DRAFT

San Joaquin County

REGIONAL CONGESTION MANAGEMENT PROGRAM

2012 Update
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CHAPTER 1 INTRODUCTION

1.1 PROGRAM BACKGROUND

In June, 1990 California voters approved legislation which increased funding for California's transportation system. With the passage of Proposition 111 there were new requirements for the transportation planning process that requires urbanized counties, such as San Joaquin County, to prepare, adopt, and biennially update a Congestion Management Program (CMP).

As the designated Congestion Management Agency (CMA) for San Joaquin County, the San Joaquin Council of Governments (SJCOG) is required to maintain the state-mandated CMP for San Joaquin County. For most CMA's, implementation of the state CMP requirements also implements the federal Congestion Management System (CMS) planning requirements. The objective of the CMS/CMP is to ensure that new land uses are developed in tandem with the necessary transportation improvements by coordinating the land use, air quality, and transportation planning processes.

The Measure K Renewal Ordinance, approved by San Joaquin County voters in November 2006, required SJCOG to have in place and be fully implementing a regional CMP by January 1, 2008 (referred hereafter as the RCMP). This update further refines SJCOG's RCMP process by developing methods and guidelines to streamline the RCMP process and facilitating program implementation via automation and web based applications to the greatest extent. It also better integrates with SJCOG's other transportation planning and programming functions. This will in turn, enhance SJCOG's ability to satisfy the federal Congestion Management System (CMS) requirements as determined by FHWA's federal certification review process.

1.2 STATE/FEDERAL LEGISLATIVE BACKGROUND

The intent of the state CMP legislation is to address the problem of increasing congestion on California's highways and principal arterials through a coordinated approach involving state, regional, county, and city transportation and land use agencies, transit providers and air pollution control districts. The CMP is also intended to facilitate an integrated approach to programming transportation improvements. By creating a forum for state, regional, and local transportation and land use agencies to address regional and multi-jurisdictional issues related to congestion, land development, and air quality, the CMP ensures that limited transportation funds are more efficiently invested.

The RCMP applies to all the incorporated cities and the unincorporated area in the County of San Joaquin. RCMP's are comprised of the following required elements:

- an element defining the CMP system;
- an element establishing level of service standards;
- a program for analyzing the impacts of land use decisions;
- a system-wide multimodal performance element; and,
- a seven year capital improvement program.
- To ensure the effectiveness of the CMP, the CMP agency must monitor its implementation and annually determine that the cities and County are conforming to all of the following:
- consistency with the levels of service standards; and,
- adoption and implementation of a program to mitigate impacts from land use decisions.
- (See Appendix A for a complete version of the state and federal statutes referencing Congestion Management Programs.)

The 2005 Federal transportation legislation, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU included a "Congestion Management Process" targeted at reducing SOV travel without increasing roadway capacity. Areas designated as non-attainment of federal air quality standards such as San Joaquin County, the federal Congestion Management Process stipulates that for any project that results in a significant increase in the carrying capacity of single occupancy vehicles (SOVs) and is also proposed to be advanced with federal funds, an analysis is required to demonstrate that travel demand reduction and operational management strategies have been implemented to the full extent possible on the subject roadway. If the analysis demonstrates that despite these strategies additional SOV capacity is still required, the CMS will identify all reasonable strategies to manage the SOV facility effectively.

The federal Congestion Management Process requires a more formal process involving SJCOG, its member agencies, transit providers and Caltrans. These congestion management mandates require an increased multi-modal 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.

Other transportation planning mandates passed after the last SJCOG RCMP Biennial Update that were considered during this update are as following:

- AB-1358 (Government Code 65040.2, 65302) for addressing multi-modal "complete streets" concepts in city/county general plan circulation elements.
- SB-375 – Redesigning Communities to Reduce Greenhouse Gases requires Metropolitan Planning Organizations to develop "Sustainable Communities Strategies" (SCSs) to achieve quantifiable targets for reducing greenhouse gas emissions through more efficient development and better coordination. SB 375 streamlines the environmental review process for certain new development projects located near transit stations.
- Revised CEQA Guidelines (Section 15064-7, Appendix G) requiring local land use development projects to conform to both the CMP LOS standards and CMP TDM measures.

1.3 RCMP IMPLEMENTATION

As the designated CMA for San Joaquin County, SJCOG is required to monitor RCMP implementation and biennially determine if each local jurisdiction is in conformance with the RCMP. The coordinating partners are listed below:

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. RCMP implementation responsibilities for each agency in San Joaquin County are summarized in ***Table 1-1***.

California Department of Transportation	City of Lathrop
County of San Joaquin	Altamont Commuter Express
City of Stockton	San Joaquin Regional Transit District
City of Lodi	Lodi Grapeline
City of Manteca	Tracy Tracer
City of Tracy	Manteca Transit
City of Ripon	San Joaquin Valley Air Pollution Control District
City of Escalon	

Table 1-1. RCMP Implementation Responsibilities

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

Since the previous update to the RCMP (2007 RCMP), the following two RCMP related documents were developed and approved by the SJCOG Board:

- Regional Deficiency Plan (August, 2010)
- Regional Transportation Demand Management Plan (August 2010)

Both these documents were prepared consistent with all federal and state CMP legislative requirements. They are described in greater detail below and are included in the remainder of this RCMP document by reference.

Regional Deficiency Plan (August, 2010)

The Regional Deficiency Plan documents all applicable information from technical and planning documents completed for 12 identified RCMP deficient roadways within San Joaquin County and provides an analysis of the deficient roadways in terms of likely causes and the magnitude of the deficiencies. Remedial actions were identified for each deficient roadway to either meet the LOS standards or to implement alternative measures that measurably improve multimodal performance and contribute to significant improvements in air quality directly or on a system-wide level. A detailed implementation plan that includes descriptions of the selected improvements, programs/actions, anticipated costs, related funding sources, and schedule was developed for one segment of I-5 shown to be deficient after the CMP exemption analysis.

Regional Transportation Demand Management Plan (August 2010)

Concurrently with the development of the SJCOG Regional Deficiency Plan, the RCMP Travel Demand Management (TDM) Plan was developed to provide an assessment of: 1) current TDM programs and policies being implemented in San Joaquin County; 2) existing institutional, political and technical barriers to TDM implementation; and, 3) a TDM Action Plan that identified a two tiered level of TDM effort required of SJCOG and its member agencies based on monitored congestion on the CMP system and fair share considerations. The TDM Action plan was developed to be supportive and consistent with the San Joaquin Valley APCD Rule 9410 that identifies and analyzes opportunities to use existing resources more efficiently and opportunities for cooperation between public agencies, employers and other businesses for travel demand management. A RCMP congestion threshold performance measure was developed that integrated SJCOG's RCMP monitoring program with local and regional agency transportation demand management efforts (i.e., CMP TDM Plan) (see Chapter 5).

1.4 RCMP IMPLEMENTATION AND STATE/ FEDERAL FUNDING

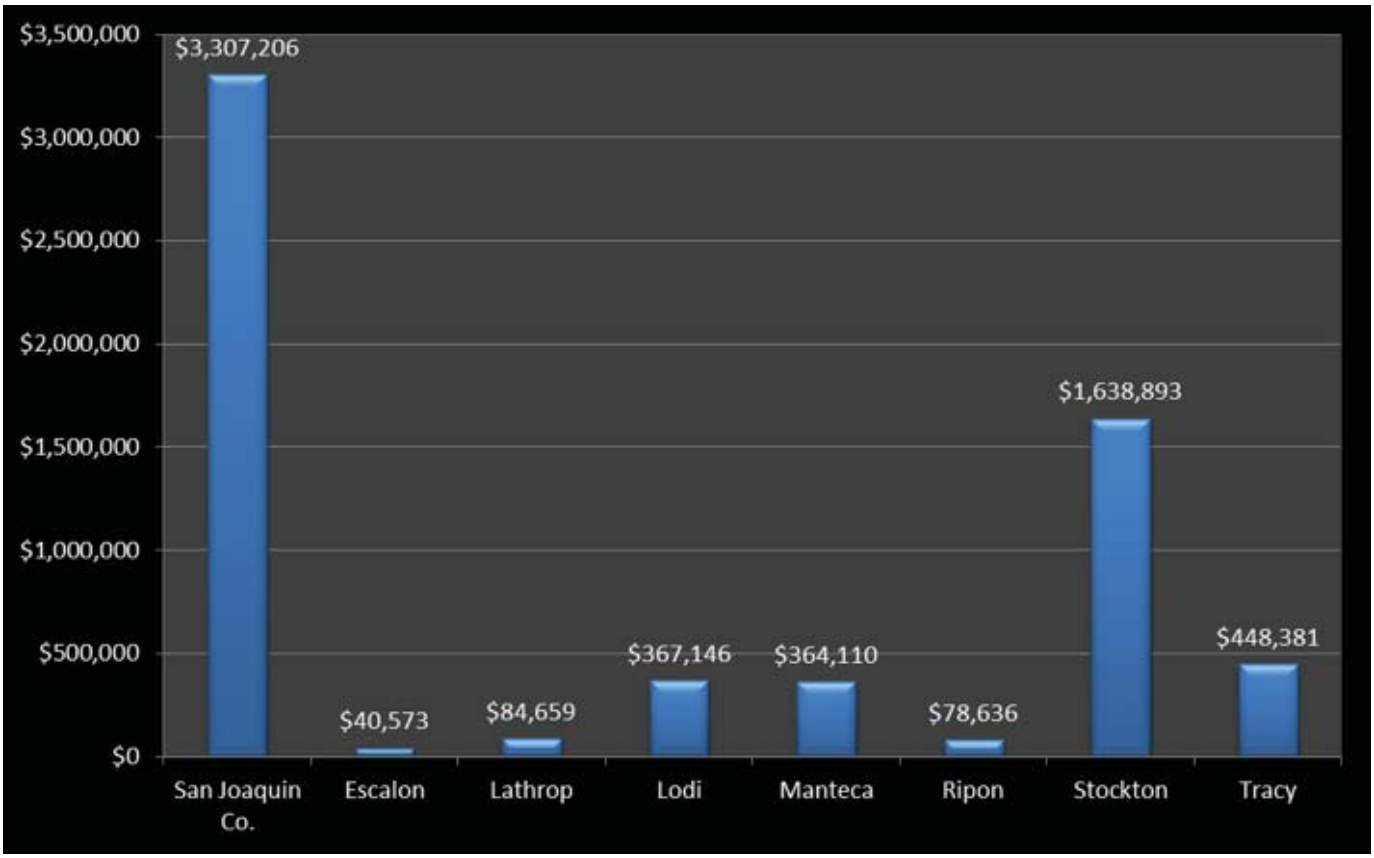
Biennial RCMP monitoring is a key mechanism that feeds into the regional transportation planning/programming process during SJCOGs MTP/RTP and FTIP updates. RCMP deficiencies identified through the deficiency planning process feed directly into the state/federal programming cycles. To better promote performance based programming, identified RCMP deficiencies are given greater formal funding priority by SJCOG during discretionary fund programming cycles.

SJCOG's member city and county agencies have a vested interest in implementing the RCMP given that the program is a prerequisite for obtaining federal, state, and local monies. These funding sources include the following:

- Federal Surface Transportation Program (STP) Funds
  Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Regional STP funds shall not be programmed for a project within a nonconforming jurisdiction unless the regional agency (SJCOG) finds that the project is of regional significance or included in a CMP deficiency plan (Section 65089.2 (C)(1) California Government Code).
- Federal Congestion Mitigation and Air Quality (CMAQ) Funds
  Federal SAFETEA-LU CMAQ funds shall not be programmed for a project within a nonconforming jurisdiction unless the regional agency (SJCOG) finds that the project is of regional significance or included in a CMP deficiency plan (Section 65089.2 (C)(1) California Government Code).
- State Regional Improvement Program Funds
  These funds are programmed through the regional transportation improvement program (RTIP). In developing the regional transportation improvement program, the regional transportation planning agency must be consistent with projects from the CMP capital improvement program.
- Local Section 2105 Funds
  If local jurisdictions are not in conformance, the new increment of local subvention funds (Proposition 111 – Section 2105) made available through the increased gas tax may be withheld (Section 65089.4). If the issue of nonconformance is not corrected within 12 months, the apportionment withheld will be allocated to the Congestion Management Agency (CMA). The CMA is then required to use the withheld amount to finance improvements identified in approved CMP deficiency plans or other regionally significant projects identified in the CMP capital improvement program countywide.

Figure 1-1 shows the annual average apportionment of Section 2105 (Proposition 111) gas tax revenues by jurisdiction for San Joaquin County for the last ten year period (2001-2011) . Proposition 111 increased the gas tax by 9 cents to address congestion through the development and implementation of the CMP. This revenue stream began in 1991. Section 2105 gas tax increase was phased in over 5 year period i.e., 4 cents the first year then 1 cent additional each successive year until the 9 cent total was achieved in 1997. Since 1997, approximately $6 million has been annually generated in San Joaquin County from Proposition 111 (approximately split 50/50 between incorporated and unincorporated areas). As such, all of SJCOG's member agencies have and continue to benefit greatly from the passage of the CMP statutes.

Figure 1-1. Average Annual Section 2105 Apportionments by SJCOG Jurisdiction (FY 2001-2011)



1.4 STRUCTURE OF REPORT

In addition to this introductory chapter, the revised RCMP contains the following nine chapters:

1. RCMP Designated Network (Chapter 2). Describes the comprehensive RCMP network of regional roadways, designated intersections and multi-modal corridors. These facilities establish the analysis framework for monitoring regional congestion and multi-modal performance in San Joaquin County.
2. RCMP Data Monitoring Program (Chapter 3). Describes the comprehensive data monitoring program that will systematically provide requisite information to monitor regional congestion within San Joaquin County. All traffic information collected as part of the SJCOG RCMP data monitoring program will be posted and made available to local agencies and the public on SJCOG's RCMP website. The RCMP website was developed as part of this update to facilitate program implementation, monitoring and data sharing by SJCOG and its partner agencies.
3. RCMP LOS Standard (Chapter 4). Defines the RCMP LOS standard, analysis methodologies and measures of effectiveness for determining vehicular LOS on the RCMP system of roadways and intersections.
4. RCMP Performance Measurement (Chapter 5). Defines selected performance measures to track multi-modal performance on the RCMP network. In addition to meeting the requirement for a "performance measurement element" in the RCMP, these measures create a framework for measuring the adequacy of alternatives to the SOV and TDM implementation.
5. RCMP Land Use Analysis Program (Chapter 6). In addition to running a well-calibrated regional travel model for future land use programming, SJCOG has further refined its evaluation of all proposed development projects in the county. This program is now better integrated with current local agency practices for developing traffic impact studies. This program encourages SJCOG, local jurisdictions, and Caltrans to be more pro-active about land use policies that may encourage excessive SOV trips. General Plan reviews are also conducted to better anticipate where congestion management tools should target.
6. Deficiency Plan Procedures (Chapter 7). Procedures for addressing "deficient" roadway segments in San Joaquin County is described as well as guidelines for developing RCMP deficiency plans.
7. Federal Congestion Management Process (Chapter 8). Describes how the federal Congestion Management Process has been "dovetailed" with the state's CMP requirements.
8. Capital Improvement Program (Chapter 9). The Capital Improvement Program (CIP) is the action plan for the RCMP which provides a framework for the funding and

implementation of projects that maintain or improve the transportation performance standards of the RCMP.

9. Conformity Requirements (Chapter 10). SJCOG is required to monitor all elements of the RCMP (Government Code Section 65089.3) and to ensure that the County and cities are conforming to the Congestion Management Plan. By meeting conformance requirements local jurisdictions ensure that Proposition 111 (Section 2105) funding for transportation improvements is not withheld.

SECTION 2

Regional Transportation System

CHAPTER 2 REGIONAL TRANSPORTATION SYSTEM

2.1 INTRODUCTION

The purpose of the Regional Congestion Management Program (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 focusses the implementation of the RCMP on a core network of key transportation facilities that facilitate regional travel within San Joaquin County.

2.2 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 Congestion Management Agency (CMA), which is the San Joaquin Council of Governments (SJCOG). The chosen principal arterials must represent routes of regional significance so that the impact of new land uses on the system can be measured. 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 used when the RCMP network of roadways was originally established in 1991 and for subsequent updates:

1. 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);
2. Access to principal arterials from abutting property is generally limited to interchanges and major intersections;
3. 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;
4. 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.

Given the RCMP network's maturation, the following scenarios are used to determine if and when the RCMP network needs to be expanded:

1. The roadway was designated is a regional facility on the Regional Transportation Impact Fee (RTIF) network;
2. A local roadway functions as a principal arterial, as described by the Federal Highway Administration's Functional Classification Guidelines ;
3. A minor arterial is reclassified as a major arterial in a jurisdiction's general plan; or
4. An existing RCMP roadway is extended or realigned.

The San Joaquin County RCMP roadway network is shown in ***Figure 2-1***. Modifications/additions to the RCMP roadway network as part of this update are highlighted. A description and explanation for designating these facilities as part of the RCMP network is provided in ***Table 2-1***. These facilities are summarized and listed in Appendix B.

Figure 2 1. RCMP Roadway Network

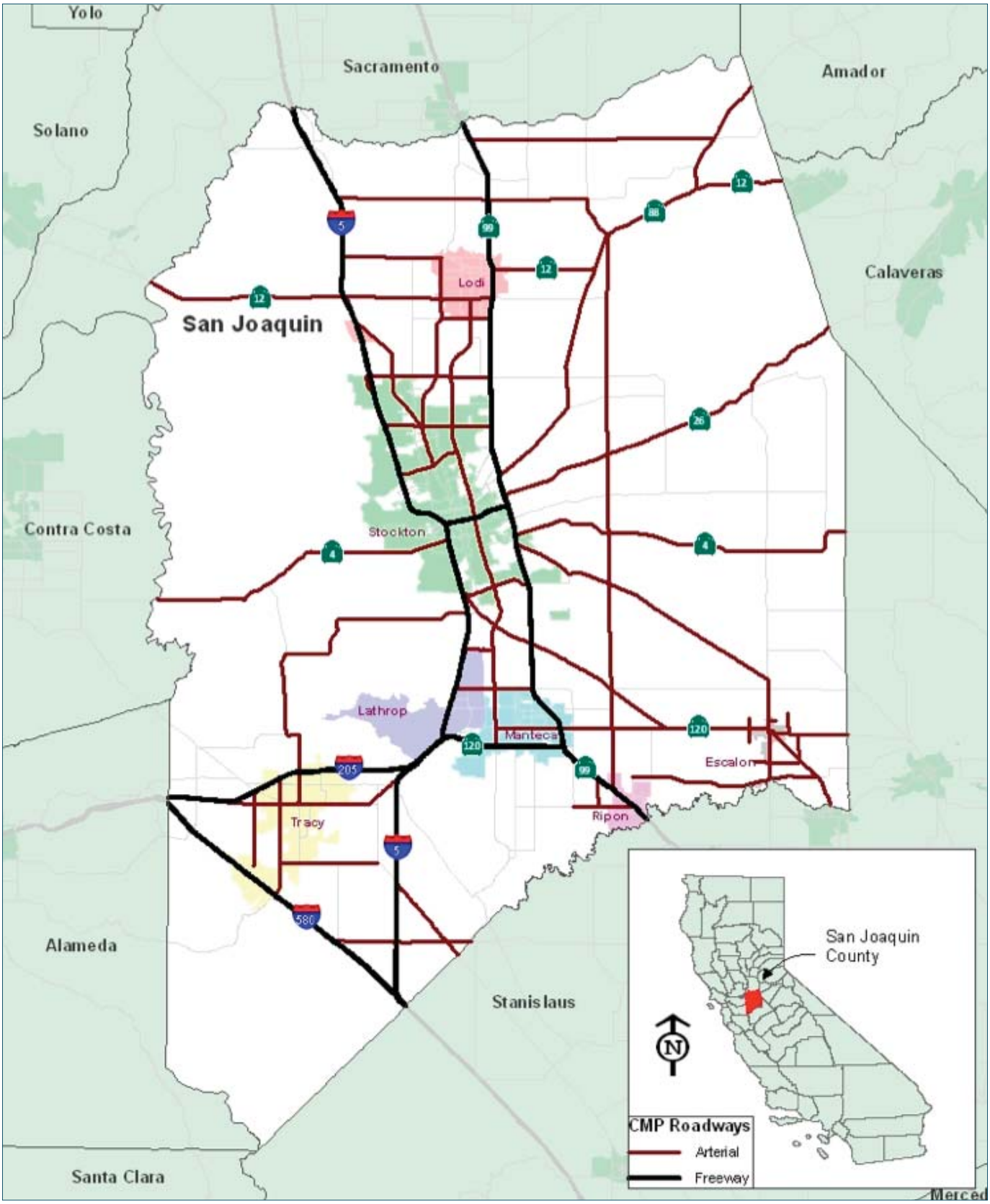


Table 2 1. RCMP Roadway Network Modifications

Proposed RCMP Roadway	Limits	Reason	Jurisdiction	Status
Eight Mile Road	I-5 to Trinity Parkway	New facility; Arterial is on the RTIF network and is designated as a regional expressway.	County/ Stockton	Open
Trinity Parkway	Eight Mile to Bear Creek	Arterial already part of existing RCMP and RTIF Network; Extension will provide connectivity between Trinity Parkway and existing Eight Mile RCMP segment; Trinity Parkway is part of the RTIF network; Designated as a regional expressway.	County/ Stockton	Open
Arch-Sperry Road	Performance Drive to I-5/ French Camp Road	Arterial already part of existing RCMP and RTIF Network; Extension will provide connectivity to I-5 and French Camp on the CMP network; Designated as a regional expressway.	County/ Stockton	In construction, due to open December 2013
Roth Road	I-5 to Airport Way	New facility; At the request of the City of Lathrop, this arterial was analyzed for its regional significance and placed on the RTIF Network in 2011.	County/ Lathrop	Open

2.3 RCMP ROADWAY NETWORK INTERSECTIONS

A total of 101 intersections within the incorporated and unincorporated areas of San Joaquin County have been designated as part of the RCMP network. Designation of RCMP intersections adds resolution for congestion monitoring and appropriately focusses attention at locations where operational constraints are typically experienced on arterial roadways.

