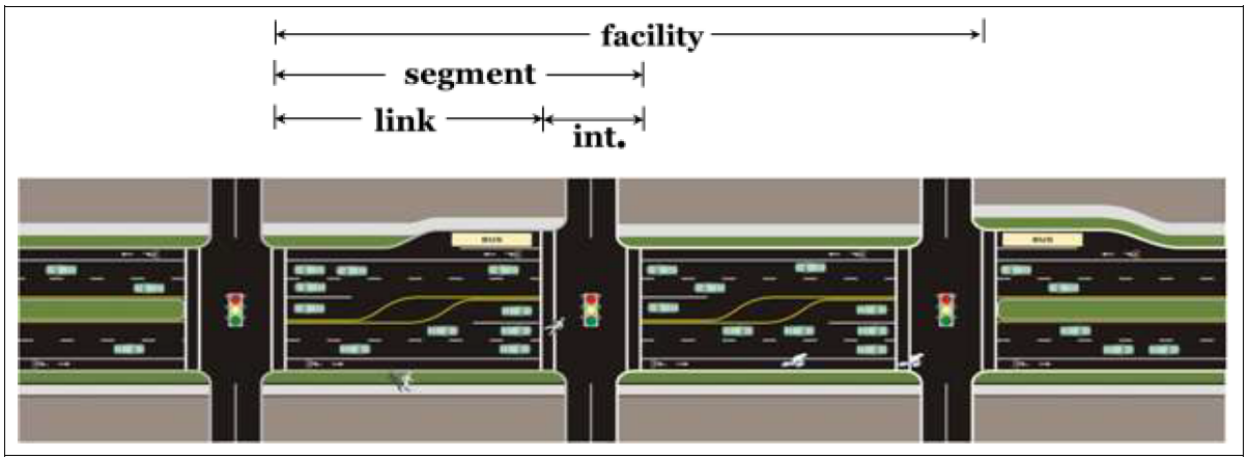
Attachment A

RCMP Multimodal Corridors

LOS Measures

Multimodal LOS evaluations include intersections and links, which are combined to develop a segment score. **Figure 1** depicts the terminologies used to describe roadway components for multimodal level of service.

Figure 1: Multimodal LOS Analysis Components



Similar to traffic conditions, pedestrian, bicycle, and transit conditions are measured using LOS. The Highway Capacity Manual 2010 provides methodologies for evaluating roadway links and intersections for each mode. The link and intersection results are computed together into a final segment score. The multimodal analysis for the RCMP is primarily focused on the quality of service along the roadway segments. Each mode is given a score that corresponds to a LOS rank. These scores are determined as follows:

Pedestrian LOS

Intersections:

The primary factors influencing pedestrian intersection LOS are cross-section (based on the number of side street lanes crossed), vehicle speed on the cross street, vehicle volume on the cross street, and pedestrian signal delay. The number of lanes a pedestrian has to cross affects the LOS with the more lanes a cross street has, the worse the pedestrian intersection LOS. Adding one additional lane to the cross street is not a guarantee to altering the LOS but it does have a significant impact to the numerical result.

While auto volume is used to determine the effect of a right-turn island, it is also considered separately with auto speed on the side street approaches. Higher speeds and higher volumes approaching from the side streets result in a worse LOS. Increasing the speed by 5 mph is roughly equivalent to adding 100 more vehicles crossing the cross walk. While this does not always result in a change to LOS, it does have a significant impact to pedestrian LOS numerical score at the intersection.

The final factor influencing pedestrian LOS at the intersection is the delay to the pedestrian caused by the signal control. The longer a pedestrian has to wait for the walk sign at the intersection, the worse the LOS will be. A 20 second increase to delay, though unlikely to change the LOS, will still affect the LOS numerical result. However, this is not as large an influence factor as physical changes such as right-turn islands.

Links:

Pedestrian link LOS is also composed of a variety of factors. The factors with the strongest influence on pedestrian link LOS are physical separation between the autos and pedestrians (cross-section), vehicle volume, and vehicle speed. The effect of volume and speed is generally the same as was shown in bicycle link/intersection LOS and pedestrian link LOS. The higher the vehicle volume per lane and the faster those vehicles are traveling, the worse the LOS for the pedestrians will be on the link. Increasing the volume per lane by 100 vehicles is unlikely to result in a worse LOS unless it is already close to the threshold value but it still affects the LOS score. Vehicle speed increases result in similar alterations to the pedestrian link LOS but it is not as significant as volume increases. A 5 mph increase in speed is equivalent to a 50 vehicle increase in volume per lane.

The most influential factor to pedestrian link LOS is the perceived separation of the autos from the pedestrians. This cross-section factor is composed of a number of components such as physical distance between sidewalk and travel lane, on-street parking, sidewalk width, and physical barriers along the street. Larger distances between the sidewalk and the travel lane are beneficial to pedestrians. On-street parking and other items such as trees, street furniture, and hedges provide physical barriers that separate pedestrians from moving traffic on the roadway. These physical barriers greatly increase the pedestrians' experience walking down the street and therefore the LOS. The final component is sidewalk width. Sidewalks wider than 10 feet provide a better walking environment for pedestrians and a better overall pedestrian link LOS than sidewalks of 10 feet or less.

Segments:

Pedestrian segment LOS is a combination of the intersection and link LOS with a factor for how difficult a street is to cross. Streets that make it easier for pedestrians to access the opposite side of the street, either by short signal spacing or easy to cross uncontrolled midblock crossings, are better for pedestrians resulting in improved segment LOS. The roadway crossing difficulty factor can substantially improve or deteriorate the pedestrian segment LOS by as much as 20%. Therefore, improving the ability of pedestrians to cross an urban street can have a large effect on pedestrian segment LOS.

Bicycle LOS

Intersections:

The two factors affecting bicycle intersection LOS are vehicle volume and a cross-section factor. The vehicle volume factor is influenced by the number of vehicles per lane. As the auto volume per lane

increases, the LOS for bicyclists at the intersection deteriorates. Since it is based on auto volume per lane, volume changes will affect smaller facilities more than multilane facilities.

The second factor influencing bicycle intersection LOS is the cross-section factor which is comprised of two major components, the width of the cross street and the width of the traveled way. The wider an intersection is to cross while traveling on the main street, the worse the LOS for bicyclists will be. The effect on bicycle intersection score for adding an additional 12 feet to the crossing distance is about the same as increasing the auto density per lane by 100 vehicles per lane. Both will increase the LOS score by about 0.17 which is not generally enough to alter the LOS unless it is close to the threshold for the next LOS.

In addition to the width of the cross street, the cross-section factor also uses the width of the traveled way in the major street. This value is the summation of the widths of the outside auto lane, bicycle lane, and shoulder. The larger this summation, the better the bicycle intersection LOS will be. Of the three factors influencing bicycle intersection LOS, this is the most important. The addition of a 5-foot bicycle lane for example will guarantee a one letter grade LOS improvement.

Links:

The link LOS for bicycles is affected by four factors: effective width of outside through lane, auto volume, vehicle speed, and pavement condition. Effective width of the outside lane is a function of the outside lane width, bike lane width, and shoulder width. The wider this effective width is, the better the bicycle link LOS will be. Adding five feet of effective width is enough to alter the link LOS by at least one LOS letter.

As with the bicycle intersection LOS, bicycle link LOS also has an auto volume component that is based on the number of vehicles per lane. Increases in volume would show more effect on single lane facilities but even an increase of 100 vehicles per lane is unlikely to result in a change to the LOS. Unlike changes to auto volume, pavement condition has a much stronger effect on bicycle link LOS. This is especially true when pavement quality is poor which results in a strong negative effect on link LOS. Repaving a roadway with poor quality pavement will increase the LOS for bicycles on the link by at least one LOS.

Speed and the number of heavy vehicles also play a role in affecting the bicycle link LOS. Higher auto speeds on an urban street make the facility less attractive to bicyclists thereby lowering the LOS. However, the effect is minimal with a 5 mph decrease to travel speed unlikely to alter the LOS unless it is near the threshold for the next LOS. Heavy vehicles impact bicycle link LOS more substantially with a 4% increase to heavy vehicle percentage likely to deteriorate the LOS by one letter grade.

Segments:

Bicycle segment LOS is composed of the intersection and link LOS results but also has an additional factor for the number of access points along the right side of the analysis segment. Access points are computed as the number of access points per mile. The higher number of access points per mile, the worse the LOS result will be as it provides more opportunities for autos to turn in front of bicyclists. However, the impact

on segment LOS is minimal until the number of access points on the right side is at or greater than 10 access points per mile.

The final part of the bicycle segment LOS equation is a large constant. This constant makes it difficult for bicycle segment LOS to be better than LOS C because user perception surveys showed that no matter how good an urban street is, it will never be as good as an exclusive bike path except under ideal conditions. The constant reflects this by starting bicycle LOS at LOS C. Even though some components of the bicycle segment score can be negative values, it is uncommon and therefore difficult to achieve LOS B or LOS A.

Transit LOS

Intersections:

The primary factor affecting transit intersection LOS is delay caused by the intersection control and traffic conditions. Delay is a function of the cycle length of traffic signals, the amount of traffic blocking progression, and the presence or absence of transit priority treatments.

Links:

Transit LOS for links is determined through transit running speed and a "wait-ride" score. Heavy traffic and closely spaced intersections and frequent stops can cause transit to run more slowly, reducing its score, while accessibility, a high quality pedestrian environment, and frequent headways improve that score.

Segments:

Segment scores for transit combine intersection and link performance to determine an overall score for the roadway being analyzed.

Multimodal LOS

The variables supporting each mode's LOS scoring have been calibrated to result in a consisting set of thresholds across the modes. The scoring thresholds for each LOS grade are shown in **Table** 1. For detailed descriptions of the calculations used, please refer to the Highway Capacity Manual 2010, Chapter 17. CompleteStreetsLOS was the software used for the RCMP analysis.

Table 1. LOS Criteria for Pedestrian, Bicycle and Transit Mode and Pedestrian Mode

LOS	LOS Score
A	<=2.00
B	>2.00-2.75
C	>2.75-3.50
D	>3.50-4.25
E	>4.25-5.00
F	>5.00

Source: Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 17 (Urban Street Segments), Exhibit 17-4.

Since automobile LOS for all RCMP roadway segments has been analyzed in Section 3.2, **Table 2** only shows the weekday a.m. and p.m. peak hour LOS results for pedestrian, bicycle and transit modes for the 12 baseline multi-modal corridors.