Consistent with state statute, once an intersection is designated part of the system, it cannot be removed. RCMP intersections are subject to the CMP roadway LOS standards and deficiency planning requirements.

The selection of RCMP intersections by SJCOG with input from its member agencies focused primarily on state highway ramp termini and state/local arterial intersections of regional importance.

RCMP intersections are shown in Figure 2 2. These facilities are summarized and listed by jurisdiction in Table 2-2.

Figure 2 2. RCMP Roadway Intersections

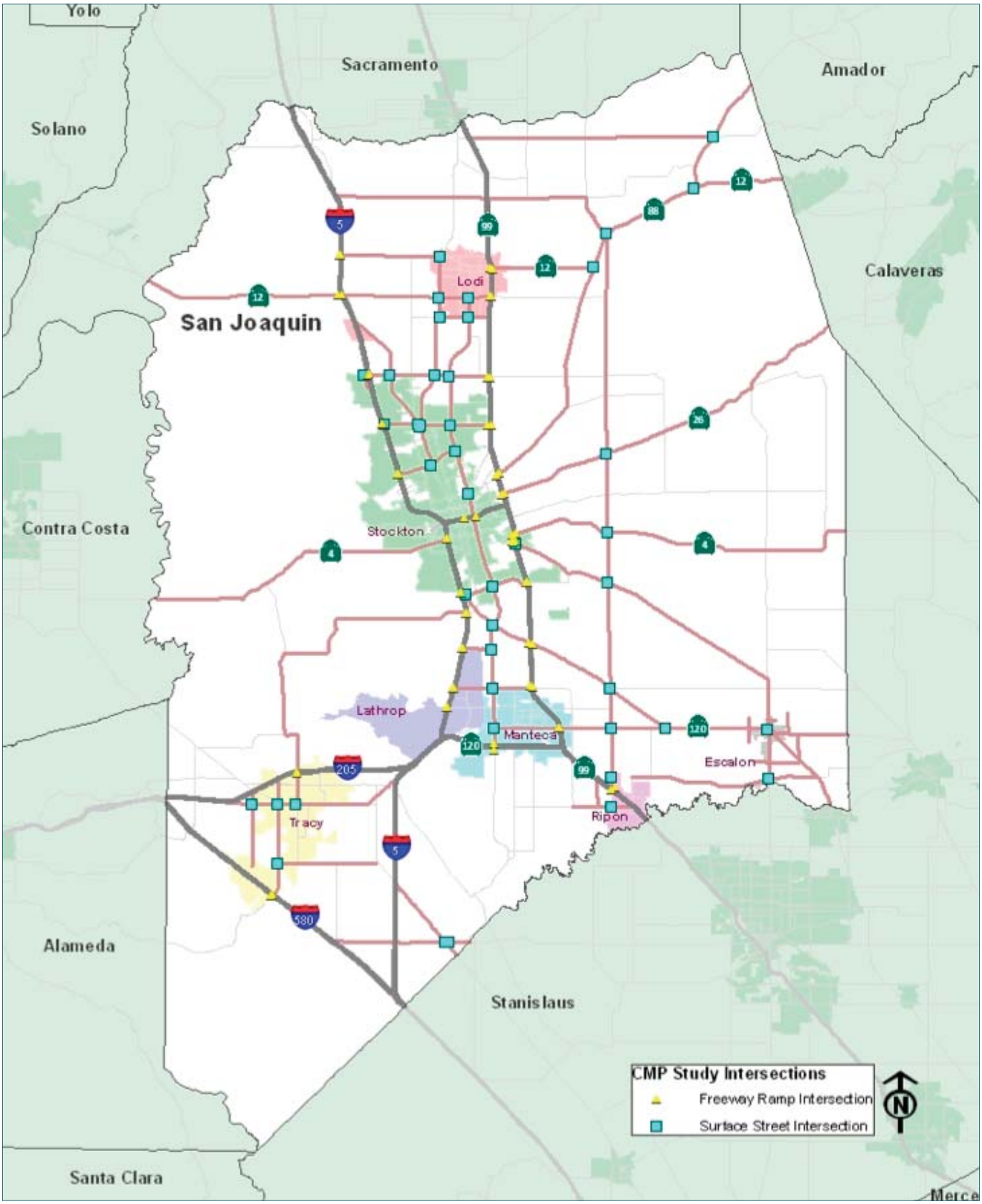


Table 2 2. RCMP Intersections

#	North-South Roadway	East-West Roadway	Jurisdiction	Intersection Type
1	I-5 SB Ramps	Turner Rd	County	Freeway Ramp Intersection
2	I-5 NB Ramps	Turner Rd	County	Freeway Ramp Intersection
3	I-5 SB Ramps	SR-12	County	Freeway Ramp Intersection
4	I-5 NB Ramps	SR-12	County	Freeway Ramp Intersection
5	I-5 SB Ramps	French Camp Rd	County	Freeway Ramp Intersection
6	I-5 NB Ramps	French Camp Rd	County	Freeway Ramp Intersection
7	I-5 SB Ramps	Matthews Rd	County	Freeway Ramp Intersection
8	I-5 NB Ramps	Matthews Rd	County	Freeway Ramp Intersection
9	99 Frontage (south of Eight Mile Rd)	Hwy 99 NB Ramps	County	Freeway Ramp Intersection
10	Hwy 99 SB Ramps	SR-88/ Waterloo Rd	County	Freeway Ramp Intersection
11	Hwy 99 NB Ramps	SR-88/ Waterloo Rd	County	Freeway Ramp Intersection
12	Hwy 99 SB Ramps	SR-26/ Fremont St	County	Freeway Ramp Intersection
13	Hwy 99 NB Ramps	SR-26/ Fremont St	County	Freeway Ramp Intersection
14	Hwy 99 NB Ramps	SR-4/ Farmington Rd	County	Freeway Ramp Intersection
15	Hwy 99 SB Ramps	French Camp Rd	County	Freeway Ramp Intersection
16	Hwy 99 NB Ramps	French Camp Rd	County	Freeway Ramp Intersection
17	Hwy 99 SB Ramps	99 Frontage (north of Lathrop Rd)	County	Freeway Ramp Intersection
18	Hwy 99 NB Ramps	99 Frontage (north of Lathrop Rd)	County	Freeway Ramp Intersection
19	Hwy 99 Ramps	Arch Airport Rd (at freeway)	County	Freeway Ramp Intersection
20	SR-88	SR-12	County	Surface Street Intersection
21	SR-88	SR-12/ Victor Rd	County	Surface Street Intersection
22	McHenry Ave	River Rd	County	Surface Street Intersection
23	SR-12/ SR-88/ Main St	Elliott Rd/ Tully Rd	County	Surface Street Intersection

Table 2 2. RCMP Intersections (cont'd)

#	North-South Roadway	East-West Roadway	Jurisdiction	Intersection Type
24	Jack Tone Rd	SR-120	County	Surface Street Intersection
25	West Ln	Eight Mile Rd	County	Surface Street Intersection
26	Airport Wy	French Camp Rd	County	Surface Street Intersection
27	Lower Sacramento Rd	Harney Ln	County	Surface Street Intersection
28	SR-33/ Ahern Rd	Vernalis Rd	County	Surface Street Intersection
29	Vernalis Rd	SR-132/ Vernalis Rd	County	Surface Street Intersection
30	Hwy 99 SB Ramps	Hammer Ln	County	Freeway Ramp Intersection
31	Hwy 99 NB Ramps	Hammer Ln	County	Freeway Ramp Intersection
32	Airport Wy	Roth Rd	County	Surface Street Intersection
33	French Camp Rd	SR-120/ Yosemite Ave	County	Surface Street Intersection
34	Jack Tone Rd	French Camp Rd	County	Surface Street Intersection
35	Jack Tone Rd	Mariposa Rd	County	Surface Street Intersection
36	Jack Tone Rd	SR-4/ Farmington Rd	County	Surface Street Intersection
37	Jack Tone Rd	SR-26	County	Surface Street Intersection
38	SR-88	Liberty Rd	County	Surface Street Intersection
39	Escalon-Bellota Rd/ McHenry Ave	SR-120	Escalon	Surface Street Intersection
40	I-5 SB Ramps	Lathrop Rd	Lathrop	Freeway Ramp Intersection
41	I-5 NB Ramps	Lathrop Rd	Lathrop	Freeway Ramp Intersection
42	I-5 SB Ramps	Roth Rd	Lathrop	Freeway Ramp Intersection
43	I-5 NB Ramps	Roth Rd	Lathrop	Freeway Ramp Intersection
44	I-5 SB Ramps	Louise Ave	Lathrop	Freeway Ramp Intersection
45	I-5 NB Ramps	Louise Ave	Lathrop	Freeway Ramp Intersection
46	Hwy 99 SB Ramps	SR-12/ Victor Rd	Lodi	Freeway Ramp Intersection

Table 2 2. RCMP Intersections (cont'd)

#	North-South Roadway	East-West Roadway	Jurisdiction	Intersection Type
47	Hwy 99 NB Ramps	SR-12/ Beckman Rd	Lodi	Freeway Ramp Intersection
48	Hwy 99 SB Ramps	SR-12/ Kettleman Ln	Lodi	Freeway Ramp Intersection
49	Hutchins St	SR-12/ Kettleman Ln	Lodi	Surface Street Intersection
50	Lower Sacramento Rd	Turner Rd	Lodi	Surface Street Intersection
51	Lower Sacramento Rd	SR-12/ Kettleman Ln	Lodi	Surface Street Intersection
52	Hwy 99 NB Ramps	SR-12/ Kettleman Ln	Lodi/ County	Freeway Ramp Intersection
53	West Ln/ Hutchins St	Harney Ln	Lodi/ County	Surface Street Intersection
54	Airport Wy	SR-120 WB Ramps	Manteca	Freeway Ramp Intersection
55	Airport Wy	SR-120 EB Ramps	Manteca	Freeway Ramp Intersection
56	Hwy 99 SB Ramps	SR-120/ Yosemite Ave	Manteca	Freeway Ramp Intersection
57	Hwy 99 NB Ramps	SR-120/ Yosemite Ave	Manteca	Freeway Ramp Intersection
58	Airport Wy	Lathrop Rd	Manteca	Surface Street Intersection
59	Airport Wy	Yosemite Ave	Manteca	Surface Street Intersection
60	Jack Tone Rd	Hwy 99 SB Ramps	Ripon	Freeway Ramp Intersection
61	Hwy 99 NB Ramps	Colony Rd	Ripon	Freeway Ramp Intersection
62	Jack Tone Rd	River Rd	Ripon	Surface Street Intersection
63	Jack Tone Rd	West Ripon Rd	Ripon	Surface Street Intersection
64	99 Frontage (south of Eight Mile Rd)	Hwy 99 SB Ramps	Stockton	Freeway Ramp Intersection
65	Hwy 99 SB Ramps	SR-4/ Farmington Rd/ Netherton Ave	Stockton	Freeway Ramp Intersection
66	I-5 SB Ramps	Eight Mile Rd	Stockton	Freeway Ramp Intersection
67	I-5 NB Ramps	Eight Mile Rd	Stockton	Freeway Ramp Intersection
68	I-5 SB Ramps	Hammer Ln	Stockton	Freeway Ramp Intersection
69	I-5 NB Ramps	Hammer Ln	Stockton	Freeway Ramp Intersection

Table 2 2. RCMP Intersections (cont'd)

#	North-South Roadway	East-West Roadway	Jurisdiction	Intersection Type
70	I-5 SB Ramps	March Ln	Stockton	Freeway Ramp Intersection
71	I-5 NB Ramps	March Ln	Stockton	Freeway Ramp Intersection
72	I-5 SB Ramps	SR-4/ Charter Wy	Stockton	Freeway Ramp Intersection
73	I-5 NB Ramps	SR-4/ Charter Wy	Stockton	Freeway Ramp Intersection
74	Stanislaus St	SR-4 WB Ramps/ Washington St	Stockton	Freeway Ramp Intersection
75	Wilson Wy	SR-4 EB Ramps	Stockton	Freeway Ramp Intersection
76	Hwy 99 SB Ramps	Mariposa Rd	Stockton	Freeway Ramp Intersection
77	Hwy 99 NB Off-Ramps	Mariposa Rd	Stockton	Freeway Ramp Intersection
78	99 Frontage (north of Mariposa)	Hwy 99 NB Ramps	Stockton	Freeway Ramp Intersection
79	99 Frontage Rd	Mariposa Rd	Stockton	Surface Street Intersection
80	West Ln	Hammer Ln	Stockton	Surface Street Intersection
81	West Ln	March Ln	Stockton	Surface Street Intersection
82	Airport Wy	Sperry Rd/ Arch-Airport Rd	Stockton	Surface Street Intersection
83	Lower Sacramento Rd	Eight Mile Rd	Stockton	Surface Street Intersection
84	Thornton Rd	Eight Mile Rd	Stockton	Surface Street Intersection
85	Thornton Rd	Hammer Ln	Stockton	Surface Street Intersection
86	Pacific Ave	March Ln	Stockton	Surface Street Intersection
87	Kelley Dr	Hammer Ln	Stockton	Surface Street Intersection
88	West Ln/ Airport Wy	Harding Wy	Stockton	Surface Street Intersection
89	Lower Sacramento Rd	Hammer Ln	Stockton	Surface Street Intersection
90	Thornton Rd/Pacific Ave	Lower Sacramento Rd	Stockton	Surface Street Intersection
91	French Camp Rd	Sperry Rd	Stockton	Surface Street Intersection
92	Hwy 99 NB Ramps	Arch Rd (east of freeway)	Stockton/ County	Freeway Ramp Intersection

Table 2 2. RCMP Intersections (cont'd)

#	North-South Roadway	East-West Roadway	Jurisdiction	Intersection Type
93	Trinity Pkwy	Eight Mile Rd	Stockton/ County	Surface Street Intersection
94	Tracy Blvd	I-205 EB Ramps	Tracy	Freeway Ramp Intersection
95	Tracy Blvd	I-205 WB Ramps	Tracy	Freeway Ramp Intersection
96	Corral Hollow Rd	I-580 WB Ramps	Tracy	Freeway Ramp Intersection
97	Corral Hollow Rd	I-580 EB Ramps	Tracy	Freeway Ramp Intersection
98	Tracy Blvd	11th Street	Tracy	Surface Street Intersection
99	Corral Hollow Rd	11th Street	Tracy	Surface Street Intersection
100	Corral Hollow Rd	Linne Rd	Tracy	Surface Street Intersection
101	Lammers Rd	11th Street	Tracy	Surface Street Intersection

2.4 RCMP BICYCLE NETWORK

The provision of bicycling facilities is an important component of the SJCOG's program to encourage multi-modal transportation. To this end, the SJCOG is in the process of developing its Bicycle, Pedestrian, and Safe Routes to School Plan . A key deliverable of this plan is the formal designation of a regional bikeway network. This will include existing and future Class I Multi-use trails, Class II Bike Lanes, and Class III Bike Route facilities that will comprise a continuous uninterrupted network of facilities across the entire county. Upon adoption of the regional bikeway plan, the RCMP will provide the mechanism for tracking performance and ultimate completion of the bikeway network.

The regional bikeway network will not be subject to the RCMP operational standards. It will simply help guide future bicycle performance measure development and infrastructure improvements needs. Unlike the RCMP roadway network, the designated bicycle network may change over time depending on the presence, quality or connectivity of existing or planned infrastructure (as defined during periodic updates of the regional bikeway network).

2.5 RCMP MULTIMODAL CORRIDORS

State and federal mandates require the consideration of all major modes of travel as part of a Congestion Management Program (CMP). 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, children, senior citizens, mobility impaired, and freight movers) as part of their general plan updates. In recognition of these legislative mandates, SJCOG, in coordination with its member agencies, have 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. The concepts and method to compute multimodal level of service (MMLOS) is documented in the 2010 Highway Capacity Manual.

The MMLOS as applied specifically to RCMP multi-modal corridors allows a more meaningful and focused RCMP multimodal performance measure tracking mechanism. It will also provide greater flexibility to local agencies for identifying improvement strategies. It will be particularly applicable to corridors where lane capacity improvements to improve vehicular level of service may be infeasible or undesirable due to high costs, limited right-of-way, lack of political support, and/or institutional constraints.

RCMP multimodal corridor LOS performance will be established by SJCOG for existing conditions. The bicyclist, pedestrian, and transit passenger performance will not be subject to the RCMP operational standards or deficiency planning requirements (i.e., RCMP deficiency plans will not be triggered). If, however, a RCMP deficiency is identified as part of the RCMP network monitoring program (see Chapter 3) and/or the RCMP land use analysis process (see Chapter 6), it would allow a more flexible response by the affected local agency to address the identified RCMP deficiency or CEQA impact. In this sense, improvements to the pedestrian, bicyclist, and/or transit passenger environment (system-wide

improvements) could replace roadway capacity increasing projects that improve only vehicle levels of service (direct fixes).