The RCMP has no adopted standard for multimodal LOS metrics, so no segments will be listed as having a deficiency based on their scores. **Table 2** shows the computed LOS values for each mode during the a.m. and p.m. peak periods along each of the designated multimodal segments. In cases where multimodal segments become deficient from a vehicular traffic perspective, local agencies can take advantage of an expanded toolbox of mitigation options outside of adding vehicle capacity to satisfy RCMP requirements.

Multimodal level of service worksheets are provided in a Technical Appendix provided under separate cover.

Figure , **Figure 2**, and **Figure** show the poorest calculated pedestrian, bicycle and transit LOS results for each of the multimodal segments respectively.

Table 2. 2020 AM RCMP Segment Multi-Model Level of Service (LOS)

ID	R2oadway	From	To		Pedestrian				Bike				Transit			
					NB/EB		SB/WB		NB/EB		SB/WB		NB/EB		SB/WB	
					Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS
AM																
1	SR 88	Locke Road	N Sierra Drive	County	2.93	C	2.91	C	4.06	D	3.97	D	6.32	F	6.24	F
2	SR 120	McHenry Avenue- Escalon Bellota Road	David Drive	Escalon	3.31	C	4.34	E	4.02	D	4.34	E	6.4	F	5.14	F
3-1	Lathrop Road	Airport Way	Crestwood Avenue	Lathrop	3.59	D	3.8	D	3.61	D	3.08	C	6.44	F	6.51	F
3-2	Lathrop Road	Harlan Road	7th Street	Lathrop	3.35	C	3.61	D	3.87	D	3.94	D	6.35	F	6.4	F
4	SR 12	Lower Sac. Road.	Cherokee Lane	Lodi	3.03	C	2.98	C	2.75	B	2.97	C	4.04	D	3.73	D
5	Yosemite Avenue	Airport Way	Northwoods Avenue-Commerce Avenue	Manteca	3.19	C	3.29	C	4.57	E	3.96	D	4.54	E	4.29	E
6	W Ripon Road (Main Street)	Jack Tone Road	N Stockton Avenue	County/Ripon	2.31	B	2.33	B	4.48	E	4.2	D	6.36	F	6.32	F
7	March Lane	Da Vinci Drive-Quail Lakes Drive	West Lane	Stockton	3.42	C	3.69	D	3.99	D	4.37	E	3.44	C	3.56	D
8	Eight Mile Road	Thornton Road	Davis Road	County	3.83	D	4.14	D	3.84	D	3.67	D	6.53	F	6.67	F
9	Hammer Lane	Kelley Drive	Maranatha Drive	Stockton	3.72	D	3.69	D	3.97	D	3.89	D	3.22	C	3.59	D
10	Lower Sac. Road	Royal Oaks Drive	Hammer Lane	Stockton	3.51	D	3.93	D	3.49	C	4.51	E	5.01	F	5.07	F
11	West Lane - Airport Way	El Pinal Drive	Roosevelt Street	Stockton	3.43	C	3.47	C	3.99	D	4.13	D	6.45	F	6.44	F
12	Eleventh Street	Lammers Road	MacArthur Drive	Tracy	3.67	D	3.6	D	4.07	D	4.08	D	6.41	F	6.41	F
PM																
1	SR 88	Locke Road	N Sierra Drive	County	3.1	C	3.15	C	4.09	D	4.15	D	6.38	F	6.38	F
2	SR 120	McHenry Avenue- Escalon Bellota Road	David Drive	Escalon	3.49	C	4.27	E	4.03	D	4.27	E	6.47	F	5.11	F
3-1	Lathrop Road	Airport Way	Crestwood Avenue	Lathrop	3.69	D	3.65	D	3.65	D	3.03	C	6.47	F	6.45	F
3-2	Lathrop Road	Harlan Road	7th Street	Lathrop	3.65	D	3.54	D	4.06	D	3.83	D	6.46	F	6.37	F
4	SR 12	Lower Sac. Road.	Cherokee Lane	Lodi	3	C	2.99	C	2.75	C	3.02	C	4.05	D	3.77	D
5	Yosemite Avenue	Airport Way	Northwoods Avenue-Commerce Avenue	Manteca	3.41	C	3.3	C	4.57	E	3.96	D	4.55	E	4.27	E
6	W Ripon Road (Main Street)	Jack Tone Road	N Stockton Avenue	County/Ripon	2.31	B	2.32	B	4.48	E	4.18	D	6.36	F	6.34	F
7	March Lane	Da Vinci Drive-Quail Lakes Drive	West Lane	Stockton	3.88	D	3.88	D	4.16	D	4.57	E	3.52	D	3.63	D
8	Eight Mile Road	Thornton Road	Davis Road	County	3.89	D	4.17	D	3.89	D	3.68	D	6.56	F	6.69	F
9	Hammer Lane	Kelley Drive	Maranatha Drive	Stockton	3.72	D	3.81	D	4.01	D	4.04	D	3.23	C	3.63	D
10	Lower Sac. Road	Royal Oaks Drive	Hammer Lane	Stockton	3.51	D	3.93	D	3.49	C	4.51	E	5.01	F	5.07	F
11	West Lane - Airport Way	El Pinal Drive	Roosevelt Street	Stockton	3.43	C	3.47	C	3.99	D	4.13	D	6.45	F	6.44	F
12	Eleventh Street	Lammers Road	MacArthur Drive	Tracy	3.67	D	3.6	D	4.07	D	4.08	D	6.41	F	6.41	F

Source: CompleteStreetsLOS and HCM 2010 Methodology

Figure 1: 2020 Multimodal LOS - Pedestrians

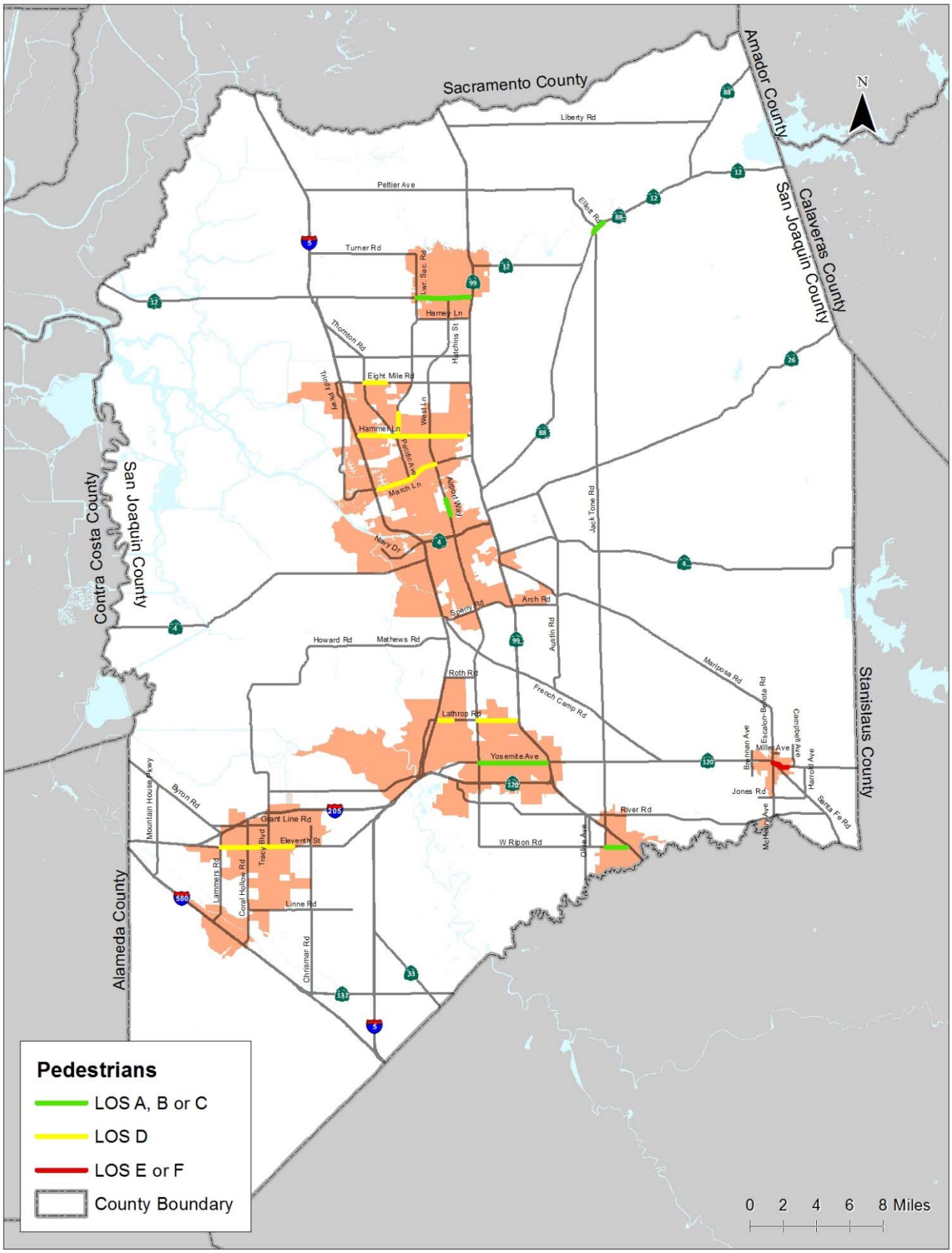


Figure 2: 2020 Multimodal LOS - Bicycles

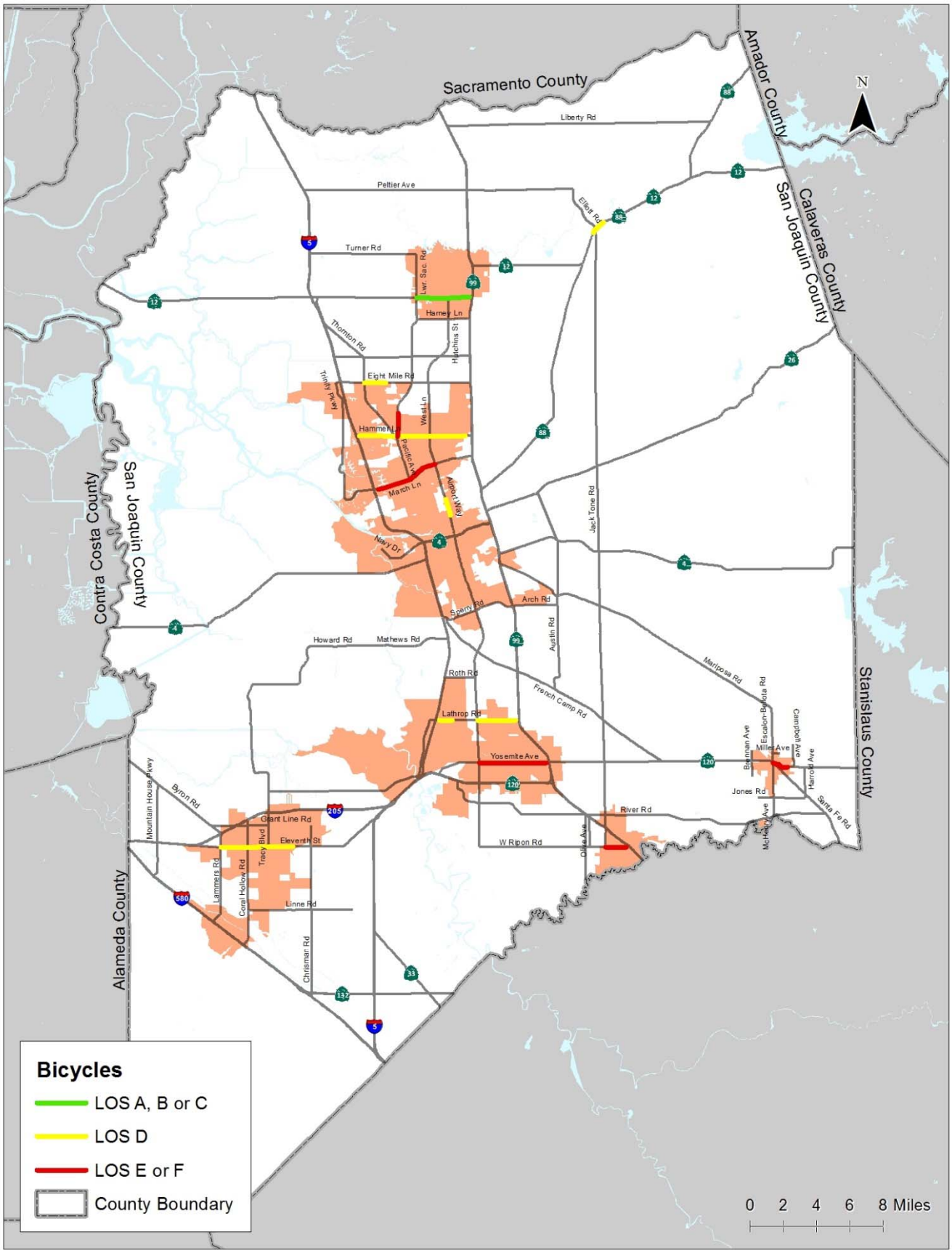
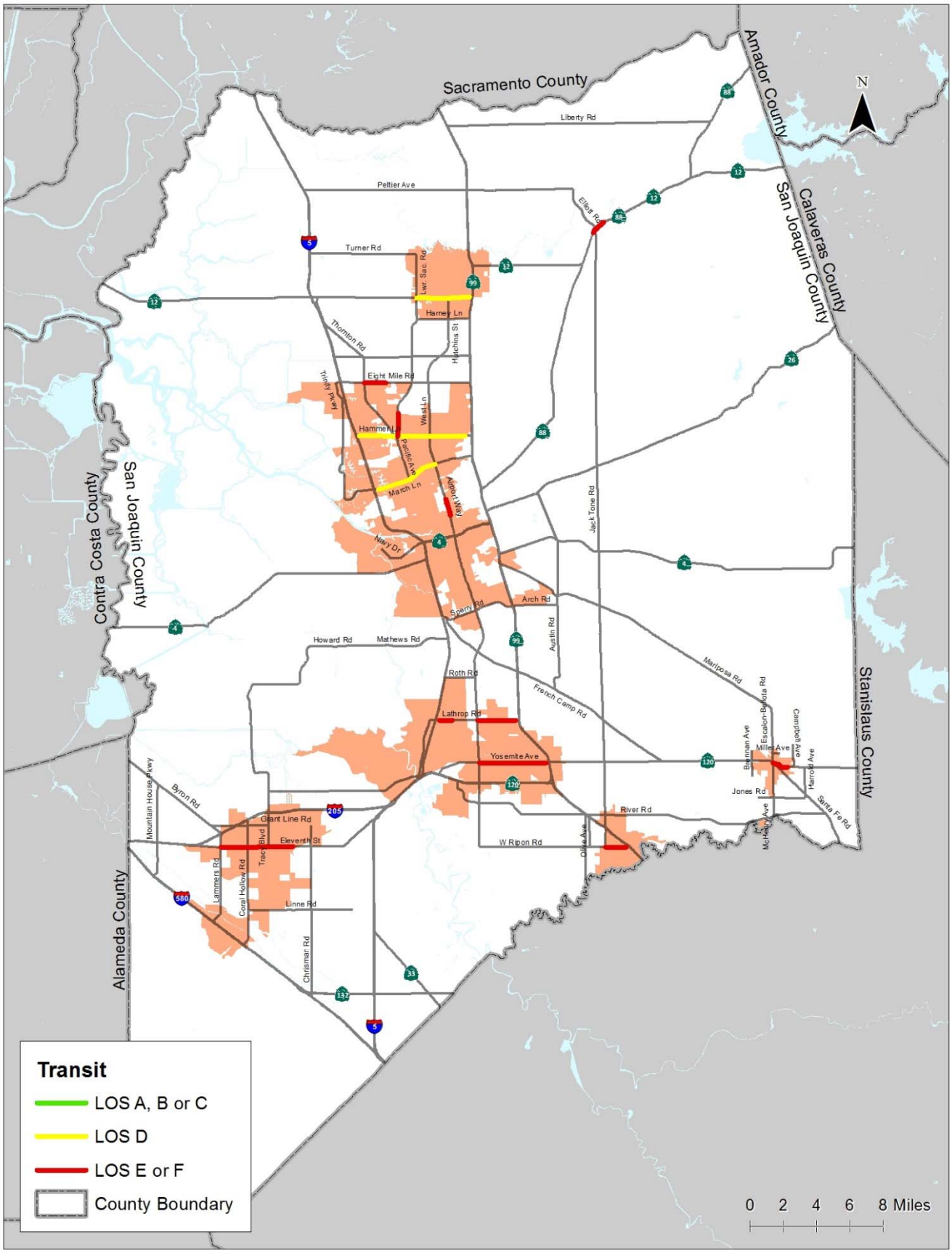


Figure 3: 2020 Multimodal LOS - Transit



Attachment B

RCMP Land Use Analysis Program:

Summary of Projects with RCMP Impacts

RCMP Land Use Analysis Program – Summary of Projects with RCMP Impacts

The RCMP is required to contain a program to analyze the impacts of land use decisions made by local jurisdictions on the regional transportation system. To comply with this state mandate, SJCOG and its member have integrated a "regional layer" of review within the CEQA review process to analyze impacts of development projects to the CMP transportation system. The RCMP Monitoring and Conformance Report must document each local agency's performance over the previous two years to comply with the RCMP, including but not limited to the following:

- Implementation progress of mitigation measures identified as part of the RCMP Land Use Analysis Program.
- Compliance with the CEQA mitigation monitoring requirements for RCMP impacts.

SJCOG staff analyzed development projects that local agencies approved between 2010 and 2019 for which SJCOG staff had provided comments relating to RCMP impacts. During this monitoring period, SJCOG staff included other development projects with transportation mitigation measures, but did not receive comments from SJCOG. The reasoning is the project did not trigger a Tier 2 review or the project's environmental document was not received by SJCOG staff. This additional process increases the mitigation measures captured; in hopes of reducing the impact of new development on the regional roadway network within San Joaquin County. SJCOG staff contacted local agency planning staff to determine the status of each project and implementation progress of mitigation measures as appropriate.

These projects are summarized in Tables 1 and displayed geographically on the map in Figure 1, below, followed by a detailed summary of the implementation progress of any RCMP-related mitigation measures for each project.