The selection of multimodal corridors began with the proviso that the roadways were identified as part of the RCMP network and were not currently operating as limited access facilities, such as freeways or expressways . To further refine the selection process for multimodal corridors, the following guidance was used:

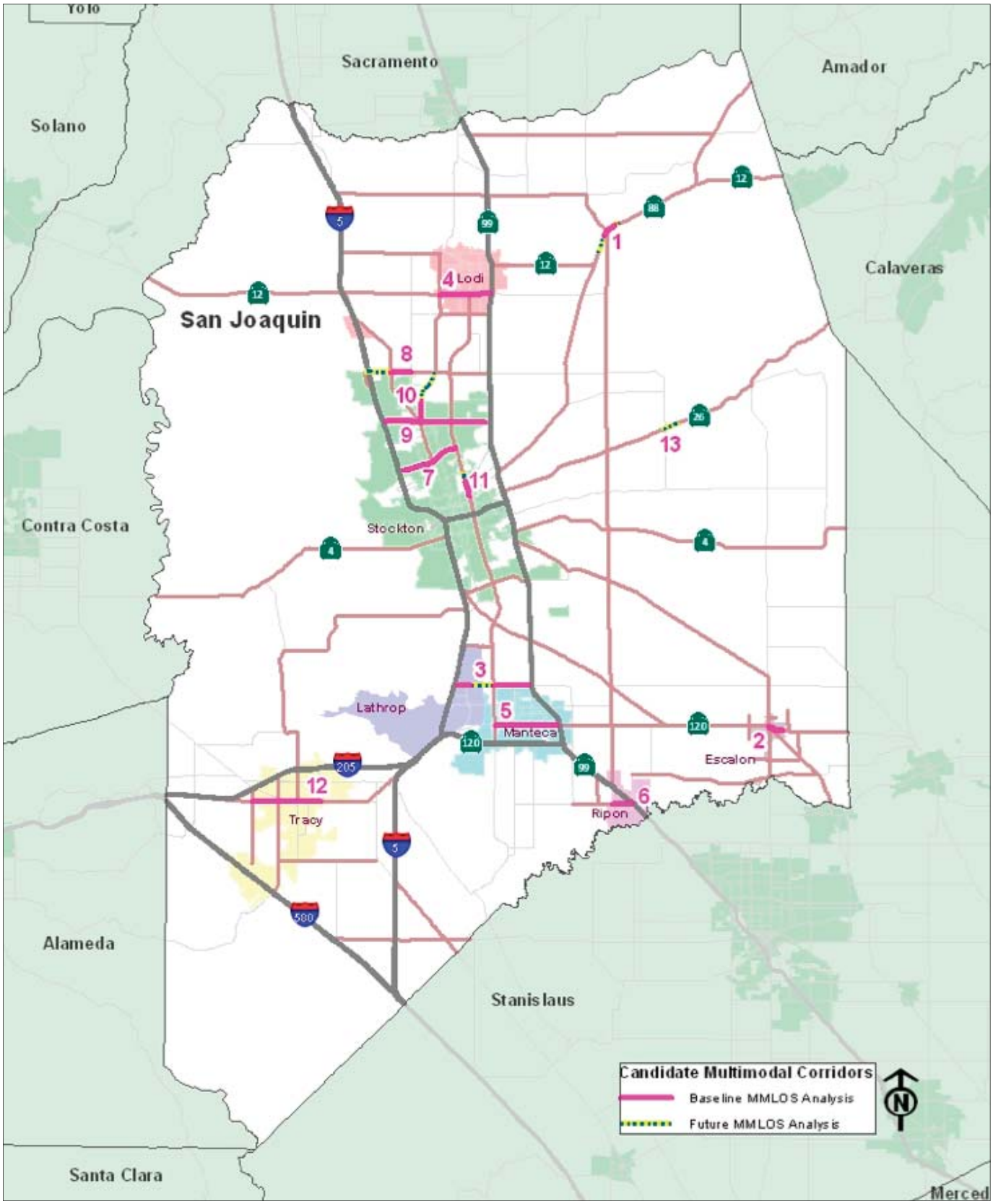
1. Roadway is a state highway that serves as a city's or community's main street;
2. Roadway possess "Complete Streets" characteristics, meaning they have limited additional right-of-way and the existing right-of-way is shared by many types of users (motorists, pedestrians, bicyclists, and transit passengers);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

Based on the above guidance, the list of RCMP multimodal corridors is summarized and listed by jurisdiction in ***Table 2-3*** and shown in ***Figure 2-3***. Both the table and figure indicate corridors that will be analyzed by SJCOG to establish baseline conditions and future corridors that will be evaluated when development patterns warrant a multimodal analysis.

Table 2 3. RCMP Multimodal Corridors

#	Roadway	Analysis Extent	Analysis Scenario 1	Jurisdiction	Length (miles)
1	SR-88	Locke Rd to North Sierra Dr	Baseline	County	0.8
		Brandt Rd to eastern town limit of Lockeford	Full	County	2.0
2	SR-120	McHenry Ave-Escalon Bellota Rd to David Dr	Baseline	Escalon	0.8
3	Lathrop Rd	Crestwood Ave to S Airport Wy	Baseline	Lathrop	0.6
		S Harlan Rd to 7th St	Baseline	Manteca	1.8
		S Harlan Rd to Crestwood Ave	Full	Lathrop/ County/ Manteca	3.6
4	SR-12/Kettleman Ln	Lower Sacramento Rd to Cherokee Ln	Baseline	Lodi	2.5
5	Yosemite Ave	Airport Wy to Northwoods Ave-Commerce Ave	Baseline	Manteca	3.2
6	Main St	Jack Tone Rd to Stockton Ave	Baseline	Ripon	1.0
7	March Ln	Da Vinci Dr-Quail Lakes Dr to West Ln	Baseline	Stockton	3.0
8	Eight Mile Rd	Thornton Rd to Davis Rd	Baseline	Stockton/ County	1.0
		Trinity Pkwy to Davis Rd	Full	Stockton/ County	2.4
9	Hammer Ln	Kelley Dr to Maranatha Dr	Baseline	Stockton	5.0
10	Lower Sacramento Rd	Royal Oaks Dr to Hammer Ln	Baseline	Stockton	1.1
		Eight Mile Rd to Hammer Ln	Full	Stockton	2.8
11	West Ln-Airport Wy	El Pinal Dr to Roosevelt St	Baseline	Stockton	0.8
		E Alpine Ave to E Roosevelt St	Full	Stockton	1.2
12	11th St	Lammers Rd to N MacArthur Dr (west)	Baseline	Tracy	3.3
13	SR-26	N Granada Ln to N Market St	Full	County	0.9

Figure 2 3. RCMP Multi-Modal Corridors



SECTION 3
Monitoring Program

CHAPTER 3 MONITORING PROGRAM

3.1 INTRODUCTION

In order to allow SJCOG to measure regional congestion in San Joaquin County on an ongoing basis, a systematic monitoring program is required. This chapter describes the RCMP Monitoring Program and provides information on how and when data collection is to be performed.

3.2 DATA COLLECTION TIMES

Depending on facility type and LOS methodology, a combination of daily and/or peak hour counts must be collected on the designated RCMP road network. Whenever available, SJCOG will first utilize new count data collected by Caltrans and local jurisdictions before conducting counts as part of the RCMP Monitoring Program. Any data utilized by SJCOG for roadway performance measurement should adhere to the following guidelines:

- Peak hour counts should be collected on a weekday (Tuesday, Wednesday, or Thursday). If multiple weekdays are counted, an average of these days should be used.
- Avoid counts during weekends, holiday weeks and roadway construction zones.
- Develop consistent counting periods for a given road segment and locations. Comparisons of counts taken in the same month of each year are likely to be more valid.
- Counts taken during the spring months of March, April, or May or fall months of September and October are preferred. These counts represent average conditions more accurately than counts taken during the summer or winter months. They also reflect when schools are in session.
- Intersection Turning Movement Count (ITMC) are to distinguish right turn on red (RTOR) movements, pedestrian crossings and bicycle turning movement counts during typical commute hours (7:00 to 9:00 AM and 4:00 to 6:00 PM).
- If possible, counts should include vehicle classification – minimally differentiating between motor vehicles from heavy duty trucks (i.e., 3+ axle trucks).

3.3 INTERSECTION COUNT SCHEDULE AND METHODOLOGY

Peak hour intersection turn movement counts (7:00 AM to 9:00 AM, 4:00 PM to 6:00 PM) will distinguish right turn on red (RTOR) movements, vehicle and bicycle turning movements counts as well as pedestrian crossing counts. They will be collected for the RCMP intersections listed in ***Table 2-2*** of Chapter 2. After a complete set of baseline counts are performed, future intersection counts will be based on the following staggered schedule detailed in ***Table 3-1***. The purpose of staggering the count schedule is to reduce the cost burden of a given monitoring year while not potentially compromising the ability to identify potential RCMP deficiencies.

Table 3 1. Intersection Update Schedule

Current Vehicle LOS	Update Frequency
C or worse	2 uears
A or B	5 Years

If an intersection is operating a LOS C or worse and programmed capital improvements are scheduled for construction within three years - traffic counts need not be performed. After the improvements are constructed/implemented, RCMP monitoring will resume.

Prior to performing intersection counts, SJCOG will review all readily available and recent intersection count data. If reliable intersection turn movement counts are available from other recent traffic analysis sources (traffic impact studies, member agency traffic studies, or Caltrans traffic studies) those counts can be used in lieu of performing new counts for a given monitoring year.

3.4 EXISTING SEGMENT DATABASE

AADT Traffic volumes for the state highway system (basic freeway, multi-lane highway and rural 2-lane highways) will be based on Caltrans most recent annual published volume report for state highways. The AADT information will be converted to peak hour direction volumes based on published weekday K and D factors from the Caltrans Peak Hour Volume Report or PeMS data depending on availability.

Summation of PM peak hour intersection turn movement counts to determine a PM peak hour segment volume for local arterial segments will be performed where applicable. Conversion of the PM peak hour segment volume to a daily volume estimate will be performed by dividing the PM peak hour segment volume by 0.1 (assumes PM peak hour volume is 10% of the AADT).

Continuous 24-hour segment counts will be performed for locally owned RCMP facilities where summation of intersection turn movement counts are determined to not provide a representative peak hour segment count will be collected by SJCOG as part of the RCMP monitoring program.

Refer to ***Figure 2-1*** in Chapter 2 for a map of the current RCMP roadways. The existing segment-based program will continue to be operated by SJCOG. The level of service analysis will be conducted by SJCOG using the 2010 HCM.

3.5 MULTI-MODAL LOS CORRIDORS DATABASE

RCMP multimodal corridors are defined as sections of the RCMP roadway network where pedestrian, bicyclist, transit passenger, and motorist levels of service are analyzed. The concepts and method to compute multimodal level of service (MMLOS) is documented in the 2010 Highway Capacity Manual (refer to Figure 2-3 in Chapter 2 for a map of the designated RCMP Multi-modal Corridors).

For designated RCMP Multi-modal Corridors, SJCOG will collect the following baseline inputs to operationalize the HCM 2010 multimodal level of service (MMLOS) procedure.

- Infrastructure Characteristics
  - Crosswalk Widths
  - Segment Lengths
  - Number of Lanes
  - Speed Limits
  - Number of Bus Stops on Each Segment
  - Presence of Right Turn Islands
  - Median Type
- Traffic and signal information
  - Cycle Length
  - Whether Signal System is Coordinated
  - Peak Hour 2-way volumes
  - Directional Volume Distribution
  - Number of Large Barrier Objects
  - Cross Sectional Widths
  - Number of left/right access points along the segment
  - Bus Stop Amenities
  - Pavement Condition
  - Presence of Left Turn Pockets
  - g/c Ratio for Through Movement
  - Walk Phase Timing
  - PHF
  - "K" Factor
- Transit System information
  - Frequency
  - Load Factor
  - Rider Trip Length
  - Bus On-Time Performance
  - Scheduled Speed

Many of these MMLOS inputs are infrastructure based as opposed to demand based. As such, much of this data can be collected outside the typical commute hours (7:00 to 9:00 AM and 4:00 to 6:00 PM). Absent, streetscape alternations, infrastructure characteristics do not vary significantly over time. Transit system information can also be readily collected and updated from information provided on transit agency websites or published transit schedules. SJCOG will be responsible for updating the MMLOS traffic demand information inputs using data collection described in Sections 3.2, 3.3 and 3.4.

Once the baseline information for a given RCMP Multi-modal Corridor is established, local agencies will be responsible to inform SJCOG of any streetscape alterations that require modification of the MMLOS inputs. SJCOG will be responsible for updating all non-infrastructure MMLOS inputs.

3.6 VALIDITY OF COUNTS

Turning movement counts should be conducted according to the data collection guidelines outlined in this chapter. New counts will be routinely cross validated with prior year counts. Should any approach volume vary by more than +/- 15% from the prior count for the same intersection location, the need for a re-count of the intersection will be examined.

Total directional approach volumes for the intersection can also be compared to available 24-hour segment machine counts. The machine counts need not necessarily be done for all four intersection approaches (e.g., counts on the major street only could be acceptable). Should any approach volume vary by more than +/- 15% from machine count data or from historical approach volume for the same intersection location, a re-count of the intersection may be required to determine what volume data is most representative of the location.

Additional monitoring to verify a RCMP LOS measurement may be performed within 60 days from the time the existing RCMP count was performed. The local jurisdiction must notify SJCOG of its' intent to perform additional monitoring. The re-count must be performed by a data. After the re-count is performed, the local jurisdiction must submit the raw traffic count sheets to SJCOG for re-analysis. Additional travel speed and delay studies may be appropriate to confirm the findings when LOS standards are exceeded. If additional monitoring is not performed within 60 days from the time of the RCMP LOS measurement, the original count will be used to determine whether the facility exceeds the RCMP LOS standards.

The need for consistent and reliable count data extends beyond the RCMP, and should be applied to any counts that are done for traffic studies. At their discretion, local jurisdictions may wish to apply a similar standard to counts used by consultants in traffic studies (or have traffic studies be one source for RCMP counts when possible). In this manner, it is hoped a better assessment of LOS will be presented in these documents.

3.6 TRAFFIC COUNT FUNDING

SJCOG is responsible for funding the RCMP Traffic Monitoring Program. To help defray costs, SJCOG will rely on its member agencies and Caltrans to share available count data.

3.7 TRAFFIC COUNT LIBRARY/ CLEARINGHOUSE

Part of the RCMP update includes the development of a RCMP website to disseminate information. Transportation count data collected by SJCOG, member agencies, developers, or other entities will be posted to a publicly available website. By creating this clearinghouse, count data collection costs and baseline analysis will be reduced for all by decreasing redundancies in counting efforts through the provision of up-to-date information. To facilitate data sharing and maximize the countywide benefit and utility of the RCMP Monitoring Program. SJCOG member agencies and Caltrans are expected to submit count data from RCMP roadways and RCMP intersections for inclusion on the RCMP website.

SECTION 4

LOS Standards

CHAPTER 4 LOS STANDARDS

4.1 INTRODUCTION

Service standards are incorporated into the RCMP to provide a measurement against which the RCMP system can be evaluated. Per state statute, RCMP standards are distinguished from RCMP performance measures in the following ways:

- RCMP standards apply specifically to vehicular roadway level of service
- Exceeding RCMP standards triggers the need for developing a RCMP Deficiency Plan

Level of service (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 extremely unstable flow conditions with volumes at or near the designed capacity (i.e., high density conditions). LOS F represents forced flow where operating 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.

Section 65089(b) (1) (B) of the statute requires the CMA to establish traffic LOS standards for the designated roadway system. This section states:

In no case shall the LOS standards established be below the LOS E, or the current level, whichever is farthest from LOS A, except where a segment or intersection had been designated as deficient and a deficiency plan has been adopted pursuant to Section 65089.4

The CMA agency may set more stringent LOS standards at its discretion. The LOS standards adopted by local jurisdictions for the Circulation Element of their General Plans, or for environmental review of projects under the California Environmental Quality Act (CEQA), may be more or less stringent than those specified in the CMP.

As required by the CMP statues, when an intersection or roadway segment is monitored as operating at LOS E or lower, the county or the city in which the deficient segment or intersection is located must prepare a deficiency plan specific to that location. The CMP statute exempts certain vehicle trips when evaluating CMP LOS deficiencies. The deficiency plan exemptions are listed below. Definitions and examples of each are provided in Chapter 7.

- interregional traffic;
- construction, rehabilitation, or maintenance activity impacting the CMP system;
- freeway ramp metering;
- traffic signal coordination by state or multi-jurisdiction agencies;
- traffic generated by the provision of low income housing;
- traffic generated by high density residential development within 1/4 mile of a passenger rail station; and,
- mixed use development within 1/4 mile of a passenger rail station.

If a facility exceeds SJCOG's RCMP LOS standards after excluding these exempt trips, a deficiency plan is required. The deficiency plan must be adopted at a noticed public hearing, and must include an analysis of the causes of the deficiency; a list of improvements needed to maintain the minimum LOS standard or, other actions that contribute to significant improvements in air quality; cost estimates for the actions and improvements; and a specific implementation schedule. In the event of a multi-jurisdictional deficiency, the RCMP relies on a consultative process to determine whether more than one jurisdiction should participate in the development of a deficiency plan. To date, there have not been any disagreements between jurisdictions about the responsibility of preparing joint deficiency plans or funding the solution to the identified problem. In the event of a dispute, use of a CMA approved traffic model may be necessary to analyze a jurisdiction's relative contribution towards the deficiency.

Deficiency plans are to be submitted to SJCOG for its review and approval. If a jurisdiction has a location on the CMP system which does not meet LOS standards, and the jurisdiction fails to prepare a deficiency plan and receive SJCOG approval for that plan, the jurisdiction can be found to be in noncompliance with the RCMP. Deficiency Plan data, analysis guidelines, and adoption process are described in Chapter 7.

RCMP Deficiency plans can only be required if the RCMP vehicular LOS Standard of "D" is exceeded. RCMP performance measures, as described in Chapter 5, cannot trigger the requirement for the preparation of a RCMP Deficiency Plan.

4.2 LOS MEASUREMENT

A regular monitoring program is required of the local jurisdictions and Caltrans to assess LOS on CMP system. The CMP Annual Monitoring Program relies on traffic counts, which allows LOS determinations to be made. Traffic counts that reflect the peak hour of travel are needed for CMP LOS measurements. The peak hour typically falls between 4:00-6:00 PM but occasionally a facility can experience greater utilization during the morning peak (7:00-9:00 AM). Travel speed and delay studies may be needed to confirm the findings when LOS standards are exceeded.

RCMP Roadway Segments

To assess the current LOS on the state highway system for average weekday evening peak period conditions, SJCOG applies the most recent traffic volume data published by Caltrans to the 2010 Highway Capacity Manual (HCM) Operational Analysis methodology for estimating LOS for basic freeway and multi-lane highway segments. LOS for these facility types is based on vehicle density of the traffic stream expressed in passenger cars per lane per mile (pcplpm). Each LOS grade or density range also relates to a volume to capacity (v/c) ratio range. The LOS parameters for these two

facility types are provided in ***Table-4.1*** and ***Table-4.2*** respectively.

For rural two-lane highways and local arterial RCMP roadways, LOS will be based on the 2010 HCM planning method. 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, signal spacing etc. The LOS parameters for two-lane highways and local arterial streets are provided in ***Table-4.3*** and ***Table-4.4*** respectively.

It should be noted that use of a planning method is considered a screen to identify potential deficiencies. If a deficiency is identified based on the 2010 HCM planning method, the affected jurisdiction in coordination with SJCOG can opt to re-analyze the facility with the appropriate engineering based 2010 HCM operational method.

RCMP Intersections

The statute states: LOS shall be measured by Circular 212, (or by the most recent version of the Highway Capacity Manual), or by a uniform methodology adopted by the agency which is consistent with the Highway Capacity Manual (HCM). Consistent with its member agencies and Caltrans District 10, the SJCOG RCMP program intersection LOS methodology will be the HCM operational method.

The methodologies for intersection Level of Service analysis are shown below.

Signalized Intersection Analysis: Signalized intersection analyses were conducted using the operational methodology outlined in the Highway Capacity Manual (Transportation Research Board, Washington D.C., 2000, Chapters 10 and 16). This procedure calculates an average stopped delay per vehicle at a signalized intersection, and assigns a level of service designation based upon the delay. The method also provides a calculation of the volume-to-capacity (v/c) ratio of the critical movements at the intersection.