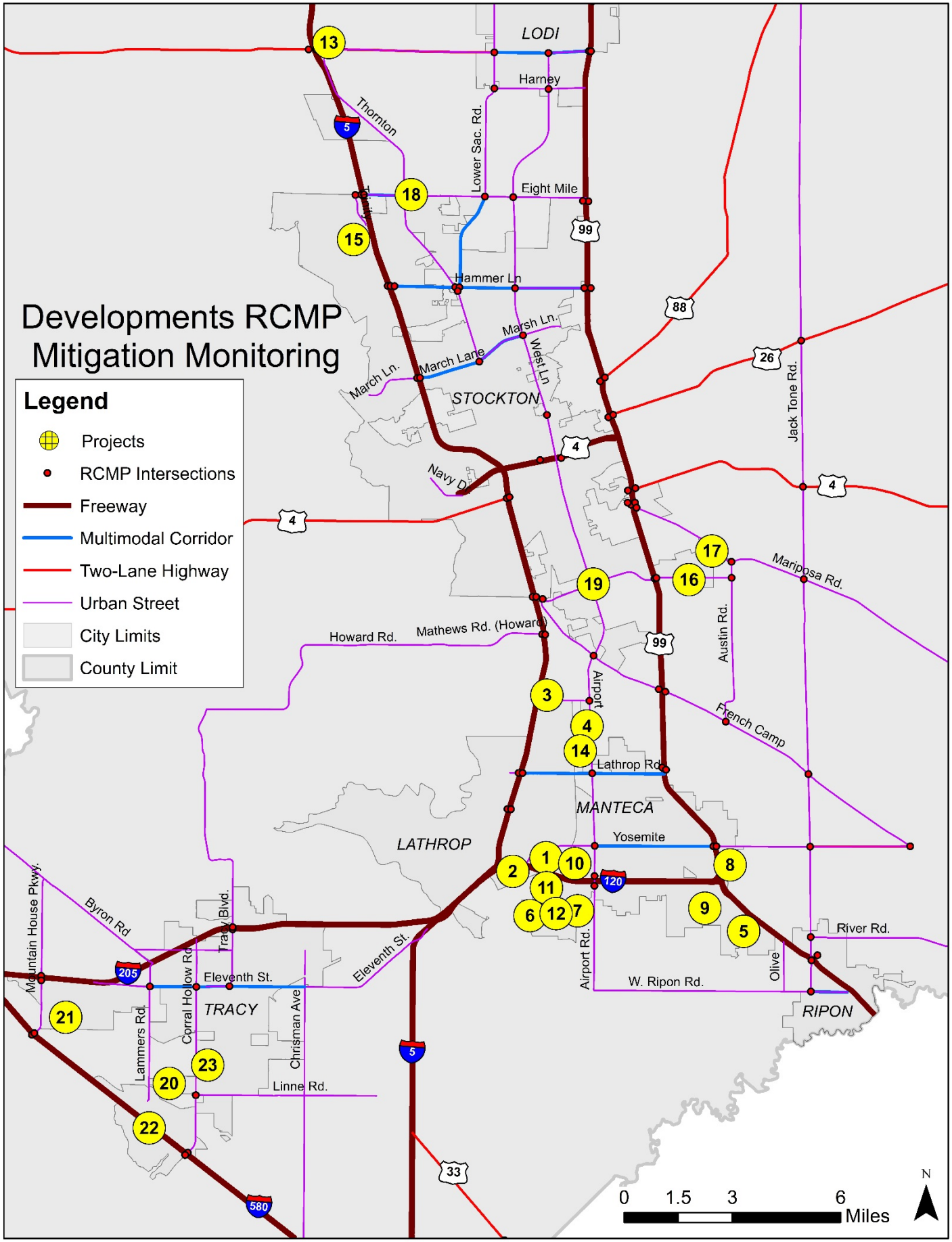


Figure 1: Development Projects with RCMP Impacts

Table 1: Development Projects with RCMP Impacts

#	Lead Agency	Project Name	Project Description	Date Approved
1	Lathrop	Lathrop Gateway Business Park	139.7 acres of commercial, 167.6 acres of industrial, and 20.1 acres of infrastructure /open space north of SR-120 and between 2 rail lines. Location: East/West of UPRR, South of Yosemite Avenue, & North of SR-120 in Lathrop, California	05/06/2011
2	Lathrop	South Lathrop Specific Plan	10 acres of commercial office, 222 acres of light industrial, 31.5 acres of open space, 36 acres of public/quasi public facilities Location: South of SR-120 and north of Chiavari Way in Lathrop, California	07/20/2015
3	Lathrop	Lathrop Pilot Flying J	Two 9 diesel fueling lanes with 10 fueling islands, 12 gas fueling lanes with 6 fueling islands, 106 truck parking spaces, 67 passenger car parking spaces, and 13,011 sq. ft. building that includes a drivers' lounge, retail space, and multiple restaurants. Location: North of Roth Road and east of I-5 in Lathrop, California	06/06/2016
4	Manteca	Northwest Airport Way Master Plan	324 acres of industrial, 22 acres of commercial, and 44 acres of open space / drainage Location: Southeast corner of Roth Road and Airport Way in Manteca, California	11/02/2010
5	Manteca	Austin Road Business Park and Residential Community	1,051 acres of primarily agriculture with 14 rural residences and 30 acres of commercial and industrial uses Location: Southeast of Woodward Avenue and Moffat Boulevard in Manteca, California	11/16/2010
6	Manteca	The Trails of Manteca	1,650 dwelling-unit planned residential community. Dwelling units would consist of 1,178 single-family units and 472 multi-family units. The project would incorporate a trail system throughout the site of over 12 miles that will eventually connect to the City facilities. The proposed project also includes over 75 acres of linear parks and a clubhouse to be utilized by the residents. Location: Southeast corner of Woodward Avenue and South Woodward Avenue in Manteca, California	02/15/2011
7	Manteca	Terra Ranch Subdivision	209 single family dwellings, 200 multi-family dwellings, and 2.8 acre park Location: Southeast corner of Woodward Avenue and McKinley Avenue in Manteca, California	06/21/2011
8	Manteca	Yosemite Square Master Plan	137.7 acres of a business park and single/multifamily dwellings (755 units) Location: Northeast corner of SR-120 and SR-99 in Manteca, California	03/20/2012
9	Manteca	South of Woodward Avenue	The approximately 191.3-acre project site consists of six parcels, identified by Assessor's Parcel Numbers (APNs) 224-050-11, 224-050-12, 224-050-13, 226-140-03, 226-140-01, and 226-140-02. The overall project site is made up of three distinct sites referred to as Atherton Homes at Woodward Park I, Atherton Homes at Woodward Park II, and DeJong Property. Location: Southwest corner of Woodward Avenue and Atherton Drive in Manteca, California	05/05/2015
10	Manteca	Great Wolfe Lodge	210.7 acres of baseball and soccer fields, outdoor stadium, 360,000 sq. ft. of retail and restaurants, hotel, convention center, and water park. Location: Northeast corner of SR-120 and McKinley Ave in Manteca, California	09/08/2015
11	Manteca	Oakwood Trails Subdivision	Approximately 207 acres of land with 676 single-family housing units, 15.67 acres of parks/basins, 20.2 acres of commercial, and 11.59 acres of business industrial park. Location: North of Woodward Ave, east of McKinley Ave, and south of SR-120 in Manteca, California	06/21/2016
12	Manteca	Oakwood Landing – Cerri & Denali Subdivision	Up to 290 high density residential units, up to 975 low density residential units, and up to approximately 237,838 square feet of commercial. Location: Southwest of McKinley Ave and Atherton Dr in Manteca, California	06/05/2018

13	San Joaquin County	Love's Travel Stops	16 pumps and 24 fueling stations to serve 16 gasoline and 8 diesel fueling positions, a 7,700 square foot convenience store with an attached 3,000 square-foot fast-food restaurant, and a 1,200 square-foot storage building. Location: East of Thornton Road, North of SR-12 in Lodi, California	12/20/2012
14	San Joaquin County	Union Pacific Expansion and Modernization Project	40 acre expansion of the existing Union Pacific Intermodal Facility Location: South of Roth Road, East of UPRR, West of Airport Way, North of Lathrop Road in Manteca, California	03/12/2013
15	Stockton	Delta Cove	1,545 residential units on 360 acres, consisting of low density residential lots (833 units), medium density residential lots (372 units), high density residential lots (280 units), 5.73 acres of commercial uses, and live-work residences (100 units) 2.5 acres within the commercial area. Location: Southwest corner of Bear Creek and Future Trinity Parkway in Stockton	10/19/2010
16	Stockton	Archtown Industrial Project	79 acres of industrial. Location: Southwest corner of Arch Road and Newcastle Road in Stockton, California	11/15/2011
17	Stockton	Norcal Logistics Center	Approximately 325 acres of land, separated into two non-adjacent portions, approximately 50 and 275 acre properties. Up to 6,280,480 sq. ft. of light industrial could be constructed. Location: South of Mariposa Road, North of Arch Road, east of Frontier Way, west of Austin Road in Stockton, California	03/26/2015
18	Stockton	Thornton Rd / Eight Mile Rd Arco Station	Three commercial structures: a gasoline station and convenience store approximately 3,799 square feet, a fast-food restaurant approximately 3,462 square feet, and a retail building approximately 4,000 square feet. The gasoline station would have 16 fuel dispensing pumps. Location: Northwest corner of Eight Mile Rd & Thornton Rd in Stockton, California	01/21/2018
19	Stockton	Airport Way/Sperry Road Commercial	The fueling station would provide 16 pumps for dispensing gasoline and diesel fuel to passenger vehicles and light-duty trucks. An adjacent building approximately 3,764 square feet in size would contain a convenience store. Location: Southwest corner of Airport Wy & Sperry Rd in Stockton, California	04/17/2018
20	Tracy	Ellis Specific Plan	321 acres of 2,250 (max) residential dwellings, open pace/parks, swim center, village center, and 180,000 sq. ft. of commercial Location: Northwest corner of Linn Road and Corral Hollow Road in Tracy, California	01/22/2013
21	Tracy	Cordes Ranch Specific Plan	16,105 residential dwellings, 275 acres of commercial, 441 acres of industrial, 759.5 acres of open space, 285 acres of schools, and 499.5 acres of public facilities Location: South of I-205, North of Old Schulte Road, east of I-580, west of Lammers Road in Tracy, California	09/03/2013
22	Tracy	Tracy Hills Specific Plan	2,732 acres of up to 5,499 residential dwellings, schools, parks, commercial, industrial, and other land uses Location: South of I-205, West of Corral Hollow Road, East of Alameda County Line in Tracy, California	03/02/2016
23	Tracy	Tracy Village	An active adult, gated, and age-restricted community consisting of up to 600 single-family detached residential lots that would support single-family dwelling units ranging from 1,350 square feet to 3,000 square feet. Location: West of Corral Hollow Rd & South of Valpico Rd in Tracy, California	04/11/2018

1. Lathrop Gateway Business Park

Description: 139.7 acres of commercial, 167.6 acres of industrial, and 20.1 acres of infrastructure /open space north of SR-120 and between 2 rail lines
Location: East/West of UPRR, South of Yosemite Avenue, & North of SR-120 in Lathrop, California
Document Type - Approval Date: EIR - 05/06/2011
Jurisdiction: City of Lathrop
RCMP Facilities Impacted: SR-120, Yosemite Avenue, I-5, SR-99, Lathrop Road, Roth Road, & Airport Way

Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 –

The City is not processing any development related applications at this time. The project proponents applied and received approval from the Planning Commission on February 11, 2015 for a tentative parcel map to subdivide the properties into 6 large developable lots. The proponents are currently marketing the project to prospective warehouse/distribution users.

2016 –

City of Lathrop approved a Vesting Tentative Parcel Map (VTM-13-69) on February 11, 2015 to subdivide a portion of the specific plan area to create 6 large developable lots ranging in size from 10 to 44 acres. City of Lathrop has received and currently processing a development review application located within the Lathrop Gateway Specific Plan area (SPR-16-73). The project site is approximately 5 acres in size located at 4100 W. Yosemite Avenue. No building permit application has been received and no construction has taken place.

2018 – N/A

2019 – N/A

Lathrop Gateway Business Park Impacts and Mitigation Measures

RCMP Facility Impacted	Mitigation Measure(s)
N/A – General	**6-9:** Shall prepare and implement a transportation demand management (TDM) plan.
N/A – General	**10-2:** Shall implement a Transportation Demand Management program applicable to businesses with 25 or more employees to reduce potential vehicle trips.
Yosemite Ave b/w Swanson Rd & Airport Wy	**14-1**: Rubberized asphalt shall be installed on the segments of Yosemite Avenue (between Swanson Road and Airport Way).
I-5 & NB/SB Ramps Int	**18-1**: Shall pay their "fair share" costs to install a traffic signal at intersections of I-5 NB & SB Ramps and Lathrop Road.
I-5 between I-205 & Lathrop Rd, SR-120 b/w I-5 & Yosemite Ave, SR-99 b/w SR-120 & Arch Rd	**18-3**: Shall pay their "fair share" costs to widen I-5 from I-205 to the SR 120 interchange, I-5 from the SR 120 interchange to the Lathrop Road interchange, SR-120 from I-5 to Yosemite Avenue, and SR-99 from SR 120 to Arch Road.
SR-120 & Yosemite Ave Int	**18-4**: Shall identify STAA design deficiencies at the existing ramps at SR-120 / Yosemite Avenue interchange.
Guthmiller Rd/Yosemite Ave	**19-3**: Shall widen Guthmiller Road/Yosemite Avenue from two to six lanes from the SR 120 interchange to the eastern boundary of the Specific Plan area.