Non-signalized All-Way Stop Controlled (AWSC) Intersection Analysis: Non-signalized AWSC intersection analyses were conducted using the operational methodology outlined in the Highway Capacity Manual (Transportation Research Board, Washington D.C., 2000, Chapters 10 and 17). This procedure calculates an average stopped delay per vehicle at an intersection, and assigns a level of service designation based upon the delay.

Non-signalized Two-Way Stop Controlled (TWSC) Intersection Analysis: Non-signalized TWSC intersection analyses were conducted using the operational methodology outlined in the Highway Capacity Manual (Transportation Research Board, Washington D.C., 2000, Chapters 10 and 17). This procedure calculates an average stopped delay per vehicle for each movement and assigns a level of service designation based upon the minor leg's worst movement average delay.

The LOS parameters for signalized and non-signalized intersections are provided in ***Table-4.5*** and ***Table-4.6*** respectively. For determining intersection LOS, the following parameters will be used by SJCOG. The SYNCHRO operational software will be used to compute the intersection LOS.

Ideal Saturation Flow Rate:	Intersections: 1900 vehicles per hour per lane (vphpl)
Pk Hour Factor (PHF):	Field Data, No Field Data: HCM Default of 0.92
Pk Hour Traffic Volumes:	Field Data
AADT Traffic Volumes:	Existing: Field Data, No Field Data – ten times PM peak hour traffic;
Pedestrian Calls:	Field data when possible, if no field data is available use minimum pedestrian timings or consult Caltrans D-10 or Local Agency Staff
Lane Width:	Field Data, No Field Data – 12 ft or Consult Caltrans D-10 or Local Agency Staff
Heavy Vehicles:	Field Data, No Field Data – HCM Default of 2% or Consult Caltrans D-10 or Local Agency Staff
Cycle Length	Field data when possible, if no field data is available optimize in SYNCHRO (Optimized cycle length can range between 90 to 120 seconds)
Right Turn On Red (RTOR)	Field Data;
Lane Utilization Factor:	Field Data, No Field Data – HDM Default
Signal Timing Plans:	Signal Timing Plans can be incorporated into the signalized intersection analysis per input from Caltrans District 10 or local agency staff. If no signal timing plans are available, optimize in SYNCHRO

4.3 DATA MONITORING

Descriptions for frequency of traffic counts, peak traffic periods, traffic count variability and recommended LOS measurement procedures for signalized intersections/interchanges, basic freeway segments, multi-lane highways, and two-lane highways are included in Chapter 3.

Table 4 1. Basic Freeway Segments LOS Criteria

Level of Service	Density (Passenger Car per Mile per lane)
A	≤ 11
B	> 11 and ≤ 18
C	> 18 and ≤ 26
D	> 26 and ≤ 35
E	> 35 and ≤ 45
F	> 45 (Demand exceeds capacity)

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 11 (Basic Freeway Segments), Exhibit 11-5.

Table 4 2. Multilane Highway LOS Criteria

Level of Service	Free-Flow Speed (Miles per Hour)	Density (Passenger Car per Mile per Lane
A	All	≤ 11
B	All	> 11 and ≤ 18
C	All	> 18 and ≤ 26
D	All	> 26 and ≤ 35
E	60	> 35 and ≤ 40
	55	> 35 and ≤ 41
	50	> 35 and ≤ 43
	45	> 35 and ≤ 45
F	Demand exceeds capacity	
	60	> 40
	55	> 41
	50	> 43
	45	> 45

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 14 (Multilane Highways), Exhibit 14-4.

Table 4 3. Two-Lane Highway LOS Criteria (2010 HCM Planning Method)

K-Factor	D-Factor	Class I Highway - Level				Class I Highway - Rolling				Class II Highway - Rolling			
		LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E
0.09	50%	5,500	9,300	16,500	31,200	4,200	8,400	15,700	30,300	5,000	9,800	18,200	31,200
	55%	4,900	8,700	14,900	30,200	3,700	7,900	14,000	29,200	4,100	8,700	16,000	30,200
	60%	4,400	8,100	13,900	27,600	3,700	6,200	12,800	26,800	3,700	7,900	14,600	27,600
	65%	4,100	7,900	12,900	25,500	3,400	5,900	11,400	24,700	3,300	5,900	13,200	25,500
0.10	50%	5,000	8,400	14,800	28,000	3,800	7,600	14,200	27,200	4,400	8,800	16,300	28,000
	55%	4,400	7,900	13,400	27,100	3,300	7,100	12,600	26,300	3,700	7,900	14,400	27,100
	60%	4,000	7,300	12,500	24,900	3,300	5,600	11,500	24,100	3,300	7,100	13,100	24,900
	65%	3,700	7,100	11,600	23,000	3,000	5,300	10,300	22,300	3,000	5,300	11,900	2,300
0.12	50%	4,100	7,000	12,400	23,400	3,100	6,300	11,800	22,700	3,700	7,400	13,600	23,400
	55%	3,700	6,500	11,200	22,600	2,800	5,900	10,500	21,900	3,100	6,500	12,000	22,600
	60%	3,300	6,100	10,400	20,700	2,700	4,700	9,600	20,100	2,700	5,900	10,900	20,700
	65%	3,100	5,900	9,600	19,100	2,500	4,400	8,500	18,500	2,400	4,400	9,900	19,100
0.14	50%	3,500	6,000	10,600	20,000	2,700	5,400	10,100	19,400	3,200	6,300	11,700	20,000
	55%	3,100	5,600	9,600	19,400	2,400	5,100	9,000	18,800	2,600	5,600	10,300	19,400
	60%	2,800	5,200	8,900	17,700	2,300	4,000	8,200	17,200	2,300	5,100	9,400	17,700
	65%	2,600	5,100	8,200	16,400	2,100	3,800	7,300	15,900	2,100	3,800	8,500	16,400

K-Factor is the proportion of traffic occurring in the peak-hour for the study segment; D-Factor is the proportion of traffic occuring in the peak direction for the study segment.
Class I Highway - Level is a roadway on flat terrain on which motorists expect to travel at relatively high speeds. It can be a major intercity route, primary arterial connecting major traffic generators, daily commuter route, or primary link in state or national highway networks.
Class I Highway - Rolling is similar in use to Class I Level but motorists may need to travel at lower speeds than a Class I Level due to the horizontal or vertical changes in the terrain.
Class II Highway - Rolling is a highway on which motorists expted to travel at moderate speeds. It can be a highway serving as access routes to Class I facilities, serving as scenic or recreational routes, or passing through rugged terrain.
Source: Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 15 (Two-Lane Highways), Exhibit 15-30.

Table 4 4. Local Arterial LOS Criteria (2010 HCM Planning Method)

K-Factor	D-Factor	Two-Lane Streets				Four-Lane Streets				Six-Lane Streets			
		LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E
Posted Speed - 30 mi/h													
0.09	0.55	NA	5,900	15,400	19,900	NA	11,300	31,400	37,900	NA	16,300	46,400	54,300
	0.60	NA	5,400	14,100	18,300	NA	10,300	28,800	34,800	NA	15,000	42,500	49,800
0.10	0.55	NA	5,300	13,800	17,900	NA	10,100	28,200	34,100	NA	14,700	41,800	48,900
	0.60	NA	4,800	12,700	16,400	NA	9,300	25,900	31,300	NA	13,500	38,300	44,800
0.11	0.55	NA	4,800	12,600	16,300	NA	9,200	25,700	31,000	NA	13,400	38,000	44,500
	0.60	NA	4,400	11,500	14,900	NA	8,400	23,500	28,400	NA	12,200	34,800	40,800
Posted Speed - 45 mi/h													
0.09	0.55	NA	10,300	18600.0	19,900	NA	21,400	37,200	37,900	NA	31,900	54,000	54,300
	0.60	NA	9,400	17100.0	18,300	NA	19,600	34,100	34,800	NA	29,200	49,500	49,800
0.10	0.55	NA	9,300	16800.0	17,900	NA	19,300	33,500	34,100	NA	28,700	48,600	48,900
	0.60	NA	8,500	15400.0	16,400	NA	17,700	30,700	31,300	NA	26,300	44,500	44,800
0.11	0.55	NA	8,400	15300.0	16,300	NA	17,500	30,500	31,000	NA	26,100	44,200	44,500
	0.60	NA	7,700	14000.0	14,900	NA	16,100	27,900	28,400	NA	23,900	40,500	40,800

Notes: NA = not applicable; LOS cannot be achieved with the stated assumptions.
General assumptions include no roundabouts or all-way STOP-controlled intersections along the facility; coordinated, semi-actuated traffic signals; arrival type 4; 120-s cycle time; protected left-turn phases; 0.45 weighted average g/C ratio; exclusive left-turn lanes with adequate queue storage provided at traffic signals; no exclusive right-turn lanes provided; no restrictive median; 2-mi facility length; 10% of traffic turns left and 10% turns right at each traffic signal; peak hour factor = 0.92; and base saturation flow rate = 1,900 pc/h/ln.
Additional assumptions for 30-mi/h facilities: signal spacing = 1,050 ft and 20 access points/mi.
Additional assumptions for 45-mi/h facilities: signal spacing = 1,500 ft and 10 access points/mi.

Table 4 5. Signalized Intersection LOS Criteria

Level of Service (LOS)	Average Delay (seconds/ vehicle)	Description
A	< 10	LOS A represents free-flow travel with an excellent level of comfort and convenience and the freedom to maneuver..
B	> 10 and < 20	LOS B has stable operating conditions, but the presence of other road users causes a noticeable, though slight, reduction in comfort, convenience, and maneuvering freedom.
C	> 20 and < 35	LOS C has stable operating conditions, but the operation of individual users is substantially affected by the interaction with others in the traffic stream.
D	> 35 and < 55	LOS D represents high-density, but stable flow. Users experience severe restriction in speed and freedom to maneuver, with poor levels of comfort and convenience.
E	> 55 and < 80	LOS E represents operating conditions at or near capacity. Speeds are reduced to a low but relatively uniform value. Freedom to maneuver is difficult with users experiencing frustration and poor comfort and convenience. Unstable operation is frequent, and minor disturbances in traffic flow can cause breakdown conditions.
F	> 80	LOS F is used to define forced or breakdown conditions. This condition exists wherever the volume of traffic exceeds the capacity of the roadway. Long queues can form behind these bottleneck points with queued traffic traveling in a stop-and-go fashion.

SOURCE: Transportation Research Board, Highway Capacity Manual (HCM), Washington, D.C., 2010, pages 18-5 and 18-6.

Table 4 6. Non-signalized Intersection LOS Criteria

Level of Service (LOS)	Average Delay (seconds / vehicle)	Description
A	< 10	Little or no delay
B	> 10 and < 15	Short traffic delay
C	> 15 and < 25	Average traffic delays
D	> 25 and < 35	Long traffic delays
E	> 35 and < 50	Very long traffic delays
F	> 50	Extreme delays potentially affecting other traffic movements in the intersection

SOURCE: Transportation Research Board, Highway Capacity Manual, Washington, D.C., 2010, page 20-3. (For unsignalized); this is the same as

SECTION 5

Performance Measures

CHAPTER 5 PERFORMANCE MEASURES

5.1 INTRODUCTION

A performance measure is defined in California State legislation as "an analytical planning tool that is used to quantitatively evaluate transportation improvements and to assist in determining effective implementation actions, considering all modes and strategies." Performance measures provide the basis for evaluating the operating conditions of the regional transportation system and identifying the location and severity of congestion, gaps in transit service, insufficient bicycle accommodation, or unsafe pedestrian environments.

5.2 STATUTORY REQUIREMENTS

Establishment of multimodal performance measures is both a state and federal CMP requirement. Section 65089(b)(2) of the Government Code states that the Congestion Management Program (CMP) must contain a performance element that includes performance measures to evaluate current and future multimodal system performance for the movement of people and goods. At a minimum, the performance measures must incorporate highway and roadway system performance measures established for the frequency and routing of public transit, and for the coordination of transit service provided by separate operators. These performance measures shall support mobility, air quality, land use, and economic objectives, and shall be used in the development of the land use analysis program (Chapter 6), deficiency plans (Chapter 7) and capital improvement program (Chapter 9).

Federal directives outlined in 23 CRR 450.320 (b) require the congestion management process result in multimodal system performance measures and strategies that can be reflected in the regional planning documents, such as the Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). In order to provide viable choices to Single-Occupant Vehicles (SOVs) and to support the intent of Federal MAP-21 legislation, SJCOG will monitor bicycling, walking, and transit performance along Multimodal Corridors (as identified in Chapter 2) with the intent of identifying opportunities to improve alternatives to the SOV. These measures will evaluate:

- Presence and geometrics of bikeways;
- Presence and geometrics of pedestrian walkways; and
- Transit passenger, bicyclist, and pedestrian levels of service.

5.3 RCMP OBJECTIVES

Given that no single performance measure can adequately address all aspects of system performance (e.g., efficiency, congestion, multimodal performance, air quality, etc.), the RCMP will track and monitor several performance indicators. The following characteristics were used as guidance in determining the most effective choices for performance measurement selection:

- Applicability – The performance measures must satisfy State and Federal requirements;
- Ease of Use – The required data should be readily available as part of an established monitoring process and easily applied to a countywide, sub-regional, or corridor based scale;
- Sensitivity – The performance measures must be indicative of changes in the RCMP system; and
- Comprehensible – The performance measures must be easy to understand;

The RCMP performance measures will be used to:

1. Track progress toward meeting RCMP objectives;
2. Update SJCOG's Regional Transportation Plan (RTP) and aid project prioritization;
3. Determine Statewide and Federal Transportation Improvement Program (STIP/FTIP) projects; and,
4. Guide Regional Transportation Improvement Fee (RTIF) funding decisions.

The identified RCMP performance measures, as shown in ***Table 5-1***, 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 that has been developed as part of this update. The website will facilitate data-sharing, provide the most up-to-date reports on the RCMP system's performance, and serve 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.

Given that several of the RCMP performance measures listed in ***Table 5-1*** rely on the same measures of effectiveness as described in Chapter 4 (RCMP Level of Service Standard) – 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 5 1. Performance Measures

Category of Objectives	Performance Measure	Analysis Tools/ Data Resources	Implementation Strategies
Operational Efficiency			
RCMP Freeway Segments	Level of service by segment	Highway Capacity Manual (HCM) 2010 basic freeway segments operations methodology using HCM validated spreadsheet models	Perform HCM 2010 operational analysis based on the most recent published AADT volume data by Caltrans. Published K and D factors will provide the basis for converting AADT to direction peak hour volumes.
RCMP Multi-lane Highway	Level of service by RCMP lane mile	HCM 2010 multi-lane highway operations methodology using HCM validated spreadsheet models	
RCMP Rural 2-Lane Highway		HCM Planning Method for rural 2-lane highways and local roadways designated RCMP roadways using HCM validated spreadsheet models	Perform segment counts no more than every two years where turn movement counts cannot be used to derive a segment volume.
RCMP Local Arterial			
Intersections	Level of service by RCMP intersection	HCM intersection operations methodology	Perform HCM 2000 or 2010 operational analysis based on AM and PM peak hour intersection counts that are collected during the regular monitoring program.
		SYNCHRO software	
Goods Movement			
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	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	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			

Table 5 1. Performance Measures (cont'd)

Category of Objectives	Performance Measure	Analysis Tools/ Data Resources	Implementation Strategies
Regional Bikeway Network			
		Regional bikeway network GIS layer (Class I, II and III)	
Complete Streets			
RCMP Multimodal Corridors			
		CompleteStreetsLOS software	
Travel Demand Management			
Employer-Based Trip Reduction Programs			
		SJCOG Commute Connections employer database	
Park and Ride Lots	Track implementation of regional park-and-ride lots through the RCMP Land Use Analysis Program	CEQA Mitigation Monitoring and Reporting Plans	CEQA Requirements
Local Agency Efforts	Track implementation of Commute Connection 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"

Table 5 2. Summary of Level of Service (LOS) Analysis Methodologies

Analysis Unit	Analysis Criteria	Source Document	Measure of Effectiveness
Freeway Segments	Basic Freeway Segment LOS - Operations	HCM 2010 (Ch 11)	Density
Multilane Highways	Multilane Highway LOS - Operations	HCM 2010 (Ch 14)	Density
Rural 2-Lane Highways	2-Lane Highway LOS - Planning	HCM 2010 (Ch 15)	Average daily traffic
Local Arterials	2-Lane Highway LOS - Planning	HCM 2010 (Ch 15)	Average daily traffic
Signalized Intersections	Signalized Intersection LOS	HCM 2000 (Ch 16) or 2010 (Ch 18)	Average control delay
Unsignalized Intersections	All-Way Stop Controlled Intersection LOS	HCM 2000 (Ch 17) or 2010 (Ch 20)	Average control delay
	Two-Way Stop-Controlled Intersection LOS	HCM 2000 (Ch 17) or 2010 (Ch 19)	Leg with highest control delay
Transit System - Frequency	Urban Scheduled Transit Service LOS	TCQSM 1999 (Pt 5)	Headways
Multimodal Corridors	Pedestrian LOS	HCM 2010 (Ch 16)	See (1) below
	Bicyclist LOS	HCM 2010 (Ch 16)	See (2) below
	Transit Passenger LOS	HCM 2010 (Ch 16)	See (3) below
	Motorist LOS	HCM 2010 (Ch 16)	Travel speeds

HCM = *Highway Capacity Manual*; TCQSM = Transit Capacity and Quality of Service Manual; Ch = Chapter; Pt = Part
1 Pedestrian LOS is based on a number of factors, including pedestrian density; presence and width of walkways; buffers and lateral distance between the walkway and adjacent traffic; volume and speed of adjacent traffic; intersection delay, crossing distances, and potential conflict points; and roadway crossing difficulty at unsignalized locations.
2 Bicyclist LOS is based on a number of factors, including presence and quality of bikeways; lateral distance between bicyclists and adjacent traffic; on-street parking occupancy; volume and speed of adjacent traffic; intersection delay, crossing distances and conflict points; and the number of driveways and unsignalized intersections.
3 Transit Passenger LOS is based on a number of factors, including the Pedestrian LOS; transit stop amenities; frequency of service; and on-board crowding.

5.4 LEVEL OF SERVICE ANALYSIS METHODOLOGIES

State law requires the CMA to set level of service standards for the system of highways and roadways designated by the agency. "Level of Service" (LOS) is actually a qualitative measurement of travel conditions for various modes of travel, in which "A" signifies the best experience, and "F" signifies the worst. SJCOG will use LOS methodologies for a number of its performance measures, as summarized in ***Table 5-2*** and detailed in each subsection thereafter, as appropriate. The Level of Service Standards for each performance measure is contained in Chapter 4. All of the performance measure analysis results will be posted on the RCMP website.

5.5 RCMP CONGESTION THRESHOLD (30-30)

The RCMP congestion threshold performance measure contains five performance metrics for operational efficiency, detailed below. The congestion threshold is comprised of the following two checks: 1) when over 30% of a jurisdiction's RCMP lane miles (or intersections) operate at LOS E or worse without programmed improvements; and, 2) if over 30% of the traffic on these segments (or intersections) is determined to be generated within the jurisdiction. If both these conditions are met, a sub-regional TDM Action Plan (i.e., TDM Level 2 effort) is required per San Joaquin County Regional Travel Demand Management Plan (August, 2010) (see also Section 5.10 Local TDM Efforts). Integrating TDM planning efforts relative to CMP roadway network performance provides an equitable nexus between degree of TDM responsibility and fair share contribution of local traffic.

The state CMP interregional trip exemption for the development of deficiency plans is not applied when evaluating this performance measure. Programming status is considered however given that deficient lane miles (or intersections) with currently programmed improvements are excluded. For example, if a non-programmed roadway segment becomes prioritized for inclusion in the FTIP, it will be reclassified as programmed and its deficient lanes miles will not be applied towards the congestion threshold calculation.

The RCMP Congestion Threshold (30-30) performance measure does not constitute a standard nor does it trigger the need for developing a RCMP deficiency plan or require other

non-TDM implementation responsibilities under the CMP/CMS programs. It was developed to better integrate the RCMP with San Joaquin County's Regional TDM Plan.

The metrics required to track the RCMP congestion threshold performance measure are predominantly focused on vehicular movements throughout the RCMP network and cover roadway as well as intersection levels of service. The previous RCMP utilized the Florida Department of Transportation's methodology for roadway analysis. However, this update revises the analysis methodologies to the Highway Capacity Manual in order align with local agency practices. It also includes analysis intersections as discussed in Chapter 2.

Freeway Segments

The analysis for vehicle levels of service on freeway segments will use methods developed for and documented in the 2010 Highway Capacity Manual. Data inputs will be based on the most recent published Caltrans count data as discussed in Chapter 3. The analysis will be based on operational methods and automated using spreadsheets developed as part of this update. Evaluation is based on vehicle density and a summary of the level of service criteria is shown in ***Table 5-3.***

Table 5 3. Basic Freeway Segments LOS Criteria

Level of Service	Density (Passenger Car per Mile per Lane)
A	< 11
B	> 11 and < 18
C	> 18 and < 26
D	> 26 and < 35
E	> 35 and < 45
F	> 45 (Demand exceeds capacity)

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 11 (Basic Freeway Segments), Exhibit 11-5.

Multilane Highways

The analysis for vehicle levels of service on multilane highways will use methods developed for and documented in the 2010 Highway Capacity Manual. Data inputs will be based on the most recent published Caltrans count data as discussed in Chapter 3. The analysis will be based on operational methods and automated using spreadsheets developed as part of this update. Evaluation is based on free flow speed and vehicle density and a summary of the level of service criteria is shown in ***Table 5-4***.

Table 5 4. Multilane Highway LOS Criteria

Level of Service	Free-Flow Speed (Miles per Hour)	Density (Passenger Car per Mile per Lane)
A	All	< 11
B	All	> 11 and < 18
C	All	> 18 and < 26
D	All	> 26 and < 35
E	60	> 35 and < 40
	55	> 35 and < 41
	50	> 35 and < 43
	45	> 35 and < 45
F	Demand exceeds capacity	
	60	> 40
	55	> 41
	50	> 43
	45	> 45

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 14 (Multilane Highways), Exhibit 14-4.

Rural 2-Lane Highways and Local Arterials

The analysis for vehicle levels of service on 2-lane highways and local arterials will use methods developed for and documented in the 2010 Highway Capacity Manual. The analysis categories (Class I Highway – Level, Class I Highway – Rolling, Class II Highway – Rolling) for each roadway segment have been determined as part of the update and included in Appendix B. Data inputs will be based on the most recent published Caltrans count data as discussed in Chapter 3. The analysis will be based on planning methods and automated using spreadsheets developed as part of this update. A summary of the level of service criteria is shown in ***Table 5-5***.

Table 5 5. 2-Lane Highway and Local Arterial LOS Criteria

K-Factor	D-Factor	Class I Highway - Level				Class I Highway - Rolling				Class II Highway - Rolling			
		LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E	LOS B	LOS C	LOS D	LOS E
0.09	50%	5,500	9,300	16,500	31,200	4,200	8,400	15,700	30,300	5,000	9,800	18,200	31,200
	55%	4,900	8,700	14,900	30,200	3,700	7,900	14,000	29,200	4,100	8,700	16,000	30,200
	60%	4,400	8,100	13,900	27,600	3,700	6,200	12,800	26,800	3,700	7,900	14,600	27,600
	65%	4,100	7,900	12,900	25,500	3,400	5,900	11,400	24,700	3,300	5,900	13,200	25,500
0.10	50%	5,000	8,400	14,800	28,000	3,800	7,600	14,200	27,200	4,400	8,800	16,300	28,000
	55%	4,400	7,900	13,400	27,100	3,300	7,100	12,600	26,300	3,700	7,900	14,400	27,100
	60%	4,000	7,300	12,500	24,900	3,300	5,600	11,500	24,100	3,300	7,100	13,100	24,900
	65%	3,700	7,100	11,600	23,000	3,000	5,300	10,300	22,300	3,000	5,300	11,900	2,300
0.12	50%	4,100	7,000	12,400	23,400	3,100	6,300	11,800	22,700	3,700	7,400	13,600	23,400
	55%	3,700	6,500	11,200	22,600	2,800	5,900	10,500	21,900	3,100	6,500	12,000	22,600
	60%	3,300	6,100	10,400	20,700	2,700	4,700	9,600	20,100	2,700	5,900	10,900	20,700
	65%	3,100	5,900	9,600	19,100	2,500	4,400	8,500	18,500	2,400	4,400	9,900	19,100
0.14	50%	3,500	6,000	10,600	20,000	2,700	5,400	10,100	19,400	3,200	6,300	11,700	20,000
	55%	3,100	5,600	9,600	19,400	2,400	5,100	9,000	18,800	2,600	5,600	10,300	19,400
	60%	2,800	5,200	8,900	17,700	2,300	4,000	8,200	17,200	2,300	5,100	9,400	17,700
	65%	2,600	5,100	8,200	16,400	2,100	3,800	7,300	15,900	2,100	3,800	8,500	16,400

K-Factor is the proportion of traffic occurring in the peak-hour for the study segment; D-Factor is the proportion of traffic occuring in the peak direction for the study segment.
Class I Highway - Level is a roadway on flat terrain on which motorists expect to travel at relatively high speeds. It can be a major intercity route, primary arterial connecting major traffic generators, daily commuter route, or primary link in state or national highway networks.
Class I Highway - Rolling is similar in use to Class I Level but motorists may need to travel at lower speeds than a Class I Level due to the horizontal or vertical changes in the terrain.
Class II Highway - Rolling is a highway on which motorists expted to travel at moderate speeds. It can be a highway serving as access routes to Class I facilities, serving as scenic or recreational routes, or passing through rugged terrain.
Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 15 (Two-Lane Highways), Exhibit 15-30.

Signalized Intersections

The analysis for vehicle level of service at signalized intersections will use methods developed for and documented in the most recent Highway Capacity Manual. The choice of using the 2000 or 2010 HCM operational method depends on the development of software that can reliably analyze intersection levels of service using the 2010 HCM methodology. Each location will be summarized based on the intersection's average control delay. Volume-to-capacity ratios and LOS for individual intersection approaches or lane groups will not be reported. AM and PM intersection turning movement data will be collected by SJCOG to be utilized as inputs, supplemented by local agency counts, as appropriate. Observed peak-hour factors (averaged for the intersection) will be used. The analysis will be based on operational methods and automated using a software program, most likely SYNCHRO® or PTV's Vistro. A summary of the level of service criteria is shown in ***Table 5-6***.

Table 5 6. Signalized Intersection LOS Criteria

Level of Service	Control Delay in seconds/ vehicle
A	< 10
B	> 10 and < 20
C	> 20 and < 35
D	> 35 and < 55
E	> 55 and < 80
F	> 80

Source: Highway Capacity Manual (HCM), Transportation Research Board, Washington, DC, Signalized Intersections. The 2000 HCM is in Chapter 16, Exhibit 16-2, and the 2010 HCM is in Chapter 18, Exhibit 18-4.

Unsignalized Intersections

The analysis for vehicle levels of service at unsignalized intersections will use methods developed for and documented in the 2000 or 2010 Highway Capacity Manual. The choice of using the 2000 or 2010 method depends on the development of software that can reliably analyze intersection levels of service using the 2010 HCM methodology.

For side-street stop-controlled intersections, levels of service will be assessed based on the intersection approach with the highest control delay. For all-way stop-controlled intersections, levels of service will be assessed based on the weighted average control delay at the intersection. Volume-to-capacity ratios and LOS for individual intersection approaches or lane groups will not be reported. AM and PM intersection turning movement data will be collected by SJCOG to be utilized as inputs, supplemented by local agency counts, as appropriate. Observed peak-hour factors (averaged for the intersection) will be used. The analysis will be based on operational methods and automated using a software program, most likely SYNCHRO® or PTV Vistro. A summary of the level of service criteria is shown in ***Table 5-7***.

Table 5 7. Unsignalized Intersection LOS Criteria

Level of Service	Control Delay in seconds/ vehicle
A	< 10
B	> 10 and < 15
C	> 15 and < 25
D	> 25 and < 35
E	> 35 and < 50
F	> 50

LOS for all-way stop-controlled intersections is based on the weighted average, while LOS at side-street stop-controlled intersections is based on the approach with the highest control delay.
Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC. The 2000 HCM is in Chapter 17 (Unsignalized Intersections, Exhibit2 17-2 and 17-22) and the 2010 HCM is in Chapter 19 (Two-Way Stop Controlled Intersections, Exhibit 19-1) and Chapter 20 (All-Way Stop-Controlled Intersections, Exhibit 20-2).

5.6 GOODS MOVEMENT MEASURES

The movement of goods throughout San Joaquin County is a crucial to the economic health of the region and the convenient access for residents and businesses alike. Freight traverses the county using many modes, including trucks, rail, and boat. Trucks, however, are the predominant mode of goods transport in the county, and the focus of a performance measure for tracking RCMP roadways that are Surface Transportation Assistance Act (STAA) compliant, as detailed below.

STAA Compliance

The Surface Transportation Assistance Act (STAA) was passed in 1982 by the federal government to govern the movement of trucks and trailers. STAA vehicles are large commercial trucks that meet federal size regulations. In California, the STAA network consists of the National Network (generally, interstate freeways and approved state highways) and Terminal Access (state highways). Roadways that part of the STAA network must be designed to accommodate the minimum truck sizes.

Roadways that are part of the STAA network are designated based on the general adherence to the following :

- The route is a geometrically typical component of the Interstate system, serving to link principal cities and densely developed portions of the states;
- The route is a high volume route utilized extensively by large vehicles for interstate commerce;
- The route does not have any restrictions precluding use by conventional combination vehicles;
- The route has adequate geometrics to support safe operations, considering sight distance, severity and

length of grades, pavement width, horizontal curvature, shoulder width, bridge clearances and load limits, traffic volumes and vehicle mix, and intersection geometry;
- The route consists of lanes designed to be a width of 12 feet or more or is otherwise consistent with highway safety;
- The route does not have any unusual characteristics causing current or anticipated safety problems.

SJCOG will track improvements to intersections listed in the Interregional Truck Operations on I-5 and SR-99 and STAA Routes Improvement Study by reviewing STAA applications.

5.7 TRANSIT SYSTEM MEASURES

San Joaquin County is diverse with respect to transit service 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 residents' needs with funding constraints.

The RCMP contains two performance measures for transit system measures, as detailed below.

Coverage

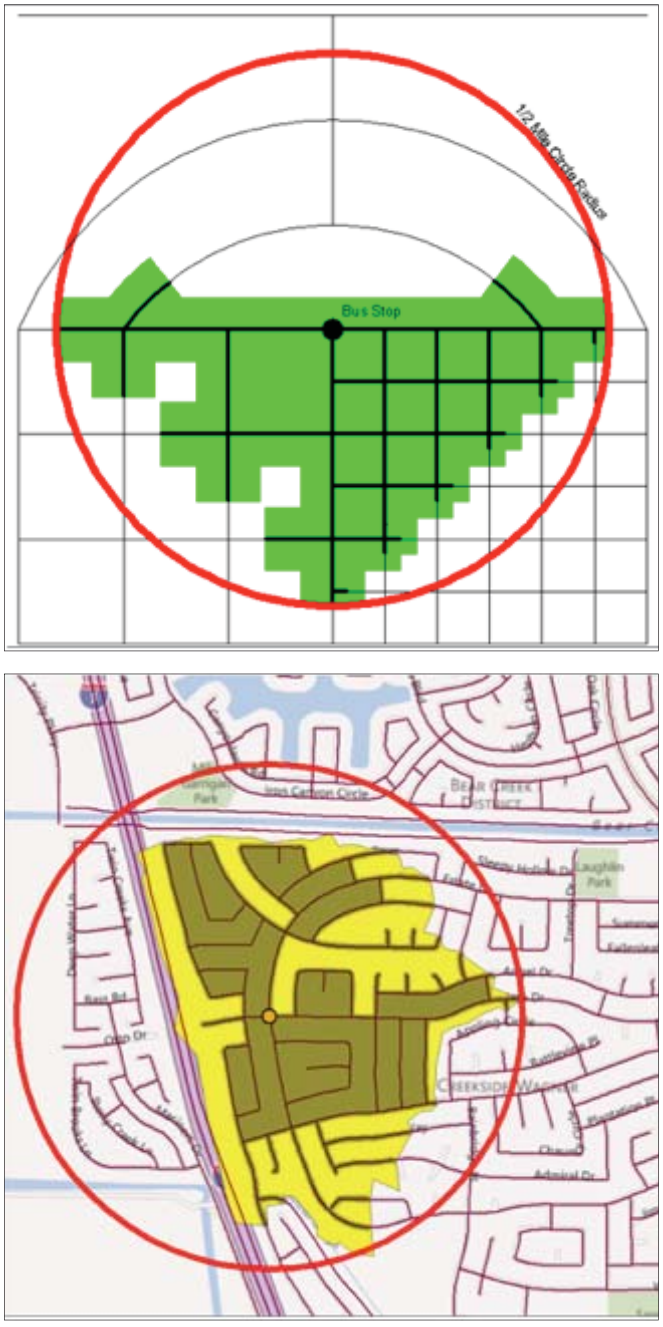
Transit service coverage is assessed using a ½ mile distance from transit stops countywide based on both circle buffers (airline radius) and linear buffers (roadway distances). Compliance will be determined using an ArcView GIS analysis of the coverage based on linear roadway distances using ArcView GIS.

Circle buffers are the easiest way to calculate a service area. All points within a given range of a facility, in this case a ½ mile from a bus stop, are considered to be within its service area. The method does not take into account barriers or network gaps that might prevent all locations within that circle from being as easily accessible.

Linear buffers evaluate the service area from the network point of view. All points accessible via roadways or other features included in the network data within a ½ mile are included in the service area. The Service Area tool in the ArcGIS Network Analyst extension will assign a given buffer around network features to generate a service area polygon. The buffer tapers to a point where the network distance reaches the analysis distance of ½ mile. In places where the accessible network forms a closed block, the block will be filled regardless of the network buffer and is considered to be completely accessible.

In ***Figure 5-1***, the bold lines are portions of the network that are within ½ mile of the bus stop. The red circle is the airline radius ½ mile buffer. The green polygon is the linear buffer service area. These two examples are somewhat simplified. In the first example, note that in the lower left quadrant, the large blocks have more than 600' grid separation, but are still filled when completely surrounded by accessible streets. The upper quadrants are missing a connection to the street along the primary x axis and are therefore deemed mostly inaccessible within the ½ mile parameter. The second example on the right is an actual location within San Joaquin County and demonstrates how freeways (I-5 running north-south on the west) and natural features (river/canal running east-west on the north) can also serve as barriers to transit accessibility.

Figure 5 1. Examples of Transit Coverage Analysis - Circle Versus Linear Distances



Currently, almost 69% of San Joaquin County's residential population is located within a ½ mile walking distance to a transit stop. Only 12% are located close to transit stops with service frequency LOS D or better (30 minute or less headways), but almost 47% more of the residential population are close to transit stops with service frequency LOS E (31 to 60 minute headways). ***Table 5-8*** shows the transit frequencies in relation to the County's residential population.

Table 5-8. Residential Population located within ½ Mile of Transit Stops

Transit Headway	1/2 Mile Walking Distance to Transit Stop 1	
	Population	Percent
< 15 minutes	64,028	10.2%
< 30 minutes	74,149	11.9%
< 60 minutes	366,304	58.6%
All transit service	428,477	68.6%
Total	625,007	100.0%

1 Distance determined using ArcView GIS Spatial Analyst Linear Buffer tool
Source: Kittelson & Associates, Inc.

Frequency

The goal of evaluating transit frequency is to determine the likelihood that travelers could utilize transit regularly. Generally speaking, higher frequencies allow travelers more flexibility to take transit when they need to, as opposed to being reliant on the few scheduled occasions that service operates. All transit agencies strive to offer high frequencies within the limits of their funding. However, frequently this goal runs at odds with providing efficient routing.

For the fixed-route local and deviated fixed-route bus services, transit LOS in San Joaquin County may be best described using the thresholds for urban scheduled transit service, as shown in ***Table 5-9*** below. It defines LOS in terms of headways (time between transit vehicles) and is often evaluated using published schedules. LOS is better for more frequent transit service and the measures can be applied to buses, trains, and ferries. This performance measure will be analyzed using published transit schedules for fixed-route service and ArcView GIS.

Table 5-9. Countywide Transit Service LOS Criteria

Level of Service	Vehicles per Hour	Headway (minutes)	Comments
A	> 6	< 10	Passengers don't need schedules
B	5 to 6	10 to 14	Frequent service, passengers consult schedules
C	3 to 4	15 to 20	Maximum desirable time to wait if transit vehicle missed
D	2	21 to 30	Service unattractive to choice riders
E	1	31 to 60	Service available during hour
F	< 1	> 60	Service unattractive to all riders

Source: *Transit Capacity and Quality of Service Manual* (TCQSM), Transportation Research Board, Washington, DC, 1999, Part 5.

5.8 BIKEWAY SYSTEM MEASURES

SJCOG is currently in the process of developing a regional bikeway network as part of the Bicycle, Pedestrian, and Safe Routes to School Plan, a draft of which was published in August 2012. The network will focus on establishing routes of regional significance for bicyclists. There are many other elements that create a supportive environment for bicycling, including bikeway types, parking, shower and locker facilities, and wayfinding signage which are best addressed in the RTP. The RCMP performance measure will focus on the bikeway network's completion.

Bikeway Network Completion

The total number of existing regional bikeway miles will be calculated using ArcView GIS and will be compared to the entire network's mileage to establish baseline conditions by jurisdiction. As regional bikeway miles are installed or programmed, SJCOG will track the ratio of completed bikeways compared to regional network and report the percent completed by jurisdiction. The results will be posted on the RCMP website.

5.9 COMPLETE STREETS MEASURES

As part of this update, SJCOG has established Multimodal Corridors, as detailed in Chapter 2. These 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 user types. All RCMP roadways with adjacent land uses need to provide access for all user types. However, these designated Multimodal Corridors will receive the benefit on level of service analysis for all travel modes.

Multimodal Corridors

SJCOG will conduct a baseline level of service analysis for all four major modes of travel (walking, biking, taking transit, and driving) on designated Multimodal Corridors using the 2010 Highway Capacity Manual's Urban Streets Facilities methodology. This method interactively compares the quality of service of a corridor between the different modes of travel. It takes into account a number of factors in order to assess the quality of service for each mode of travel. These factors are summarized below by each mode of travel:

Factors Affecting Pedestrian LOS

- Pedestrian density (only under crowded conditions)
- Sidewalk presence and clear width
- Vehicle volume and speed in adjacent travel lane
- Bicycle lane, shoulder, and outside vehicle lane widths
- Buffer presence and width
- On-street parking utilization
- Permitted left turn, right-turn-on-red volumes
- Cross-street motor vehicle volumes and speeds
- Crossing length
- Average pedestrian delay
- Right-turn channelizing island presence

Factors Affecting Bicyclist LOS

- Vehicle volume and speed in outside travel lane
- Heavy vehicle percentage
- Pavement condition
- Bicycle lane presence
- Bicycle lane, shoulder, and outside vehicle lane widths
- On-street parking utilization
- Number of access points on right side
- Cross-street width

Factors Affecting Transit Passenger LOS

- Access to transit (pedestrian link LOS)
- Wait for transit (frequency)
- Excess wait time due to late bus/train arrival
- Actual bus travel speed
- Bus stop amenities
- On-board crowding

Factors Affecting Motorist LOS

- Posted versus actual speed
- Intersection delay

The baseline analysis will include the collection of infrastructure and time-of-day data, such as counts, on-street parking occupancies, and transit schedules for existing conditions. The analysis will be done for the AM and PM peak-hours and summarized by segment and direction on the RCMP website. Once the baseline is established, updates will be performed when new counts are completed, major transit scheduling changes occur, or major roadway changes are installed. The analysis will be conducted using a software program, most likely CompleteStreetsLOS™.