2. South Lathrop Specific Plan

Description: 10 acres of commercial office, 222 acres of light industrial, 31.5 acres of open space, 36 acres of public/quasi public facilities
Location: South of SR-120 and north of Chiavari Way in Lathrop, California
Document Type - Approval Date: EIR - 07/20/2015
Jurisdiction: City of Lathrop
RCMP Facilities Impacted: SR-120 & SR-99
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:
2016 –

The City of Lathrop approved a Vesting Tentative Parcel Map (VTM-15-94) on April 18, 2016 to subdivide a portion of the specific plan area to create 8 light industrial parcels, 1 commercial parcel and 7 parcels reserved for open space, public utilities and right of way. The City of Lathrop approved a Site Plan Review (SPR-16-43) for 6 concrete tilt-up warehouse buildings ranging in size from 300,000 sq. ft. to 1 million sq. ft. No building permit application has been received and no construction has taken place.

2018 – N/A
2019 – N/A

South Lathrop Specific Plan Impact and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A – General	**3.3-2:** Shall incorporate improvements to transit, pedestrian, and bicycle facilities.
N/A – General	**3.3-3:** Shall prepare and implement a transportation demand management (TDM) plan.
SR-120 & Yosemite Ave Int	**3.14-1 & 5**: Multiple improvements at SR-120 & Yosemite Avenue Interchange.
Yosemite Avenue & Airport Way Intersection	**3.14-2**: Add an eastbound right turn lane with a storage pocket of 200 feet at Yosemite Avenue & Airport Way Intersection.
SR-120	**3.14-3**: Shall pay the appropriate San Joaquin Regional Traffic Impact Fee to help funding widening of SR-120 to six lanes.
SR-120 & Airport Way Intersection	**3.14-9**: Multiple improvements at SR-120 and Airport Way.
SR-120	**3.14-10**: Shall pay the appropriate San Joaquin Regional Traffic Impact Fee to help funding widening of SR-120 to six lanes.

3. Lathrop Pilot Flying J

Description: 2 9 diesel fueling lanes with 10 fueling islands, 12 gas fueling lanes with 6 fueling islands, 106 truck parking spaces, 67 passenger car parking spaces, and 13,011 sq. ft. building that includes a drivers' lounge, retail space, and multiple restaurants
Location: North of Roth Road and east of I-5 in Lathrop, California
Document Type - Approval Date: EIR - 06/06/2016
Jurisdiction: City of Lathrop
RCMP Facilities Impacted: I-5, Roth Rd, & Airport Way
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2016 –

If the proposed Pilot Flying J Travel Center entitlements are approved by the City Council, and the annexation is approved by San Joaquin LAFCo, then the project applicant would go forward with specific site development improvements and final Building designs to implement the new commercial operation.

2018 – N/A

2019 – N/A

Lathrop Pilot Flying J Impact and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Roth Road	**3.12-1**: Shall coordinate with the City to determine a potential need for new and/or upgraded bicycle lanes along Roth Road
Roth Road	**4.18-1**: Shall pay its fair share toward the widening of Roth Road.
I-5	**4.19-1**: Shall pay appropriate San Joaquin County Regional Traffic Impact Fee (RTIF) to help fund regional improvements to I-5.

4. Northwest Airport Way Master Plan

Description: 324 acres of industrial, 22 acres of commercial, and 44 acres of open space / drainage
Location: Southeast corner of Roth Road and Airport Way in Manteca, California
Document Type - Approval Date: EIR - 11/02/2010
Jurisdiction: City of Manteca
RCMP Facilities Impacted: I-5, Roth Road, Airport Way, & Lathrop Road
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:
2014 – As of 2014, only approved project is Crothall Healthcare Commercial Laundry Facility, southwest of Daisy Avenue along Airport Way.

TRANS-1, 2a, 2b Fees Paid
TRANS-4a, 4b Installed frontage and roadway improvements adjacent to site
TRANS-6a, b, c Provided turnout, bicycle racks, & pedestrian connections to the street
TRANS-6d Community Commercial component has not been developed yet

2016 –

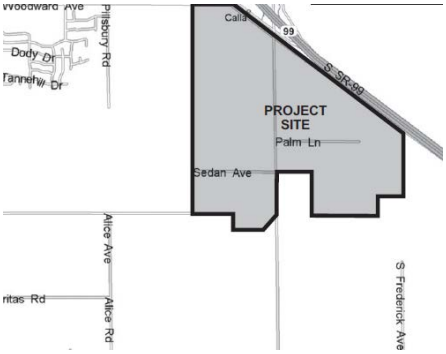
No new construction. The City is processing a Site Plan Review application for the construction of an approximately 1.2 million square foot distribution warehouse building at the southwest corner Airport Way and Roth Road. The project includes full improvements and will be designed and further conditioned where necessary to comply with NWAWMP development standards and the applicable Mitigations of the MMRP.

2018 – N/A
2019 – N/A

Northwest Airport Way Master Plan Impacts and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A – General	**TRANS-1**: Prior to issuance of building permits for each Master Plan use, the applicant shall pay all transportation-related fees.
I-5 NB/SB Ramps & Roth Road Intersections	**TRANS-2a:** Shall provide fees to install of signals at the I-5 Northbound Ramps/Roth Road and I-5 Southbound Ramps/Roth Road intersections.

5. Austin Road Business Park and Residential Community



Description: 1,051 acres of primarily agriculture with 14 rural residences and 30 acres of commercial and industrial uses
Location: Southeast of Woodward Avenue and Moffat Boulevard in Manteca, California
Document Type - Approval Date: EIR - 11/16/2010
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120 & SR-99
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 –

Minor amendments to Master Plan. Working with City of Ripon to establish sub-regional fee and approved interim Austin Road Interchange improvements. In October 2014, the SJCOG board approved allocating $350,000 in RTIF to construct interim Austin Road/State Route 99 Interchange improvements in the first phases. On October 10, the Manteca City Council awarded the construction contract for the interchange reconstruction to George Reed, Inc.

2016 – No construction planned. Infrastructure improvements on hold.

2018 – N/A

2019 – N/A

Austin Road Business Park and Residential Community Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A – General	**5.9-8, 9, & 24**: Shall pay the San Joaquin County RTIF.
Pedestrian Facility	**5.9-10**: Shall review the pedestrian circulation of the ARBPRC.
Bike Facility	**5.9-11**: Shall review the bicycle circulation of the ARBPRC.

6. The Trails of Manteca

Description: 1,650 dwelling-unit planned residential community. Dwelling units would consist of 1,178 single-family units and 472 multi-family units. The project would incorporate a trail system throughout the site of over 12 miles that will eventually connect to the City facilities. The proposed project also includes over 75 acres of linear parks and a clubhouse to be utilized by the residents.
Location: Southeast corner of Woodward Avenue and South Woodward Avenue in Manteca, California
Document Type - Approval Date: EIR - 02/15/2011
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 –

Project is in the approved tentative map stage, with no final maps recorded and no approved improvement plans. On May 27, 2014, a tentative subdivision map for The Trails of Manteca Unit #2 was approved. On March 3, 2015, the Manteca City Council approved a General Plan Amendment to remove the high density housing areas from the project in the tentative maps for The Trails of Manteca Units #3 and #4. Instead, additional low-density housing was substituted and as a result, the total subdivision now consists of 1,163 units of single-family residential units, with a resulting lessened impact on regional roadways.

2016 – No change.
2018 – N/A
2019 – N/A

The Trails of Manteca Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A – General	**TRANS-1a**: Prior to issuance of building permits for each dwelling unit, the applicant shall pay all transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought.
SR-120 & Airport Wy Int and SR-120 & Yosemite Ave Int	**TRANS-2**: Shall provide the City of Manteca with proportionate-share fees for the intersections of SR-120 & Airport Way and SR-120 & Yosemite Avenue.

7. Terra Ranch Subdivision

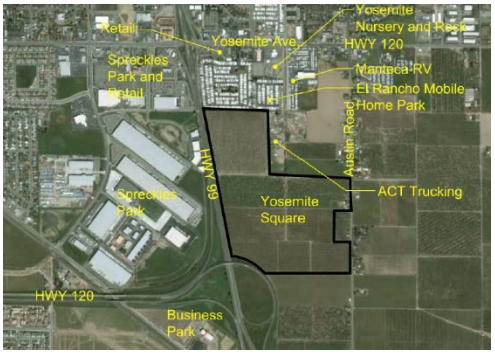
Description: 209 single family dwellings, 200 multi-family dwellings, and 2.8 acre park
Location: Southeast corner of Woodward Avenue and McKinley Avenue in Manteca, California
Document Type - Approval Date: EIR - 06/21/2011
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120, Airport Way, & Yosemite Avenue.
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 – City of Manteca established mitigation measures for Copper Cover project.
2016 – No change. City completed infrastructure projects, but none project specific. Projects in planning entitlement stage
2018 – N/A
2019 – N/A

Terra Ranch Subdivision Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
SR-120	**4.11-3 & 9**: Shall pay the appropriate San Joaquin County Regional Traffic Impact Fee (RTIF).
SR-120 & Airport Wy Int	**4.11-8**: Shall pay its fair share toward improvements to the interchange of SR-120 and Airport Way.

8. Yosemite Square Master Plan



Description: 137.7 acres of a business park and single/multifamily dwellings (755 units)
Location: Northeast corner of SR-120 and SR-99 in Manteca, California
Document Type - Approval Date: IS/MND - 03/20/2012
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120, SR-99, & Yosemite Avenue
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 –

The residential portion of the master plan was subsequently subdivided under the name Copper Cove, which consists of 342 single-family homes. The Copper Cove project received a tentative subdivision map on November 5, 2013 and is working its way through the final map and improvement plans process. SJCOG staff contacted the City of Manteca Community Development Department to determine the status of the project. City of Manteca staff stated that they would be monitoring and requiring the mitigations for the Copper Cover project as the implementation schedule/timing dictates. The City will be monitoring and requiring the mitigations as the implementation schedule/timing dictates.

2016 –

No change. The City has completed infrastructure projects in the Yosemite Square Master plan area, but none that were project specific as no projects within the master plan area have progressed past the planning entitlement stage.

2018 – N/A

2019 – N/A

Yosemite Square Master Plan Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A	**16a-4**: Shall pay their fair share of the City's Public Facilities Implementation Plan (PFIP).
Yosemite Ave & NB SB-99/Button Ave Int	**16a-6**: Shall fund or construct improvements at the intersection of Yosemite Avenue/Northbound SR 99 Ramps–Button Avenue.