A summary of the bicyclist and transit passenger level of service criteria is shown in ***Table 5-10.*** A summary of the pedestrian level of service criteria, which compares the pedestrian quality of service on urban streets to walkway crowding, is shown in ***Table 5-11***. A summary of the motorist level of service criteria is shown in ***Table 5-12***.

Table 5-10. Bicyclist and Transit Passenger LOS Criteria for Urban Streets

Level of Service	LOS Score
A	< 2.00
B	> 2.00 and < 2.75
C	> 2.75 and < 3.50
D	> 3.50 and < 4.25
E	> 4.25 and < 5.00
F	> 5.00

Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 16 (Urban Street Facilities, Exhibit 16-6).

Table 5 11. Pedestrian LOS Criteria (Quality of Service on Urban Streets Compared to Crowding)

Pedestrian QOS LOS Score	LOS by Average Pedestrian Space (square feet per person)					
	> 60	> 40 and < 60	> 24 and < 40	> 15 and < 24	> 8 and < 15 1	< 8 1
< 2.00	A	B	C	D	E	F
> 2.00 and < 2.75	B	B	C	D	E	F
> 2.75 and < 3.50	C	C	C	D	E	F
> 3.50 and < 4.25	D	D	D	D	E	F
> 4.25 and < 5.00	E	E	E	E	E	F
> 5.00	F	F	F	F	F	F

1 In cross-flow situations, the LOS E-F threshold in 13 square feet per person.
QOS = Quality of Service
Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 16 (Urban Street Facilities, Exhibit 16-5).

Table 5 12. Motorist LOS Criteria for Urban Streets

Travel Speed as a Percentage of Base Free-Flow Speed	LOS by Critical Volume-to-Capacity Ratio 1	
	< 1.0	> 1.0
> 85%	A	F
> 67% and < 85%	B	F
> 50% and < 67%	C	F
> 40% and < 50%	D	F
> 30% and < 40%	E	F
< 30%	F	F

1 The critical volume-to-capacity (v/C) ratio is based on consideration of the through movement v/C ratio at each boundary intersection in the subject direction of travel. The critical v/C is the largest ratio of those considered.
Source: *Highway Capacity Manual* (HCM), Transportation Research Board, Washington, DC, 2010, Chapter 16 (Urban Street Facilities, Exhibit 16-4).

5.10 TRAVEL DEMAND MANAGEMENT MEASURES

SJCOG has established countywide programs to address demands for transportation, embodied in the Commute Connections. The main purpose of the demand management program is to reduce the number of single-occupant vehicles during peak demand times by providing incentives for carpooling, taking transit, walking, biking, or traveling off-peak. These programs are documented in SJCOG's Travel Demand Management Plan. San Joaquin County is also part of the San Joaquin Valley Air Pollution Control District (SJVAPCD), which has introduced a mandatory trip reduction program for businesses that employ 100 or more full time employees.

The RCMP contains two performance measures for travel demand management, detailed below.

Employer-Based Trip Reduction Programs

This measure is designed to quantify participation by all employers located in San Joaquin County in employee trip reduction programs. As mentioned previously, employers of 100 or more full-time-equivalent employees are required to participate in SJVAPCD's eTRIP program. SJCOG will calculate the number of full-time equivalent (FTE) employees working for employers that are complying with San Joaquin Valley Air Pollution Control District's (SJVAPCD) eTRIP program (Rule 9410). SJCOG calculate the ratio of these employees to the total countywide employment as a baseline then track changes to the ratio over time. The number of employers who are complying with or voluntarily participating in the eTRIP program will be quantified and categorized by their size as follows:

- Small (< 20 FTE employees)
- Medium (20 to 99 FTE employees)
- Large (> 99 FTE employees)

Local Agency Efforts

This measure is designed to track local jurisdictions' participation in implementing their Tier I Travel Demand Management responsibilities as defined in SJCOG's Regional Travel Demand Management Plan (August, 2010). The Regional TDM Plan establishes the appropriate level of local agency resources/effort for implementation of demand management strategies. The level of effort is based on the level of congestion on a given jurisdiction's RCMP roadways with particular focus placed on roadways that are currently not

meeting the RCMP LOS Standard (not taking into account RCMP trip exemptions) and are currently not programmed (i.e., have no identified funding source). The TDM Action Plan consists of expected Levels of Effort (Level 1 and 2), which are cumulative.

TDM Level of Effort	Applies to:
Level 1 - Universal	Applies to all county jurisdictions and SJCOG
Level 2 - Triggered	Applies to jurisdictions that trigger the Congestion Threshold Performance Measure

Level 1 is a required minimum effort to be implemented by SJCOG and each of its member agencies. The purpose of the Level 1 Effort is to formalize the existing working relationship SJCOG currently has with its partner agencies and further refine existing TDM related activities currently being implemented countywide.

In response to measured levels of congestion on the CMP network within the boundaries of a given jurisdiction (see Section 5.5 Operational Efficiency Measures) additional TDM efforts may be triggered. Level 2 TDM Efforts require the development of a sub-regional TDM Action Plan that can draw from a wide range of example TDM strategies (SJCOG TDM Toolbox). This "menu" approach allows a given local agency to customize its sub-regional TDM Action Plan to a given local situation (e.g., design guidelines for site access, roadways, transit stops, off-street vehicle parking, bicycling support, transportation pricing) for the purpose of reducing and minimizing congestion.

SJCOG will determine local agency compliance with the Regional TDM Plan as part the RCMP biennial review (see Chapter 10). If a local agency is implementing TDM actions above and beyond the TDM Action Plan's requirements, it would receive credit for doing so as part of SJCOG's CMP biennial review. SJCOG will also track implementation of Commute Connection Program initiatives and the 2010 Regional Travel Demand Management Program through the RCMP Land Use Analysis Program.

SECTION 6

Land Use Impact Analysis Program

CHAPTER 6 LAND USE IMPACT ANALYSIS PROGRAM

6.1 INTRODUCTION

A CMP must contain a program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems . The program must generally be able to estimate the costs associated with mitigating those impacts, as well as provide credits for local public and private contributions to improving regional transportation systems. The program described in this chapter meets this requirement.

The legislative intent of the LUAP is to improve the linkage between local land-use decisions with regional transportation facility improvement needs; to better address the impacts of development in one community on another; and, to promote information sharing between local governments when the decisions made by one jurisdiction have an impact on another. As part of the annual Measure K and biennial state Congestion Management Program (CMP) reporting requirements, SJCOG is required to evaluate the efforts made by each local jurisdiction within San Joaquin County to ensure compliance with state statute (see Chapter 10).

A key compliance finding during CMP conformance assessment reviews relates to SJCOG's RCMP Land Use Analysis Program. Hence, SJCOG must evaluate the efforts made by each jurisdiction to ensure that proposed land use projects comply with the established RCMP Land Use Analysis requirements.

Given that the RCMP Land Use Analysis Program directly interfaces with established local agency land use review programs, it is important that the following components of the program are clearly described, measurable, and understandable:

- Review Criteria
- Significance Criteria
- Mitigation Measures
- Analysis Methods

6.2 PROPOSED LAND USE PROJECTS – REVIEW CRITERIA

The following describes the types of proposed projects that trigger RCMP review. It should be noted that SJCOG is not a land use authority, and as such it will not seek to approve or disapprove land use projects. The purpose of the review will be to ensure that proposed projects are consistent with regional planning documents (Tier 1 Review) and that their effects on the regional transportation system are analyzed (Tier 2 Review), as described in further detail below.

Tier 1 Review

All development projects will be qualitatively reviewed for consistency with SJCOG's regional planning documents, including one of more of the following, as appropriate:

- Regional Transportation Demand Management Plan
- Regional Expressway System Plan (System Management and TDM components)
- Park-and-Ride Master Plan
- Regional Bikeway Plan
- Smart Growth Infill Opportunity Zone Plan
- Regional Transit Systems Plan
- Regional Transportation Impact Fee Program
- Regional Transportation Plan
- Interregional STAA Study for I-5 and SR-99

Tier 2 Review

Projects that trigger the one or both of the following thresholds will be subject :

1. 125 or more vehicle trips during weekday AM or PM peak-hours; or,
2. 500 or more total daily vehicle trips on any day of the week.

As defined above, all development projects regardless of trip generation characteristics will be at a minimum reviewed for consistency with applicable regional planning documents. Triggering a quantitative Tier 2 review will entail addressing the Tier 1 consistency review as well as a quantitative analysis of RCMP impacts – project specific and cumulative plus project conditions.

It should be noted that SJCOG's ability to comment should not be interpreted as an authority to reject development applications.

6.3 RCMP IMPACT SIGNIFICANCE CRITERIA

To determine whether project added traffic constitutes a significant impact to the RCMP network, the following significance criterion is established.

Tier 1 Development Projects

Projects subject to Tier 1 reviews will be not subject to specific "significance criteria". SJCOG will notify a project sponsor of any recommended design consideration, mitigation measures and/or conditions that should be carried forward in the final approval. After project approval, the lead agency will submit the Mitigation Monitoring and Reporting Plan (MMRP) and/or final project conditions to SJCOG. The Project and applicable elements of the MMRP/Final Project Conditions will be recorded for reference when preparing the annual Measure K and biennial State CMP reports, which require disclosure of jurisdictional compliance.

Tier 2 Review

A proposed development will have a significant impact to the RCMP network if any one of the following criteria is met during the AM or PM peak hours:

1. For any RCMP roadway or intersection currently operating or expected to operate at LOS D or better under No Project conditions, the project-added traffic results in LOS E or F operating conditions
2. For RCMP intersections or roadways currently operating or expected to operate at LOS E or F under No Project conditions, the project results in increases to:

a. average delay by 4 seconds or more; or,

b. the volume-to-capacity (v/c) ratio by 1.0 or more

- Conflicts with SJCOG adopted/approved Regional Plans applicable to the project. During the project review period, SJCOG staff will identify any inconsistencies with regional planning documents, such as:
  - Regional Transportation Demand Management Plan
  - Regional Expressway System Plan (System Management and TDM components)
  - Park-and-Ride Master Plan
  - Regional Bikeway Plan
  - Smart Growth Infill Opportunity Zone Plan
  - Regional Transit Systems Plan
  - Regional Transportation Impact Fee Program
  - Regional Transportation Plan
  - Interregional STAA Study for I-5 and SR-99

State and local agency significance criteria may be more stringent that the RCMP significance criteria described above. Note that the RCMP significance criteria will not require additional analysis work performed for TIAs but will require RCMP impacts, as well as their significance after mitigation, to be explicitly identified in the TIA and environmental documentation.

6.4 MITIGATION MEASURES

State law places responsibility for the RCMP Land Use Analysis Program on local jurisdictions, since they retain the power to approve or deny land development applications. SJCOG can assist cities and the County in determining regional traffic impacts, but the Lead Agency is responsible for determining how to mitigate these impacts and what the cost will be to do so. SJCOG encourages local agencies to require development projects to cover the costs of mitigating transportation impacts, but the decision to do so rests with the city or County.

If the RCMP significance criteria are exceeded and feasible mitigation is not identified to mitigate the impact to less than significant levels, the impact must be identified as significant and unavoidable.

1. SJCOG's policy regarding mitigation measures for capital improvement projects is:

- RCMP mitigation measures must be adequate to allow the RCMP roadway to meet the RCMP LOS standard
- RCMP mitigation measures must be fully funded to be considered adequate;
- RCMP mitigation measures that rely on state or federal funds directed by or influenced by SJCOG must be consistent with project funding priorities established in the CIP of the RCMP and the RTP, or the Federal TIP; and,
- For RCMP mitigation measures that involve a local or regional "fair share" contribution for mitigating RCMP cumulative impacts, the fee must be committed to funding priorities established in the CIP of the RCMP, the RTP, or the Federal TIP. The SJCOG Regional Traffic Impact Fee (RTIF) program establishes a RCMP specific mitigation fee program relative to cumulative regional impacts . To satisfy CEQA requirements, project applicants simply need to pay their fair share contribution into the RTIF program. However, to better inform the public and stakeholders, the environmental document (i.e., mitigation language) must convey that although payment into the RTIF program satisfies the applicant's CEQA responsibilities, it does not guarantee that the lead agency (local agency) will necessarily spend these developer fees on the identified mitigation improvement. SJCOG will administer the RCMP/RTIF Mitigation Monitoring Program to track the "actual" funding/implementation of identified mitigation improvements (i.e., conditions of approval) identified as part of environmental documents. SJCOG will periodically report each local agency's implementation progress of identified mitigation measures as part of mandated RCMP and RTIF program compliance hearings to the SJCOG board. SJCOG will also provide this status update mitigation improvement information to local agencies as part SJCOG's state and federal flexible funding cycle "call for projects".

2. 2. The RCMP also requires cumulative impacts to the RCMP network be addressed through the CEQA analysis process. The project analysis of traffic impacts to the RCMP network must reflect the most recently approved development projects from the lead agency as well as from adjacent jurisdictions. It should also include currently programmed infrastructure improvements. To satisfy this requirement, trip ends associated with permitted uses in the vicinity of the project site must be quantified and assigned to the CMP network.

3. 3. As part of the RCMP Land Use Analysis Program, if a RCMP intersection is projected to operate at LOS E or F (CEQA Cumulative and/or Cumulative Plus Project analyses) after trip exemptions have been accounted for, the affected jurisdiction can choose to prepare a Deficiency Plan. The benefit of preparing and adopting a RCMP deficiency plan based on a future year deficiency finding is that the identified improvements can be submitted/proposed for flexible funding cycle sooner (i.e., "call for projects"). Given the typical 7-10 year lag between the time a project is programmed till it is actually constructed/implemented, this proactive approach better ensures that identified improvements are implemented in a more timely manner – rather than long after a congestion problem becomes evident i.e., reactive.

Inter-Jurisdictional Impacts

A regional analysis based on local land use decisions will often involve more than one jurisdiction. For example, a large project approved by City A (Lead Agency) may affect traffic on a nearby principal arterial in City B (affected city). The RCMP places the responsibility for addressing the significant traffic impacts with the approving jurisdiction. However, SJCOG also recognizes that City A will need to work with City

B in order to properly mitigate the traffic impacts on the affected segment. It is the preference of SJCOG that the Lead Agency work with any affected jurisdiction to arrive at a mutually agreeable plan for addressing the inter-jurisdictional impacts of a given project. If a dispute arises, or at the request of either party, SJCOG will assist both localities in preparing a mitigation plan that meets the requirements of this land use program.

6.5 REGIONAL TRAFFIC IMPACT FEES

The RCMP Land Use Program is intended to ensure that new development contributes a fair share and provides transportation improvements at the time of new construction. The SJCOG Regional Traffic Impact Fee (RTIF) program establishes a RCMP specific impact mitigation fee that serves to streamline the CEQA process as it relates to regional impacts.

All jurisdictions adopted and began implementation of the RTIF program by July 1, 2006 . SJCOG monitors the local jurisdictions' collection and disbursement of the fee to ensure that the RTIF is being applied toward traffic mitigation projects that were identified in the development of the fee or towards regional impacts identified as part of the RCMP Land Use Analysis Program. Compliance monitoring is performed through SJCOG's annual audit process of local agency transportation funds.

A flow chart of the Land Use Analysis Program is provided in Figure 6-1 on the following page. As alluded to at the bottom of the flow chart, RCMP compliance findings are in part determined based on local agency compliance with the RCMP Land Use Analysis Program. A detailed description of the SJCOG's RCMP conformance assessment process is provided in Chapter 10. RCMP impacts and identified mitigations will be recorded for reference and disclosed as part SJCOG's annual Measure K and biennial State CMP compliance reports.

6.6 ANALYSIS METHODS

All RCMP analysis procedures will be based on the most recent HCM methodology (i.e., 2010 HCM) when reliable software implementations are available. This includes basic freeway, multi-lane highway, two-lane highway and intersections.

Generally, vehicle trip generation should be based on the most current Trip Generation informational report published by the Institute of Transportation Engineers (ITE). The published trip generation estimates are often described for both the peak hour of the land use (generator) and for the peak hour of adjacent street traffic. For analyzing the study threshold criteria, trip generation for the peak hour of adjacent street traffic should be used if available. If not available, trip generation for the peak hour of the generator can be substituted. If the land use is not specifically represented in the ITE trip generation rates, then an estimate of the project's trip generation should be conducted and fully documented using estimation methodologies normally accepted in the fields of traffic engineering and transportation planning. Use of specific trip generation studies or other trip generation information sources (e.g., San Diego Association of Governments trip rates) will be considered on a case by case basis.

6.7 REGIONAL TRAFFIC MODEL

SJCOG's regional traffic model is an integral component of the Land Use Analysis Program, and its maintenance is a requirement of both the State CMP legislation and the Measure K Ordinance.

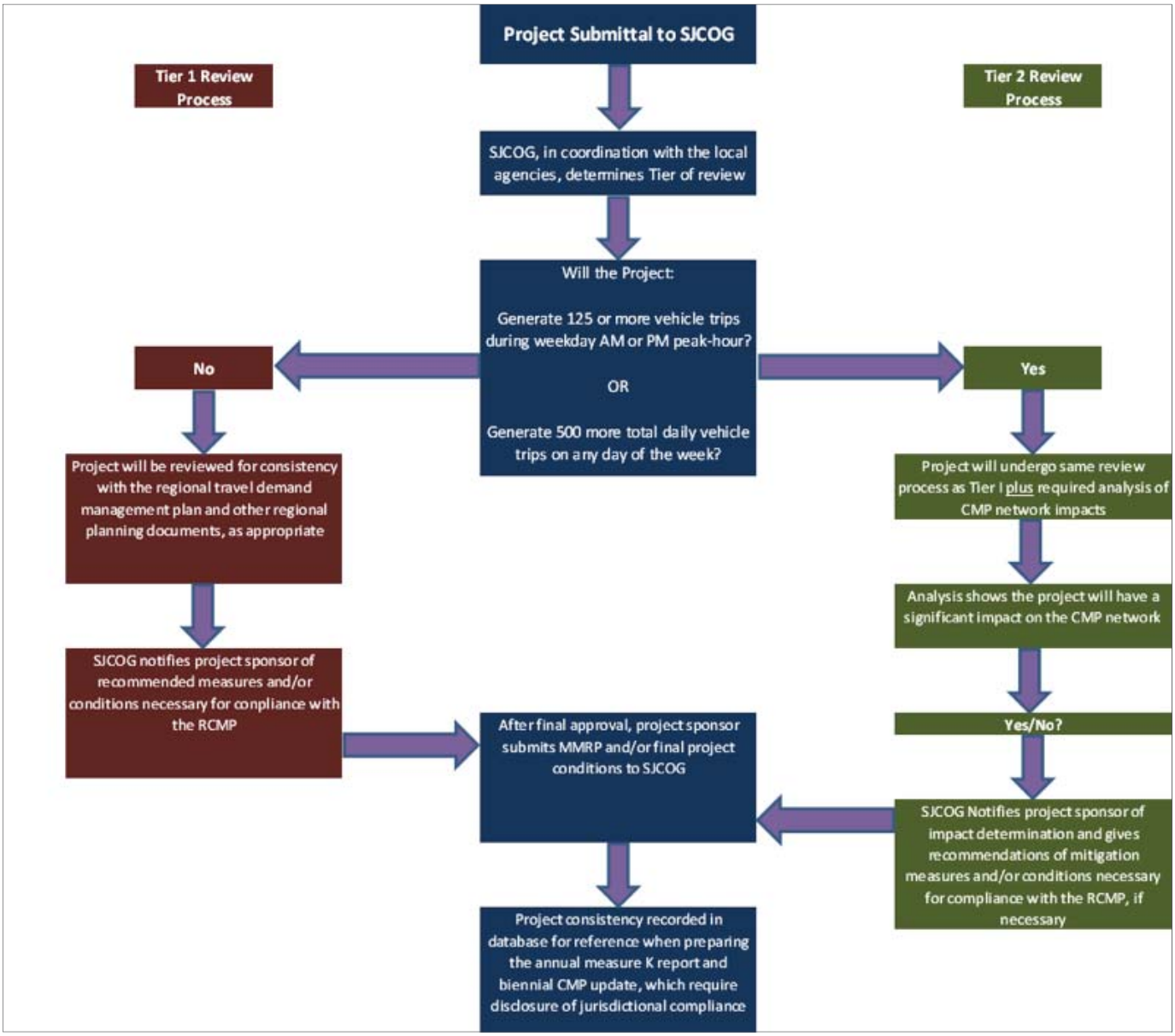
The following model applications are used to assist in the implementation of the RCMP Land Use Analysis Program.