9. South of Woodward Avenue

Description: The approximately 191.3-acre project site consists of six parcels, identified by Assessor's Parcel Numbers (APNs) 224-050-11, 224-050-12, 224-050-13, 226-140-03, 226-140-01, and 226-140-02. The overall project site is made up of three distinct sites referred to as Atherton Homes at Woodward Park I, Atherton Homes at Woodward Park II, and DeJong Property.

Location: Southwest corner of Woodward Avenue and Atherton Drive in Manteca, California

Document Type - Approval Date: EIR - 05/05/2015

Jurisdiction: City of Manteca

RCMP Facilities Impacted: SR-120 & SR-99

Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2016 – The Manteca South of Woodward Avenue (SOWA) project is under construction.

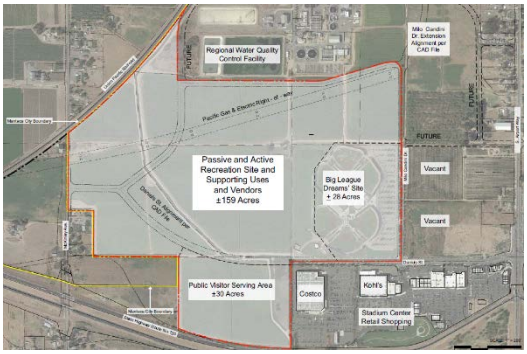
2018 – N/A

2019 – N/A

South of Woodward Avenue Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A	**4.12-1**: Prior to the issuance of each building permit, the project applicant shall pay the applicable PFIP fee.
Future SR-99, Raymus Expy, & River Rd Expy Int	**4.12-8(a) & 9**: Prior to the issuance of building permits, the project applicant shall pay the appropriate fee into the Manteca-Ripon Sub-Regional Fee Program to fund the interchange of SR-99, Raymus Expressway, and River Road Expressway.

10. Great Wolfe Lodge



Description: 210.7 acres of baseball and soccer fields, outdoor stadium, 360,000 sq. ft. of retail and restaurants, hotel, convention center, and water park
Location: Northeast corner of SR-120 and McKinley Ave in Manteca, California
Document Type - Approval Date: EIR - 09/08/2015
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120, Yosemite Avenue, & Airport Way
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2016 –

The status of the Manteca Family Entertainment Zone (FEZ) project is that the Master Plan was adopted by the City; however, the master plan will be revised to accommodate a change in the alignment of Daniels Street to allow for a larger project area along the Hwy. 120 frontage. This change requires a change to balance of the master plan and either an addendum to the EIR or supplemental EIR. In the meantime, the City is moving forward with initial phases of planned installation of utilities and environmental remediation of the shooting range.

2018 – N/A

2019 – N/A

Great Wolfe Lodge Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A – General	**3.3-3:** Shall prepare a transportation demand management (TDM) plan.
Bike Facility	**3.14-1**: Shall provide Class II bicycle lanes on Daniels Street.
SR-120 & Airport Wy Int	**3.14-2**: Shall pay its fair share cost for improvements at the interchange of SR-120 and Airport Way.
Airport Wy & Yosemite Ave Int	**3.14-5**: Shall pay its fair share cost for improvements at the intersection of Airport Way and Yosemite Avenue.

11. Oakwood Trails Subdivision

Description: Approximately 207 acres of land with 676 single-family housing units, 15.67 acres of parks/basins, 20.2 acres of commercial, and 11.59 acres of business industrial park.
L**ocation:** North of Woodward Ave, east of McKinley Ave, and south of SR-120 in Manteca, California
Document Type - Approval Date: EIR - 06/21/2016
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120
Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2016 – N/A
2018 – N/A
2019 – N/A

Oakwood Trails Subdivision Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
SR-120	**3.14-3**: Shall pay the appropriate San Joaquin County RTIF, which is collecting fees from new developments to help fund widening of SR 120 to six lanes.
Bike Facility	**3.14-4**: Shall provide Class I Bike Path along Atherton Drive from McKinley Ave to Woodward Ave and continue west to Bella Lago Wy.
Yosemite Ave & Airport Wy Int	**3.14-6**: Shall pay its fair share cost toward the improvements at the intersection of Yosemite Avenue and Airport Way.
SR-120 & Airport Wy Int	**3.14-8**: Shall pay its fair share toward improvements to the interchange at SR-120 and Airport Way.

12. Oakwood Landing – Cerri & Denali Subdivision

Description: Up to 290 high density residential units, up to 975 low density residential units, and up to approximately 237,838 square feet of commercial.
L**ocation:** Southwest of McKinley Ave and Atherton Dr in Manteca, California
Document Type - Approval Date: EIR - 06/05/2018
Jurisdiction: City of Manteca
RCMP Facilities Impacted: SR-120
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:
2016 – N/A
2018 – N/A
2019 – N/A

Oakwood Landing – Cerri & Denali Subdivision Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
SR-120 Ramps / Airport Way Int	**3.13-3**: Shall coordinate with the City to ensure that appropriate signal timing adjustments are made to the Eastbound SR 120 Ramps / Airport Way intersection.
N/A	**3.13-5, 10, & 11**: Shall contribute the appropriate San Joaquin Regional County RTIF.
Bike Facility	**3.13-6**: Shall provide a Class I Bike Path along Atherton Drive through the Project site and along McKinley Avenue north of Atherton Drive.

13. Love's Travel Stops

Description: 16 pumps and 24 fueling stations to serve 16 gasoline and 8 diesel fueling positions, a 7,700 square foot convenience store with an attached 3,000 square-foot fast-food restaurant, and a 1,200 square-foot storage building.
Location: East of Thornton Road, North of SR-12 in Lodi, California
Document Type - Approval Date: EIR - 12/20/2012
Jurisdiction: San Joaquin County
RCMP Facilities Impacted: I-5 & SR-12
Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2014 – *New Addition*
2016 – *New Addition*
2018 – ***The mitigation measure has been completed.***

Love's Travel Stops Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
SR-12/I-5 NB/SB Ramp Int	**CumuTRANS 6.2-1**: Shall fund the necessary hardware and wiring to coordinate the traffic signals at SR-12/I-5 Northbound Ramp Intersection and SR-12/I-5 Southbound Ramp Intersection.

14. Union Pacific Expansion and Modernization Project

Description: 40 acre expansion of the existing Union Pacific Intermodal Facility
Location: South of Roth Road, East of UPRR, West of Airport Way, North of Lathrop Road in Manteca, California
Document Type - Approval Date: EIR - 03/12/2013
Jurisdiction: San Joaquin County
RCMP Facilities Impacted: Lathrop Road, SR-99, I-5, Roth Road, & Airport Way
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014– No building permits issued

2016 – No change

2018 –

UPRR has not moved forward with the expansion port of their approved project; therefore, no building permits have been issued and no construction has started for this. When the expansion project moves forward, UPRR will mitigate in accordance with the MMRP, either through payment of impact fees or fair share payments.

2019 – N/A

Union Pacific Expansion and Modernization Project Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
I-5 SB Ramp & Lathrop Rd Int	**TRANS-1, 11, & 19**: Shall contribute its fair share of cost to install a traffic signal at the intersection of Lathrop Road and I-5 Southbound Ramps, under the RTIF Program.
I-5 NB Ramp & Lathrop Rd Int	**TRANS-2, 12, & 20**: Shall contribute its fair share of cost to install a traffic signal at the intersection of Lathrop Road and I-5 Northbound Ramps, under the RTIF Program.
SR-99 b/w French Camp Rd & Lathrop Rd	**TRANS-4, 5, 6, & 7**: Shall contribute its fair share of cost to add a lane to the Southbound SR-99 freeway segment between French Camp Road and Lathrop, under RTIF Program.
Roth Rd & I-5 SB Ramps Int	**TRANS-8 & 15**: Shall contribute its fair share of cost to installing a traffic signal at the intersection of Roth Road and I-5 Southbound Ramps.
Roth Rd & I-5 NB Ramps Int	**TRANS-9 & 16**: Shall contribute its fair share of cost to installing a traffic signal at the intersection of Roth Road and I-5 Northbound Ramps.
SR-99 SB Ramp & French Camp Rd Int	**TRANS-13 & 22**: Shall contribute its fair share of the cost to install a traffic signal at the intersection of French Camp Road and SR-99 Southbound Ramps, under the RTIF Program.
Airport Wy and French Camp Rd	**TRANS-14**: Shall contribute its fair share of the cost of installing the following improvements: (i) an additional left-turn lane on the southbound Airport Way approach, and (ii) an additional left-turn lane on the westbound French Camp Road approach.
SR-99 NB Ramps & French Camp Rd Int	**TRANS-23:** Shall contribute its fair share of the cost to install a traffic signal at the intersection of SR-99 Northbound Ramps and French Camp Road, under the RTIF Program.
I-5 b/w Lathrop Rd & Roth Rd	**TRANS-24 & 28**: Shall contribute its fair share of the cost of adding a land to the northbound I-5 freeway segment between Lathrop Road and Roth Road, under the RTIF Program.
I-5 b/w Roth Rd & Mathews Rd	**TRANS-25**: Shall contribute its fair share of cost to add a lane to the northbound I-5 freeway segment between Roth Road and Mathews Road, Under the RTIF Program.
I-5 b/w Mathews Rd & Roth Rd	**TRANS-26**: Shall add two mixed-flow lanes to the Southbound I-5 freeway segment between Mathews Road and Roth Road.
I-5 b/w Roth Rd & Lathrop Rd	**TRANS-27**: Shall add two mixed-flow lanes to the Southbound I-5 freeway segment between Roth Road and Lathrop Road.
I-5 b/w Mathews Rd & Roth Rd	**TRANS-29**: Shall contribute its fair share of the cost to adding a lane to the Southbound I-5 freeway segment between Mathews Road and Roth Road.

SR-99 b/w French Camp Rd & Lathrop Rd	**TRANS-32, 34, 35, & 36**: Shall contribute its fair share of the cost of adding a lane to the northbound SR-99 freeway segment between French Camp Road and Lathrop Road, under the RTIF program.
SR-99 b/w French Camp Rd & Lathrop Rd	**TRANS-33, 37, & 38**: Shall contribute its fair share of the cost of adding a lane to the southbound SR-99 freeway segment between French Camp Road and Lathrop Road, under the RTIF program.
Roth Rd	**TRANS-39**: Shall contribute its fair share of the cost of the construction of a grade separation/overpass at the easterly crossing on Roth Road, under the RTIF program.

15. Delta Cove

Description: 1,545 residential units on 360 acres, consisting of low density residential lots (833 units), medium density residential lots (372 units), high density residential lots (280 units), 5.73 acres of commercial uses, and live-work residences (100 units) 2.5 acres within the commercial area.
Location: Southwest corner of Bear Creek and Future Trinity Parkway in Stockton, California
Document Type - Approval Date: EIR - 10/19/10
Jurisdiction: City of Stockton
RCMP Facilities Impacted: Eight Mile Road, Thornton Road, & Lower Sacramento Road
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 – *New Addition*
2016 – *New Addition*
2018 – N/A
2019 – N/A

Delta Cove Impact(s) and Mitigation Measure (s)

RCMP Facility Impacted	Mitigation Measure(s)
I-5 & Eight Mile Rd Int	**TRAF-1a, 6b, & 6c**: Shall contribute their fair share to improvements to the interchange of I-5 and Eight Mile Road.
I-5 & Hammer Ln Int	**TRAF-1b, 6g, 6h, 6i, & 6j**: Shall contribute their fair share to improvements to the interchange of I-5 and Hammer Lane.
I-5 & Hammer Ln Int and Hammer Ln & Kelley Dr Int	**TRAF-1c & 4e**: Shall contribute their fair share to improvements to the interchanges of I-5 & Hammer Lane and Hammer Lane & Kelley Drive.
I-5 and I-5 & Hammer Ln Int	**TRAF-3**: Shall widen I-5 and shall contribute their fair share to improvements to I-5 and Hammer Ln interchange.
I-5 b/w Otto Dr & Hammer Ln	**TRAF-5**: Shall require four lanes per direction on I-5 between Otto Drive and Lammer Lane.

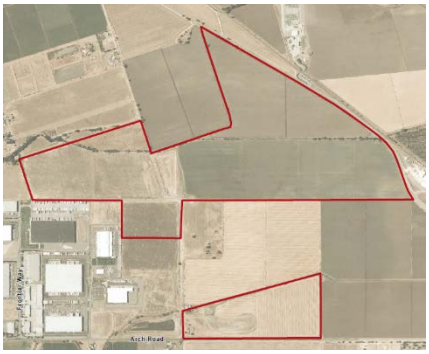
16. Archtown Industrial Project

Description: 79 acres of industrial
Location: Southwest corner of Arch Road and Newcastle Road in Stockton, California
Document Type - Approval Date: IS/MND - 11/15/11
Jurisdiction: City of Stockton
RCMP Facilities Impacted: Arch Road, Austin Road, & SR-99
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:
2014 – Project stalled. Project cannot be annexed into City of Stockton.
2016 – No change. The tentative map is valid until 11/15/17 due to automatic state extensions, which enabled their remaining entitlements to be valid.
2018 – N/A
2019 – N/A

Archtown Industrial Project Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Arch-Airport Rd & SR-99 Ramps Int	**TRAF-1a**: Shall contribute its fair share to the construction of a free NB right-turn lane at the intersection of Arch-Airport Road and SR-99 Ramps.

17. Norcal Logistics Center



Description: Approximately 325 acres of land, separated into two non-adjacent portions, approximately 50 and 275 acre properties. Up to 6,280,480 sq. ft. of light industrial could be constructed.
Location: South of Mariposa Road, North of Arch Road, east of Frontier Way, west of Austin Road in Stockton, California
Document Type - Approval Date: EIR - 03/26/2015
Jurisdiction: City of Stockton
RCMP Facilities Impacted: Mariposa Road, Austin Road, Arch Road, & SR-99
Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2016 – N/A
2018 – N/A
2019 – N/A

Norcal Logistics Center Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Arch Rd	**3.13.1**: Restripe Arch Road to provide Second Westbound Lane.
SR-99 between SR-120 to SR-4	**3.13.2**: Shall pay public facilities fees (PFF), which include the Regional Transportation Impact, Street Improvements, and Traffic Signal Fees, to widen SR-99 from SR-120 to the Crosstown Freeway.
Arch-Airport Rd & Sperry Rd Int	**3.13.3a**: Shall pay PFFs to construct improvements found in Arch-Airport Road/Sperry Road Specific Road Plan.

18. Thornton Rd / Eight Mile Rd Arco Station

Description: Three commercial structures: a gasoline station and convenience store approximately 3,799 square feet, a fast-food restaurant approximately 3,462 square feet, and a retail building approximately 4,000 square feet. The gasoline station would have 16 fuel dispensing pumps.
Location: Northwest corner of Eight Mile Rd & Thornton Rd in Stockton, California
Document Type - Approval Date: IS/MND - 01/21/2018

Jurisdiction: City of Stockton
RCMP Facilities Impacted: Eight Mile Rd & Thornton Rd
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2016 – N/A
2018 – N/A
2019 – N/A

Thornton Rd / Eight Mile Rd Arco Station Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Thornton Rd and Eight Mile Rd	**TRANS-1**: Shall install barriers on Eight Mile Road and Thornton Road along the commercial development frontage to prevent vehicles from making left turns to the commercial development.

19. Airport Way/Sperry Road Commercial

Description: The fueling station would provide 16 pumps for dispensing gasoline and diesel fuel to passenger vehicles and light-duty trucks. An adjacent building approximately 3,764 square feet in size would contain a convenience store.

Location: Southwest corner of Airport Wy & Sperry Rd in Stockton, California

Document Type - Approval Date: IS/MND - 04/17/2018

Jurisdiction: City of Stockton

RCMP Facilities Impacted: SR-99, Sperry Rd, Arch Airport Rd, & I-5

Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2016 – N/A

2018 – N/A

2019 – N/A

Airport Way/Sperry Road Commercial Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Airport Wy & Sperry Rd Int	**TRANS-1**: Shall make a fair-share contribution to funding improvements to the South Airport Way and Sperry Road intersection.
Sperry Rd	**TRANS-2**: Shall install, or contribute to the cost of installing, a barrier on Sperry Road from the intersection with South Airport Way, may be incorporated as part of the improvements required by Mitigation Measure TRANS-1.

20. Ellis Specific Plan

Description: 321 acres of 2,250 (max) residential dwellings, open pace/parks, swim center, village center, and 180,000 sq. ft. of commercial
Location: Northwest corner of Linn Road and Corral Hollow Road in Tracy, California
Document Type - Approval Date: EIR - 01/22/2013
Jurisdiction: City of Tracy
RCMP Facilities Impacted: Corral Hollow Road, Linne Road, & I-580
Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2014 –

A tentative subdivision map for the first phase of the project which consists of 296 residential lots was approved on July 23, 2014. SJCOG staff contacted City of Tracy Development and Engineering Services staff to determine the status of the project, who stated that the Final Map for the first phase of the project and associated improvements are currently under review.

2016 –

4.6-1a Pedestrian connections: complete (sidewalks improvements included in project); trip reduction program, ride-sharing, non-motorized: limited activity (initial stages of conclusion)
4.13-5 in progress; (fees currently be collected)
4.13-6 & -7 complete/in progress; (ongoing)

2018 –

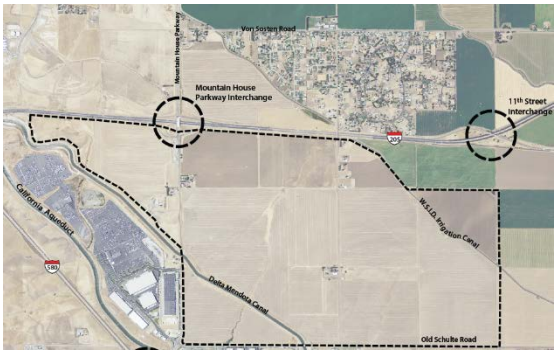
4.6-1a Pedestrian connections for Phase 1A and Phase 1B complete (sidewalks improvements included in project); Pedestrian connections for Phase 2 in design stage (sidewalks improvements included in project). Trip reduction program, ride-sharing, non-motorized: limited activity (initial stages of conclusion)
4.13-5a (Lammers Rd/Schulte Rd Intersection) in progress; (Development Impact fees currently being collected)
4.13-5b (Corral Hollow Rd/Valpico Rd Intersection) in progress; (Development Impact fees currently being collected)
4.13-6 (Interstate 580 west of Interstate 205) in progress, on-going; (RTIF fees currently being collected)
4.13-7 (Tesla Rd. & Patterson Pass Rd.) in progress, on-going; (RTIF fees currently being collected)

2019 – N/A

Ellis Specific Plan Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
N/A	**4.13-6 & 7**: Shall be required to pay Regional Transportation Impact Fees.

21. Cordes Ranch Specific Plan



Description: 16,105 residential dwellings, 275 acres of commercial, 441 acres of industrial, 759.5 acres of open space, 285 acres of schools, and 499.5 acres of public facilities
Location: South of I-205, North of Old Schulte Road, east of I-580, west of Lammers Road in Tracy, California
Document Type - Approval Date: EIR - 09/03/2013
Jurisdiction: City of Tracy
RCMP Facilities Impacted: I-580, I-205, Mountain House Parkway, Lammers Road, & Eleventh Street

Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2014 –

Master Developer of Cordes Ranch Specific Plan Area, Prologis, is currently working on design of improvements at Intersections #6, #7 and #10. The Developer will pay fair share cost of Intersection #19 and City will complete improvements in accordance with City's CIP implementation plan and as approved by the City Engineer. All RTIF and TMP fees were paid at the issuance of the building permits for the FedEx and Medline facilities currently under construction.