Regional Traffic Model Details

- Helping to determine a development project's trip distribution (select zone analysis)
- Per California Code Section 65089.4, interregional trips are exempt from triggering the need for RCMP Deficiency Plans. SJCOG's model is used for estimating the extent of interregional trips from outside the San Joaquin County i.e., Stanislaus County, the Sacramento region, the entire Bay Area, Calaveras County, and Amador County (see Chapter X).

These analyses can be deferred to or used in combination with local jurisdiction travel models that can demonstrate to meet state/federal guidelines for model calibration/validation.

Figure 6 1. RCMP Land Use Analysis Program



SECTION 7

Rcmp Deficiency Plans

CHAPTER 7 RCMP DEFICIENCY PLANS

7.1 INTRODUCTION

State CMP statutes (Section 65089.4) require Deficiency Plans to be prepared when a RCMP LOS standard on the RCMP network is exceeded, after calculating required trip exemptions. San Joaquin County's RCMP LOS standard is LOS "D". The legislation requires deficiency plans to either mitigate the deficiency at its location through capital improvements (i.e., direct fix) or alternatively, implement system-wide improvements which benefit circulation and air quality. If a CMP facility exceeds the LOS standard and does not have a CMA-approved deficiency plan, the local jurisdiction in which the facility is located is at risk of being found in non-compliance (See Chapter 10).

When a deficiency is determined, both the jurisdiction in which the deficiency occurs and any jurisdictions that contribute substantially to the deficiency must work together to prepare, or oversee the preparation of a Deficiency Plan.

7.2 PURPOSE OF DEFICIENCY PLANS

There are two primary purposes Deficiency Plans serve in the RCMP process. First, they ensure a jurisdiction will not be found in nonconformance with the RCMP for exceeding the RCMP LOS standard. Secondly, they serve to increase the funding priority of any improvement identified through the deficiency planning process. This greatly increases the likelihood that a local jurisdiction will obtain flexible funding to implement congestion relief or circulation/air quality benefiting projects. SJCOG explicitly considers, as part of the project prioritization and selection criteria, whether proposed projects are identified in a RCMP deficiency plan. This greatly increases the chances for improvements identified as part of RCMP deficiency plans to be selected for inclusion as either a Tier I RTP capital improvement project (a prerequisite for state/federal programming) and/or, inclusion for federal/state discretionary funding programs such as federal RSTP and CMAQ programs; and, the State Regional Improvement Program.

7.3 TYPES OF DEFICIENCY PLANS

The CMP statutes allow several approaches for agencies responsible for preparing a CMP deficiency plan to consider. Remedies for identified CMP deficiencies can provide for either: 1) a direct fix deficiency response; or alternatively, 2) a system-wide deficiency response. Each approach is described below.

Direct Fix Approach

A direct fix deficiency plan entails identifying and pursuing physical capacity improvements to the deficient facility itself that will allow the facility to operate within the RCMP level of service standard. This has been the traditional approach for addressing CMP deficiencies statewide. In some cases, physical capacity increasing improvements to a parallel facility can also indirectly relieve congestion on a deficient roadway by encouraging traffic to divert to the parallel route.

System-wide Approach

When adding capacity directly to a deficient roadway is deemed infeasible either from a cost, political, or right-of-way perspective, the CMP statutes allow for a system-wide deficiency plan approach. A system-wide deficiency plan identifies improvements or programs that will improve system-wide traffic circulation and air quality.

It is important to note that under a system-wide deficiency plan approach, the identified improvements need not improve operating conditions of the deficient roadway itself. The roadway in question is allowed to remain deficient in perpetuity. The legislative intent of a CMP system-wide deficiency plan approach is to mitigate the negative impacts to circulation and air quality caused by the congested condition. This is done by improving system-wide circulation and air quality within the vicinity of the deficient roadway. Although not required, ostensibly the system-wide deficiency planning efforts will indirectly relieve congestion at the deficient location.

A system-wide deficiency plan involves developing a systems management or alternative mode capital improvement plan (e.g., pedestrian, bicycle, transit, trip reduction program etc.) that allows for the more efficient use of the existing transportation system by decreasing single-occupancy vehicle trips. Several resources have been developed by SJCOG to assist local agencies for developing system-wide deficiency plans and/or quantifying the benefits of multi-modal improvement strategies. These include but are not limited to:

- RCMP Performance Measures (See Chapter 5)
- HCM 2010 MMLOS analysis capabilities - designated RCMP Multi-modal Corridors will already have established baseline MMLOS data and information available to local agencies (See Chapter 2 and 5)
- SJCOG Regional Transportation Demand Management Plan (i.e., TDM toolbox)
- SJCOG Regional Bikeway Plan
- SJCOG Park-and-Ride Master Plan
- SJCOG Regional Expressway System Plan
- San Joaquin Valley Intelligent Transportation Systems (ITS) Strategic Deployment Plan
- Regional Transit Systems Plan
- SJCOG Regional Smart Growth and Infill Opportunity Zone Plan (currently under development)

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).

7.4 DEFICIENCY PLANS AND LAND USE

Although deficiency plans are developed as a result of poor system performance, they are inextricably tied to the land use planning process. Land use development projects which contribute or cause a deficiency must as a condition of ap-

proval, ensure that all feasible and reasonable physical improvements are made so that the RCMP traffic LOS standard violation is minimized. This requirement is consistent with the normal CEQA process for requiring mitigation measures. The planning body could also decide to delay the project until a deficiency plan is developed and approved. For development projects which impact a facility with an approved deficiency plan, the project sponsor, as a condition of approval, must participate in the implementation of the deficiency plan's action list.

7.5 DEFICIENCY PLANS AND TRANSPORTATION PLANNING/ PROGRAMMING

All improvements identified in an adopted and SJCOG approved RCMP Deficiency Plan will be included in the RCMP seven-year Capital Improvement Program (CIP). SJCOG has integrated its Regional Transportation Plan project selection screening process with the Regional Congestion Management Plan. As stated in Section 7.2, improvements identified in a locally adopted and SJCOG approved RCMP Deficiency Plan will be integrated with SJCOG's RTP project prioritization (for Tier I and Tier II) as well as be given greater priority during SJCOG's RTP discretionary state/federal funding cycles. This will greatly increase the likelihood that a local jurisdiction will obtain discretionary funding to implement congestion relief or circulation/air quality benefiting projects. As stated above, jurisdictions can pursue other less-capital intensive system-wide strategies to improve circulation or air quality in addition to, or in lieu of, capital improvements. Some of these strategies require on-going support (e.g., transit operating costs, program funding etc). These costs should also be identified as part of the deficiency plan CIP. ***Figure 7-1*** depicts the RCMP CIP and RTP integration process.

7.6 RCMP EXEMPT TRIPS

An intersection or roadway segment designated as part of the RCMP road network that is shown to operate deficiently i.e., at LOS "E" or "F" according to the 2010 ***Highway Capacity Manual*** and based on RCMP monitoring data performed in every odd-numbered year, may require that a Deficiency Plan be developed. Given that the 2010 Highway Capacity Manual planning method is used to determine the LOS for two-lane highways and local arterial segments, the deficient segments for these facility types can be re-evaluated using the operational methodology for LOS evaluation. The LOS standard must continue to be exceeded based on this re-evaluation. Before a determination to develop a deficiency plan is made, 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 segment's observed roadway 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.

[1] Interregional trips are defined by SJCOG as the proportion of I-X, X-I and X-X trips occurring on a given facility during either the AM or PM peak hour.

[2] The CMP legislation does not define low income housing. To ensure countywide consistency, SJCOG will use the same definition of low income housing defined in each local jurisdiction's adopted General Plan's housing element. The low income housing exemption only applies to low income housing approved after July 10, 1989 (AB1963).

For purposes of implementing the above provisions, the following terms have been defined by the CMP statute: "High Density" means residential development which contains a minimum of 24 dwelling units per acre and a minimum density per acre which is equal to or greater than 120 percent of the maximum residential density allowed under the local general plan and zoning ordinance - a project providing a minimum of 75 units per acre shall automatically be considered high density; "Mixed Use Development" means development which integrates compatible commercial or retail uses, or both, with residential uses, and which, due to the proximity of job locations, shopping opportunities, and residences, will discourage new trip generation.

Examples of how to address these exempt trip types are described below:

Interregional travel: perform select link analysis to isolate I-X, X-I and X-X trips using SJCOG's regional travel demand model and/or origin-destination survey data.

Construction, rehabilitation: acquisition of information on detours used during construction or maintenance of facilities and analysis of traffic volume data (peak hour ADT for road segments (peak hour approach volumes for intersections) before improvement effort began relative to current volumes.

Ramp metering: monitoring of peak hour traffic queuing caused by ramp meter.

Traffic signal coordination: monitoring of peak hour signal coordination between highway off-ramp signals with local signals and its impact on traffic approach progression.

Low income housing: remove post-1989 low income housing from SJCOG's regional travel demand model socio-economic (trip production) input files and re-run model; or, manually "back-out" estimated trips using ITE trip generation rates or other published trip rates from model assignment to assess RCMP impacts.

High density housing: remove post-1989 high density housing within one mile of an existing passenger rail station from SJCOG's regional travel demand model socio-economic (trip production) input files and re-run model; or, manually "back-out" estimated trips using ITE trip generation rates or other published trip rates from model assignment to assess RCMP impacts.

Mixed use development: remove post-1989 mixed use development within one mile of an existing passenger rail station from SJCOG's regional travel demand model socio-economic (trip production) input files and re-run model; or, manually "back-out" estimated trips using ITE trip generation rates or other published trip rates from model assignment to assess RCMP impacts.

When all of these criteria are met and the subject road segment is designated as deficient by SJCOG, the lead local jurisdiction will be notified about the deficiency. The lead jurisdiction responsible for ensuring that the deficiency plan is completed and locally adopted is as follows:

1. If the deficient segment is in one jurisdiction, according to Government Code, Section 65089.4(e)(2), the local jurisdiction in which the deficiency occurs (regardless of ownership) shall have lead responsibility for developing the deficiency plan. The lead jurisdiction must coordinate with other impacting jurisdictions in the development of the deficiency plan;
2. If the deficient roadway crosses over jurisdiction boundaries (i.e., multi-jurisdictional deficiency) the local jurisdiction that triggered the deficiency will assume lead responsibility for developing a deficiency plan. In such cases, lead responsibility will be determined by SJCOG in coordination with the affected local agencies. SJCOG will utilize calibrated output from SJCOG's regional travel demand model (i.e., select link analysis) to inform this determination. The other affected jurisdiction(s) must become involved with the lead jurisdiction to address the deficiency.
3. In the special case involving an annexation of land, the jurisdiction acquiring the land will act as the lead agency if a deficiency plan is necessary. Coordination with other impacting jurisdiction(s) to develop the deficiency plan is also necessary.

While final authorship of a Deficiency Plan is the legal responsibility of the subject jurisdiction(s), SJCOG will play an active technical support role in the development of each required element of the Deficiency Plan and will assist with identifying appropriate funding for capital or operational improvements. If the deficiency occurs on a state owned facility, the subject jurisdiction(s) also must consult with Caltrans while developing the Deficiency Plan.

In the case of a multi-jurisdictional Deficiency Plan, it is not reasonable to expect the lead jurisdiction to bear more than its fair share of the identified improvements. Each involved jurisdiction is responsible for collaborating with SJCOG, Caltrans, and other jurisdictions as necessary to develop a balanced action plan that addresses the deficiencies in order to improve current and future RCMP performance. The individual lead jurisdiction is responsible for indicating in the action plan the entire extent of the proposed improvements and the funding strategies associated with the improvements. The methodologies or projects to address the deficiencies will be identified by SJCOG and included in the RCMP CIP (Chapter 9). Figure 7-2 depicts the RCMP Deficiency Planning Process.

Timeframe for Approval

A local jurisdiction shall forward its adopted Deficiency Plan to SJCOG within 12 months of the identification of a deficiency. SJCOG will hold a noticed public hearing within 60 days of receiving the Deficiency Plan. Following that hearing, SJCOG will either accept or reject the Deficiency Plan in its entirety, but it may not modify the Deficiency Plan. If SJCOG rejects the plan, it will notify the local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days addressing the identified concerns. SJCOG will work collaboratively with local jurisdictions to avoid cause for rejection. Failure of a local jurisdiction to comply with these requirements will be found in nonconformance with the RCMP (see Chapter 10).

7.7 COMPONENTS OF A DEFICIENCY PLAN

The CMP requires the development of criteria and guidelines for preparation of deficiency plans. The criteria/guidelines are to be developed to:

1. streamline the development of deficiency plans;
2. ensure consistency of deficiency plans among all jurisdictions;
3. ensure the technical adequacy of the deficiency plan process; and,
4. provide enough information so that government officials and policy makers can make informed decisions.

Each Deficiency Plan must contain the following four components:

1. An analysis of the cause of the deficiency;
2. A list of improvements necessary for the deficient roadway segment to: (a) maintain the minimum RCMP LOS standard and the estimated cost of the improvements (direct-fix approach); or, alternatively (b) improve multimodal performance that contributes to significant improvements in circulation and air quality subject to the approval of the San Joaquin Valley APCD (system-wide approach);
3. Estimated costs for the identified improvements; and,
4. An action plan implementing either the improvements listed in 2 or 3 along with a specific implementation schedule.

Preparation Guidelines

A Deficiency Plan should be considered as a "quasi" early stage programming document. While the plan is designed to feed into the seven-year RCMP CIP, its time horizon may actually be longer. If a proposed improvement project's schedule falls beyond the seven year horizon of the CIP, it will be considered a long-term improvement. If the long-term improvement is considered the ultimate remedy to the deficient condition, it is recommended that short-term improvements also be identified that can serve to ameliorate congestion in the interim.

The following format should be used in the preparation of RCMP Deficiency Plans:

Introduction: This section provides the legislative context of the deficiency plan process and identifies the deficiency. The following information should be included in this section:

- brief description of the RCMP and its purpose;
- the RCMP deficiency plan requirements (listed above);
- the RCMP LOS standards;
- identification of the deficient intersection or roadway;
- if applicable, the local jurisdiction's General Plan policies and objectives which are violated by the deficiency;
- monitoring history of the deficient intersection or roadway including any non-CMP related monitoring if available and a brief discussion of monitoring experience; and,
- a brief description of the type of deficiency plan being developed (i.e., direct-fix or system-wide deficiency plan approach) and deficiency plan report format/structure.

Cause of Deficiency: The following information should be included in this section:

- For the deficient facility (RCMP intersection or road segment), reference and documentation of the speed survey or traffic volume count relative to the 2010 Highway Capacity Manual (HCM) operational analysis methodology and results must be described and provided in this section or as an attachment.
- The most significant critical turning movements and/or constrained geometric properties of the deficient section of the facility, signalization phases/properties which contribute to the deficiency.
- Travel demand markets (e.g., specific commuters, shoppers etc.) which place the greatest burden on the facility during the peak period must be described. Travel demand markets can either be derived from a RCMP approved network traffic model or professional judgment. A qualitative discussion of the potential causes of vehicular travel demand could include, but are not limited to: approval of a new general plan amendment along or near the segment, approval of new projects under the existing general plan guidelines along or near the segment, marginal growth in an area with preexisting high traffic volumes, increased infill development, expansion by existing development or accommodation of growth generated by other jurisdictions. The Deficiency Plan should include the full list of causes that are applicable.

Proposed Improvements: The type of proposed improvements will depend on the type of deficiency plan being proposed. Direct-fix plans will include capacity increasing projects. Depending on the extent of the deficiency and roadway capacity increasing proposed, the plan may also trigger the federal Congestion Management Process (see Chapter 8). If the federal CMP applies, the deficiency plan should reference this requirement. The need to address the federal CMP requirements will follow local adoption and approval of the RCMP deficiency plan by SJCOG. The federal CMP will entail a more protracted assessment of existing and potential opportunities for expanded system management and demand management strategies and will be a collaborative effort between SJCOG and affected local and state agencies. Conversely, a system-wide deficiency plan will include non-capacity increasing projects. Examples include improved public transit services and facilities, improved non-motorized transportation facilities, high occupancy vehicle facilities, system and demand management strategies, transportation control measures and improved streetscape features that enhance pedestrian, bicycle and transit LOS. The focus of system-wide deficiency plan improvements will typically involve trip reduction strategies or efforts to improve multi-modal performance.

Action Plan: Drawing from the list of improvements, an action plan is developed. For each proposed improvement, the

following should be addressed:

- Status of the Improvement - is the improvement currently planned, programmed or conceptual. How much planning traction does the proposed improvement have i.e., is there any planning or political history of the improvement or deficient location? To what extent is the governing body aware of this proposed improvement?
- Completion Date - What is the target date for completion of the improvement/s? Planning level cost estimates must be provided. What is the preliminary, rough cost estimate for the improvement?
- Funding Sources - What funding source(s) does the jurisdiction propose to use to pay for its share of this improvement? What additional funding source(s) does the jurisdiction propose to pay for the remainder of the project cost (regardless of whether or not that source has been approved)?

7.8 CONFLICT RESOLUTION PROCESS

California Code 65089.4 requires the presiding agency to, "establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional Deficiency Plan responsibilities." The conflict resolution process will include the following:

1. **Education** - In order to provide member agencies with a working knowledge of dispute resolution options, to provide information on the methods and techniques for resolving disputes that require neutral intervention and to reduce the frequency of unresolved disputes between local agencies, SJCOG provides an education program to Board members and staff in conflict management techniques.
2. **Agreement to Participate** - Local government agencies involved in an inter-jurisdictional conflict which cannot be resolved among the agencies may, through formal action of their policy bodies, agree to participate in resolving the dispute in accordance with this procedure. Evidence of the agreement to participate shall be forwarded by the local agencies to SJCOG, and shall describe the issue(s) for which review is requested. SJCOG's role shall be limited to providing assistance to the agencies in accordance with this procedure. Participation in the conflict resolution process shall be voluntary, but is strongly encouraged prior to initiation of litigation by an agency. All parties involved in the dispute shall be requested to participate.
3. **Implementation** - The Conflict Resolution Procedure may be initiated by:

- One or more involved local agencies; and,
- The SJCOG Board of Directors

4. **Confidentiality** - The process set forth below shall be subject to the provisions of California law relating to confidentiality, and specifically the provisions of Section 1152.5 of the Evidence Code.

Process includes:

A. a. SJCOG staff meets with the affected agencies for purposes of interviewing them regarding the nature and scope of the conflict and to request all necessary information. Such interviews shall be undertaken as soon as possible, but in no case later than 30 days from the date of agreement by the agencies to participate. SJCOG and the member agencies shall attempt to resolve the conflict based on this information within seven working days, prior to a continuation of the process.

B. b. SJCOG staff facilitates the selection of a neutral third-party, subject to approval and sharing of costs by both agencies, to recommend an appropriate facilitation and negotiation model to be used in resolving the dispute which may include, but not be limited to:

- Mediation
- Arbitration

C. At any time, should the parties be unable to reach agreement on an issue associated with this conflict resolution process, they may choose to not continue further and attempt to resolve the issue by other means.