2016 –

TRANS-1: Mountain House Pkwy/I-205 EB Ramp and I-580 Ramps In progress (Interchange upgrade, PSR/PDS complete)
TRANS-1: Old Schulte Rd/Hansen Rd Complete
TRANS-1: New Schulte Rd & Old Schulte Rd/Lammers Rd In progress (partially built)
TRANS-1: New Schulte Rd/Lammers Rd & Valpico Rd/Lammers Rd Limited activity
TRANS-2, 7, & 9 In progress
TRANS-8: Mountain House Pkwy/I-205 WB Ramp
Limited activity (PSR/PDS for interchange upgrade complete)
TRANS-8: New Schulte Rd/Mountain House Pkwy & Lammers Rd and Valpico Rd/Lammers Rd Limited activity (not triggered)
TRANS-10 Complete (ongoing and PSR/PDS completed)

2018 –

TRANS-1: Mtn House Pkwy/I-205 WB Ramp and Mtn House Pkwy/I-205 EB Ramp In progress (Interchange upgrade, PSR/PDS complete)
TRANS-1: Mtn House Pkwy/I-580 WB Ramp and Mtn House Pkwy/I-580 EB Ramp In progress (Interchange upgrade, PSR/PDS complete)
TRANS-1: Old Schulte Rd/Hansen Rd Complete
TRANS-1: New Schulte Rd. (Promontory Pkwy) In progress (partially built from International Pkwy to Hansen Rd.)
TRANS-1: New Schulte Rd. (Promontory Pkwy) In progress (construction completed between Hansen Rd. to Road "H", partially graded from Road "H" to Lammers Rd.)
TRANS-1: New Schulte Rd. (Promontory Pkwy)/Lammers Rd Limited activity
TRANS-1: Old Schulte Rd/Lammers Rd. In progress (partially built)
TRANS-1: Valpico Rd/Lammers Rd Limited activity
TRANS-2: I-205 EB between Mtn House Pkwy and Tracy Blvd, In progress, on-going; (RTIF fees currently being collected)
TRANS-7: Existing Roadway and Freeways, In progress, on-going; (RTIF fees currently being collected)
TRANS-8: New Schulte Rd. (Promontory Pkwy)/Mtn House Pkwy (International Pkwy) . In progress (under construction)
TRANS-8: New Schulte Rd. (Promontory Pkwy)/Lammers Rd: Limited activity

TRANS-8: Valpico Rd/Lammers Rd: Limited activity

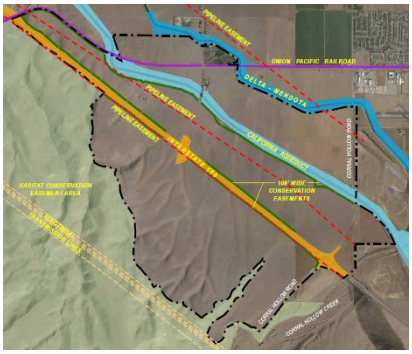
TRANS-10 Existing Roadway and Freeways, In progress, on-going; (TMP Program Fees and RTIF fees currently being collected)

2019 – N/A

Cordes Ranch Specific Plan Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Mountain House Pkwy & I-205 WB/EB Ramps Int and Mountain House Pkwy & I-580 WB/EB Ramps Int	**TRANS-1 & 8**: Improve the intersections of Mountain House Parkway & I-205 Westbound/Eastbound Ramps and Mountain House Parkway & I-580 Westbound/Eastbound Ramps.
I-205	**TRANS-2 & 9**: Shall contribute to capacity improvements in San Joaquin County through the payment of RTIF.
N/A	**TRANS-7**: Shall pay the applicable TMP Program Fee, RTIF fee, and any other applicable transportation fees.
Mountain House Pkwy & I-205 WB Ramps	**TRANS-8**: Refer to **Mitigation Measure TRANS-1**.
I-205	**TRANS-9**: Refer to **Mitigation Measure TRANS-2**.
Mountain House Pkwy & I-205 Int and Patterson Pass Rd & I-580 Int	**TRANS-10**: Refer to **Mitigation Measure TRANS-7**.

22. Tracy Hills Specific Plan



Description: 2,732 acres of up to 5,499 residential dwellings, schools, parks, commercial, industrial, and other land uses
Location: South of I-205, West of Corral Hollow Road, East of Alameda County Line in Tracy, California
Document Type - Approval Date: EIR - 03/02/2016
Jurisdiction: City of Tracy
RCMP Facilities Impacted: I-580, I-205, & Lammers Road
Project Status (Not Started, Under Construction, Completed):
Mitigation Measure Status:

2016 –

4.13-2 Bicycle and Pedestrian: complete; remainder: in progress; (part of Condition of Approval)
4.13-5a: #1-5, 9-10, 23 Limited activity
4.13-5a: #7 In Progress (Developer to pay fees)
4.13-5a: #13-14 In Progress (Cordes Ranch projects leading these intersections)
4.13-5a: #36 In Progress (included in Corral Hollow Road widening)
4.13-5b Limited activity/in progress (future phases of Tracy Hills/project to pay fees)
4.13-6a Limited activity (Applicant in discussion with Caltrans)

2018 –

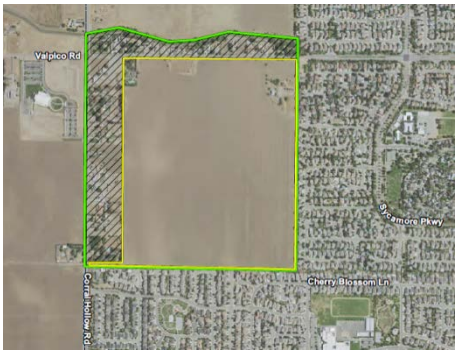
4.13-2 Bicycle and Pedestrian: Tracy Hills Blvd. complete; remainder: in progress; (part of Condition of Approval)
4.13-5a: #1 Corral Hollow Rd/ I-580 EB Ramps: Limited activity
4.13-5a: #2 Corral Hollow Rd/ I-580 WB Ramps: Limited activity
4.13-5a: #3 Corral Hollow Rd/ Spine Road (Tracy Hills Blvd.): In construction
4.13-5a: #4 Corral Hollow Rd/Linne Rd.: Limited activity
4.13-5a: #5 Linne Rd/S. Tracy Blvd.: Limited activity (In design)
4.13-5a: #7 Corral Hollow Rd./Valpico Rd.: In Progress, on-going (TMP Program Fees and TIF fees being collected)
4.13-5a: #9 Corral Hollow Rd./New Schulte Rd.: Limited activity (TMP Program Fees and TIF fees being collected)
4.13-5a: #10 Lammers Rd./Old Schulte Rd.: Limited activity (TMP Program Fees and TIF fees being collected)
4.13-5a: #13-14 Mtn House Pkwy/I-580 EB and WB Ramps: In Progress (Cordes Ranch projects leading these intx)
4.13-5a: #23 Tracy Hills Rd Internal Intersection: In Progress (construction not complete)
4.13-5a: #36 Corral Hollow Rd/Tennis Lane: In Progress (included in Corral Hollow Road widening)
4.13-5b Limited activity/in progress, on-going (TMP Program Fees and TIF fees being collected))
4.13-6a #1 & 2 Corral Hollow Rd/ I-580 EB and WB Ramps: Limited activity (Applicant in discussion with Caltrans)
4.13-6a: #13-14 Mtn House Pkwy/I-580 EB and WB Ramps: In Progress (Cordes Ranch projects leading these projects)
4.13-7a Linne Rd/MacArthur Dr: Limited activity, not triggered (RTF fees being collected)
4.13-7b &8b: Limited activity, not triggered (SJCOG RTF fees being collected)
4.13-9b, 9c, 10b, 10c, 15b, & 15c: **:** Limited activity, JPA TIF fees being collected)
4.13-14a: #4 Corral Hollow Rd/Linne Rd.: Limited activity (Refer to Mitigation 4.13-5a)
4.13-14a: #13-14 Mtn House Pkwy/I-580 EB and WB Ramps: In Progress (Refer to Mitigation 4.13-5a)
4.13-14b: Corral Hollow Rd Overlay b/w I-580 and Linne Rd.: In construction
4.13-15g: Class I or Class II bike path from Spine Rd (Tracy Hills Blvd.) to Linne Rd.: Limited activity (in design)

2019 – N/A

Tracy Hills Specific Plan Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Corral Hollow Rd & Linne Rd Int	**4.13-5a**: Signalize and reconstruct the northbound approach, to include a NB right-turn lane and NB through lane, of Corral Hollow Road & Linne Road Intersection.
Mountain House Pkwy & I-580 EB and WB Ramps Int	**4.13-5a**: Signalize the intersection of Mountain House Parkway & I-580 EB/WB Ramps.
Corral Hollow Rd b\w Linne Rd & Railroad Tracks and b\w S. Tracy Hills Rd and Linne Rd Lammers Rd b/w I-580 and Lammers Rd	**4.13-5b**: Construct the first two lanes of the future four lane arterial along Corral Hollow Road between Linne Road and the railroad tracks south of Golden Leaf Lane. Construct new street segments along Corral Hollow Road to a four-lane arterial from South Tracy Hills Road to Linne Road. Construct four lane expressway/parkway along Lammers Road between I-580 and Lammers Road.
Mountain House Parkway & I-580 EB and WB Ramps Int	**4.13-6a**: Refer to **Mitigation Measure 4.13-5a**.
N/A	**4.13-7b & 8b**: Shall pay the applicable SJCOG RTF.
N/A	**4.13-9b, 9c, 10b, 10c, 15b, & 15c**: Shall pay in 2014 dollars to the JPA TIF.
Corral Hollow Rd & Linne Rd Int	**4.13-14a**: Refer to **Mitigation Measure 4.13-5a** for the intersections of Corral Hollow Road & Linne Road and Mountain House Parkway & EB/WB Ramps.
Corral Hollow Rd b/w I-580 & Linne Rd	**4.13-14b**: Shall coordinate with the City Engineer to fund and implement the overlay of the existing 2 lanes of Corral Hollow Road between I-580 and Linne Road.
North of Linne Rd	**4.13-15g**: Shall construct a Class I or a Class II bicycle facility and a pedestrian facility from Spine Road to connect to the existing bicycle and pedestrian facilities just north of Linne Road.

23. Tracy Village



Description: An active adult, gated, and age-restricted community consisting of up to 600 single-family detached residential lots that would support single-family dwelling units ranging from 1,350 square feet to 3,000 square feet.
L**ocation:** West of Corral Hollow Rd & South of Valpico Rd in Tracy, California
Document Type - Approval Date: EIR - 04/11/2018
Jurisdiction: City of Tracy
RCMP Facilities Impacted: Corral Hollow Rd
Project Status (Not Started, Under Construction, Completed):

Mitigation Measure Status:

2016 – N/A

2018 – Project initiated

TRANS-1b and 4 – Widen Corral Hollow Rd from Parkside Dr. to Linne Rd.: In progress, on-going (CIP in design, TMP Program Fees and TIF fees to be collected)

TRANS-2b &4 – Corral Hollow Rd/Linne Rd: In progress, on-going (CIP in design, TMP Program Fees and TIF fees to be collected)

TRANS-3&4: Not Triggered. TMP Program Fees and TIF fees to be collected.

2019 – N/A

Tracy Village Residential Impact(s) and Mitigation Measure(s)

RCMP Facility Impacted	Mitigation Measure(s)
Corral Hollow Road between Parkside Drive and Linne Road	**TRANS 1b & 4**: Shall pay and widen Corral Hollow Road to four lanes from Parkside Drive to Linne Road.
Corral Hollow Road & Linne Road Intersection	**TRANS 2b & 4**: Add SB and NB through lanes and add a separate westbound right-turn lane at Corral Hollow Road & Linne Road Intersection.
N/A	**TRANS 3 & 4**: Prior to the issuance of a building permit, the Applicant shall pay Traffic Impact Fees for the Cumulative Traffic Impacts.