D. SJCOG staff serving, where appropriate, as a resource to the agencies, and a neutral third party convene the conflict resolution conference using the model agreed to by the agencies. The conference should generally consist of the following elements:
Stage I. Introduction
Stage II. Opening statement by the agencies
Stage III. Exchange (for purposes of developing an understanding of each agency's issues and positions)
Stage IV. Development of options
Stage V. Draft and execute agreement

E. The agreement is implemented by the agencies. Follow up of implementation of the agreement is done by SJCOG.

F. The Executive Director shall report to the Board at regular intervals on the use of the procedure by local agencies

Figure 7-1. RCMP CIP and RTP Integration

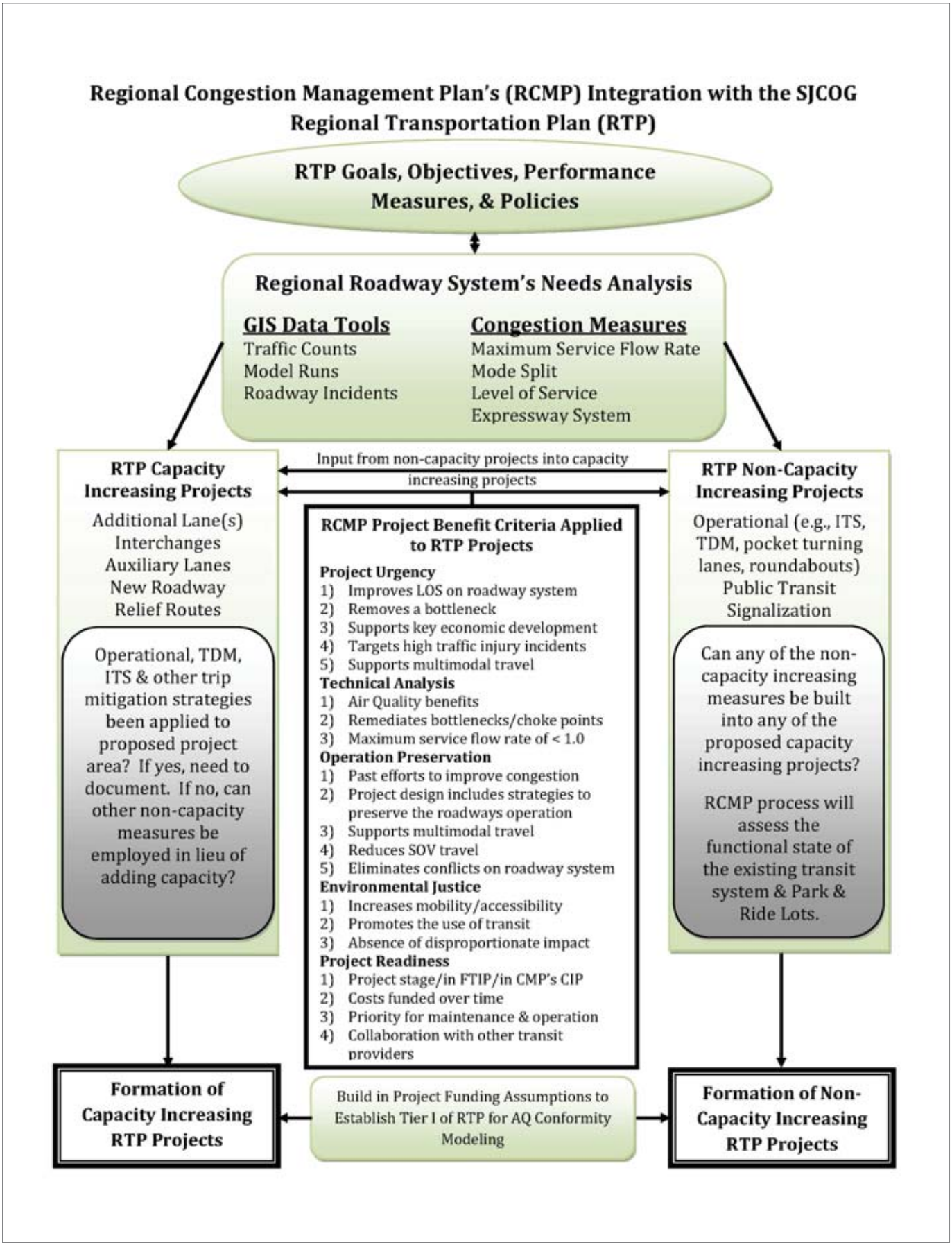
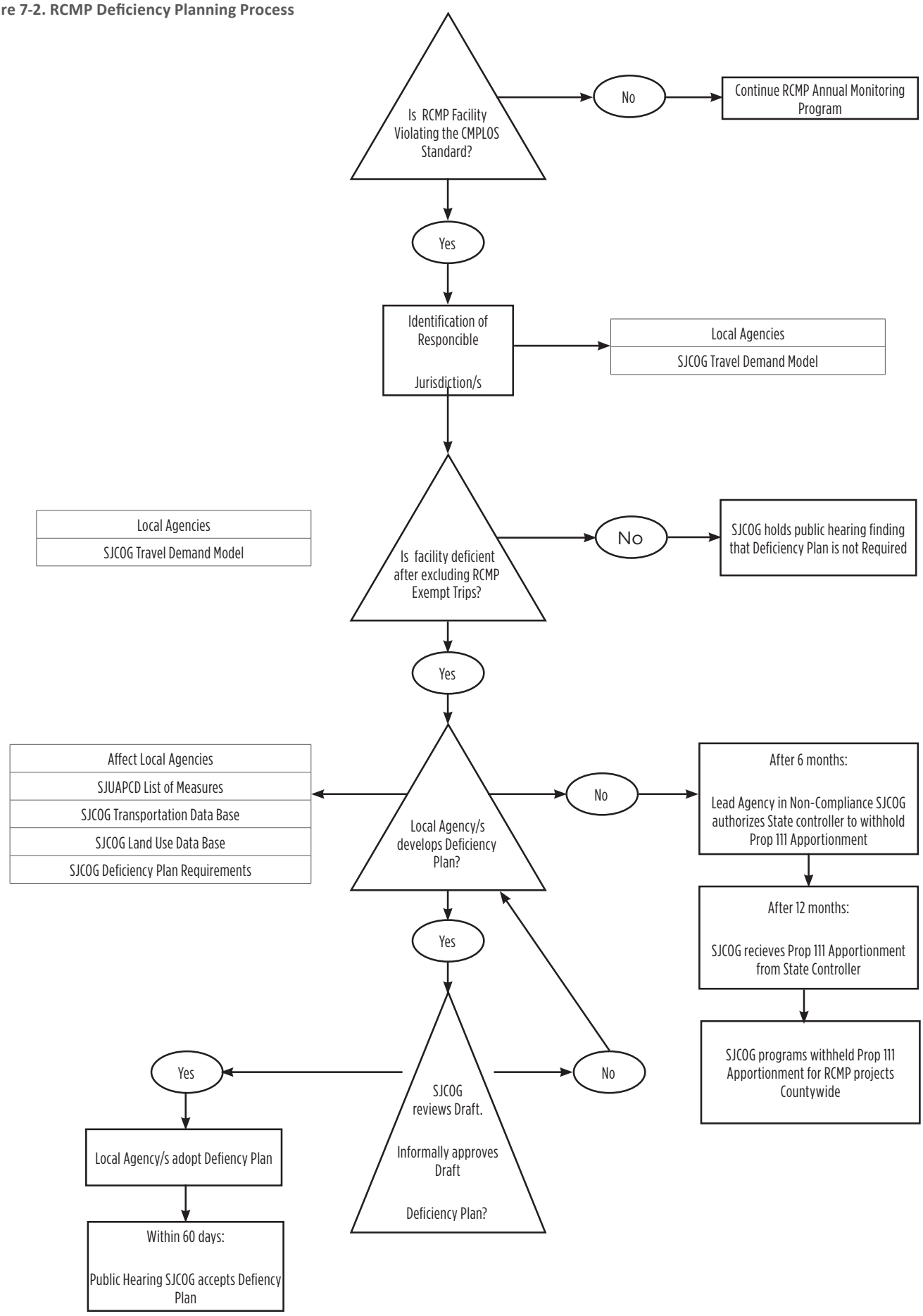


Figure 7-2. RCMP Deficiency Planning Process



SECTION 8

Federal Congestion Management Requirements

CHAPTER 8 FEDERAL CONGESTION MANAGEMENT REQUIREMENTS

8.1 INTRODUCTION

SJCOG is a designated Transportation Management Area (TMA) within a federal air quality non-attainment area; therefore, the federal requirements for implementing the Federal Congestion Management Process apply within San Joaquin County. This chapter describes the Federal requirements and how this RCMP complies with those requirements.

8.2 FEDERAL PROCESS REQUIREMENTS

According to the FHWA Congestion Management Process Guidebook (2011) ,

"The Congestion Management Process (CMP), as defined in federal regulation, is intended to serve as a systematic process that provides for safe and effective integrated management and operation of the multimodal transportation system. The process includes:

- Development of congestion management objectives
- Establishment of measures of multimodal transportation system performance
- Collection of data and system performance monitoring to define the extent and duration of congestion and determine the causes of congestion
- Identification of congestion management strategies
- Implementation activities, including identification of an implementation schedule and possible funding sources for each strategy
- Evaluation of the effectiveness of implemented strategies

A CMP is required in metropolitan areas with population exceeding 200,000, known as Transportation Management Areas (TMAs). Federal requirements also state that in all TMAs, the CMP shall be developed and implemented as an integrated part of the metropolitan transportation planning process."

The FHWA Congestion Management Process Guidebook further states the following regarding single occupant vehicle capacity increasing projects and requirements to incorporate demand and system management strategies if such a project is ultimately warranted:

"In TMAs that are designated as non-attainment or maintenance areas for ozone or carbon monoxide federal regulations require certification that any project resulting in a significant increase in SOV carrying capacity (with the exception of safety improvements and bottleneck elimination projects) be identified or addressed through the CMP. In these areas, the CMP must provide an appropriate analysis of reasonable travel demand reduction and operational management strategies.

Additionally, the identified need for additional SOV capacity does not obviate the need for operational and demand management improvements to address congestion. In TMAs that are designated as non-attainment or maintenance areas for ozone or carbon monoxide, federal regulations require that in cases where additional SOV capacity is warranted, the CMP must identify all reasonable strategies to manage the SOV facility safely and effectively, and identify travel demand reduction and operational management strategies appropriate for the corridor."

MPO Regional Transportation Plans (RTP) and CMP must be revisited periodically and updated to ensure consistency. It is important for the MPO to have a procedure in place to ensure that all FTIP projects are in compliance with the federal CMP. It is also helpful for MPOs to define "safety" and "bottleneck" projects in advance so there is less confusion about which projects may be exempt from the requirement for SOV analysis.

In the event the federal CMP is applied, the aforementioned RCMP program elements (network, monitoring, objectives and performance measures) will all serve to inform the process. However, given the finer scale of analysis required for when this process is triggered (i.e., single roadway or corridor level), more area/site specific objectives and performance measures may likely be developed.

For example, identification and quantification of enhanced opportunities for more aggressive employer based travel demand management implementation or application of system management strategies within a given corridor is required by the federal CMP. More detailed local travel and socio-economic information may likely be required for such an analysis. An example analysis framework used by SJCOG as part its Regional Deficiency Plan and Regional TDM Plan (August, 2010) is depicted in Figure 8-1.

Hence, on a case by case basis during specific applications of the federal CMP, additional objectives and performance measures beyond those described herein may be developed.

8.2 RELATIONSHIP OF SJCOG RCMP TO FEDERAL PROCESS

In recognition that metropolitan areas face unique travel congestion conditions and have different visions on how to address traffic congestion, federal guidelines allow MPOs flexibility to design their own structured processes for addressing the federal congestion management requirements (Congestion Management Process: A Guidebook, 2011).

With the 1991 passage of Proposition 111 establishing Congestion Management Programs for urbanized counties in California, many California MPOs currently have well established and structured programs for addressing congestion management objectives – including SJCOG. Hence, a key strategy for better integrating the state and federal requirements has been to "dovetail" the federal CMP requirements within SJCOG's established state mandated Congestion Management Program.

This integration exists for the following RCMP elements:

- Defining the federal CMP Network.
  Based on consultation with FHWA, SJCOG has

designated the state RCMP network of regional roadways (called the RCMP Network) as the basis for complying with both the state and federal congestion management requirements. The RCMP network defines the geographic boundaries/network and area of application. This not only clearly defines where the state/federal regulations apply, but better ensures that their application is appropriately focused only on transportation facilities of regional significance. Figure 2.1 in Chapter 2 shows the federal/state RCMP network.

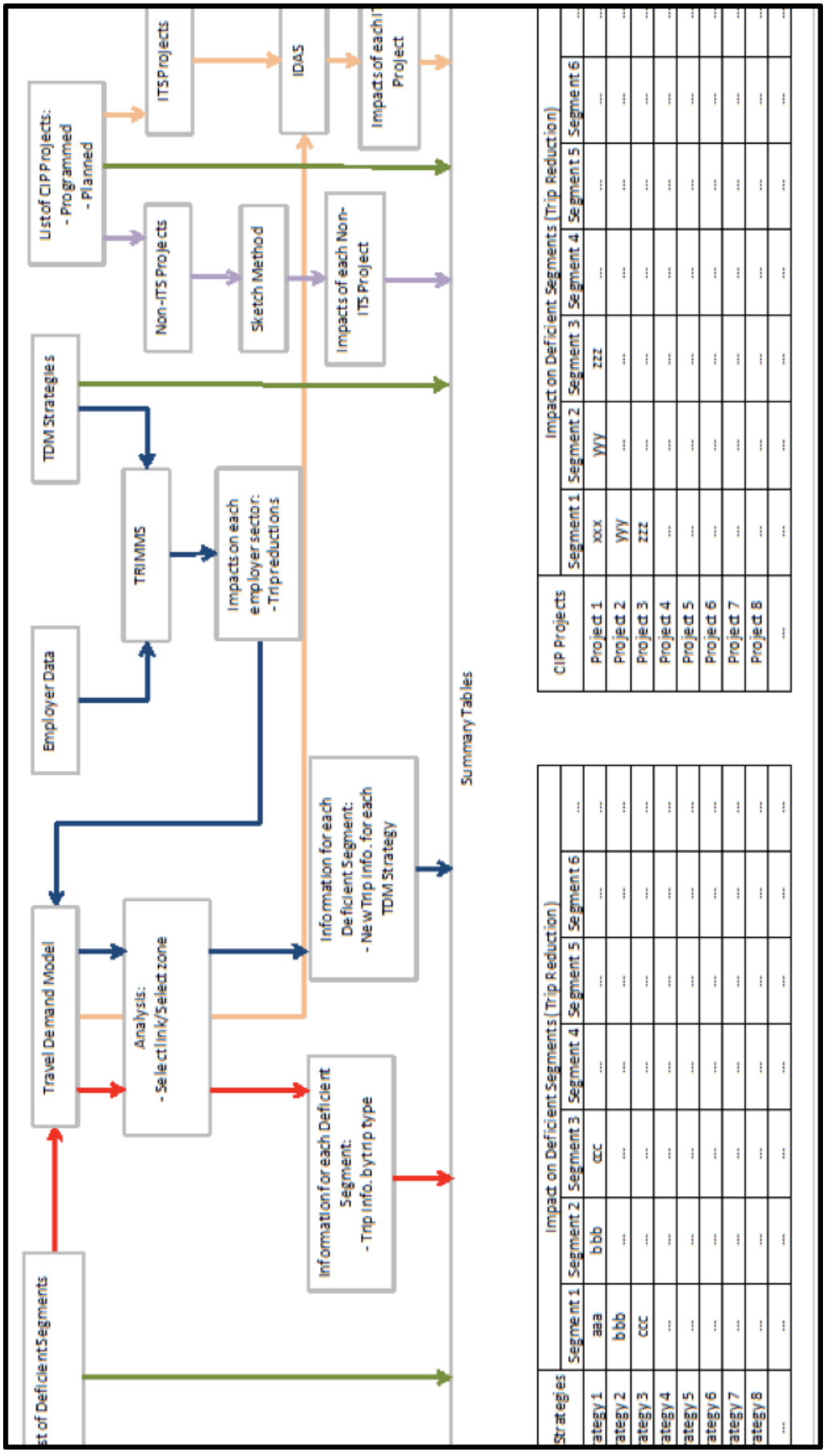
- Designate RCMP Intersections and RCMP Multi-modal Corridors as part of federal CMP system.
  This finer scale of resolution recognizes the system components (corridor, segment, intersection) appropriate for monitoring and assessing multi-modal performance and adherence to established standards and/or system thresholds. It also establishes a multi-tiered process in which data are collected on a broad regional network (i.e., RCMP Network) while a subset of these roadways (a subset of key intersections and multi-modal corridors) are specifically targeted for more detailed data collection and multi-modal operational assessments. Figure 2.2 and Figure 2.3 in Chapter 2 depict RCMP intersections and multi-modal corridors respectively. In all, there are 101 RCMP intersections and 13 RCMP multi-modal corridors designated as part of the RCMP system. Some of these locations are planned for future consideration.
- Establishment of the RCMP Monitoring Program.
  The RCMP Monitoring Program provides the mechanism to yield the requisite traffic counts and related data and methodologies to address the state RCMP vehicular LOS standards (see Chapter 4) and the established multi-modal state/federal performance measures (see Chapter 5). It addresses multiple analysis scales and RCMP system components (corridor, segment, intersection). The RCMP Data Monitoring Program will be funded and administered by SJCOG.
  How the RCMP monitoring process is integrated with the state Congestion Management Program and federal Congestion Management System i.e., Congestion Management Process is depicted in Figure 8-2.
- Establishment of RCMP Objectives.
  Per state statute, the state congestion management objectives are as follows:
  - Monitor vehicular congestion on the designated CMP system
  - Maintain vehicular CMP LOS Standards on the CMP system
  - Monitor the affect local land use decisions on the CMP system including inter-jurisdictional impacts and identify strategies/improvements to mitigate the impacts.
  - Monitor multi-modal performance through the establishment of performance measures
  - Monitor compliance of all participating agencies receiving Proposition 111 funding (Section 2105)

  Given the state objectives are statutorily driven, they are typically referred to as program requirements rather than program objectives. Federal CMP guidance recommends identification of CMP objectives and allows MPOs the flexibility to develop performance measures tailored to the specific region.

  A point of departure in the federal guidance relative to the state CMP requirements is the recommendation that objectives be "time-bound" i.e., reduce some measure x% by a given future year. Although straight forward – this "line in the sand" approach creates several issues. Namely: it requires on-going and broad based collaboration and consensus by all stakeholders; it can appear arbitrary in nature to those not intimately involved in their development; it can imply failure if not achieved; if a target is not achieved in the allotted timeframe – it may suggest the need for remedial actions which may not be feasible or even desirable; and lastly, by definition it antiquates itself over time. Given these concerns, SJCOG has applied a tempered approach to time-bound objectives opting instead for "time elastic" threshold based objectives (i.e., maintain a given percentage of RCMP lane miles and/or intersections operating at LOS D or better for the RCMP system as a whole or by jurisdiction).
- Establishment of RCMP Performance Measures.
  Establishment of multimodal performance measures is both a state and federal CMP requirement. Performance measures provide the metric to gauge system performance and whether stated congestion management objectives are being met or not. A set of "core" multi-modal RCMP objectives and RCMP performance measures are described in Chapter 5 (see Table 5-1). As program implementation continues, refinement of these measures and/or additional performance measures can be established as part of future RCMP updates. These performance measures and the data that feeds them information will be available on SJCOG's RCMP website – developed as part of this update to facilitate program implementation, monitoring and data sharing by SJCOG and its partner agencies.

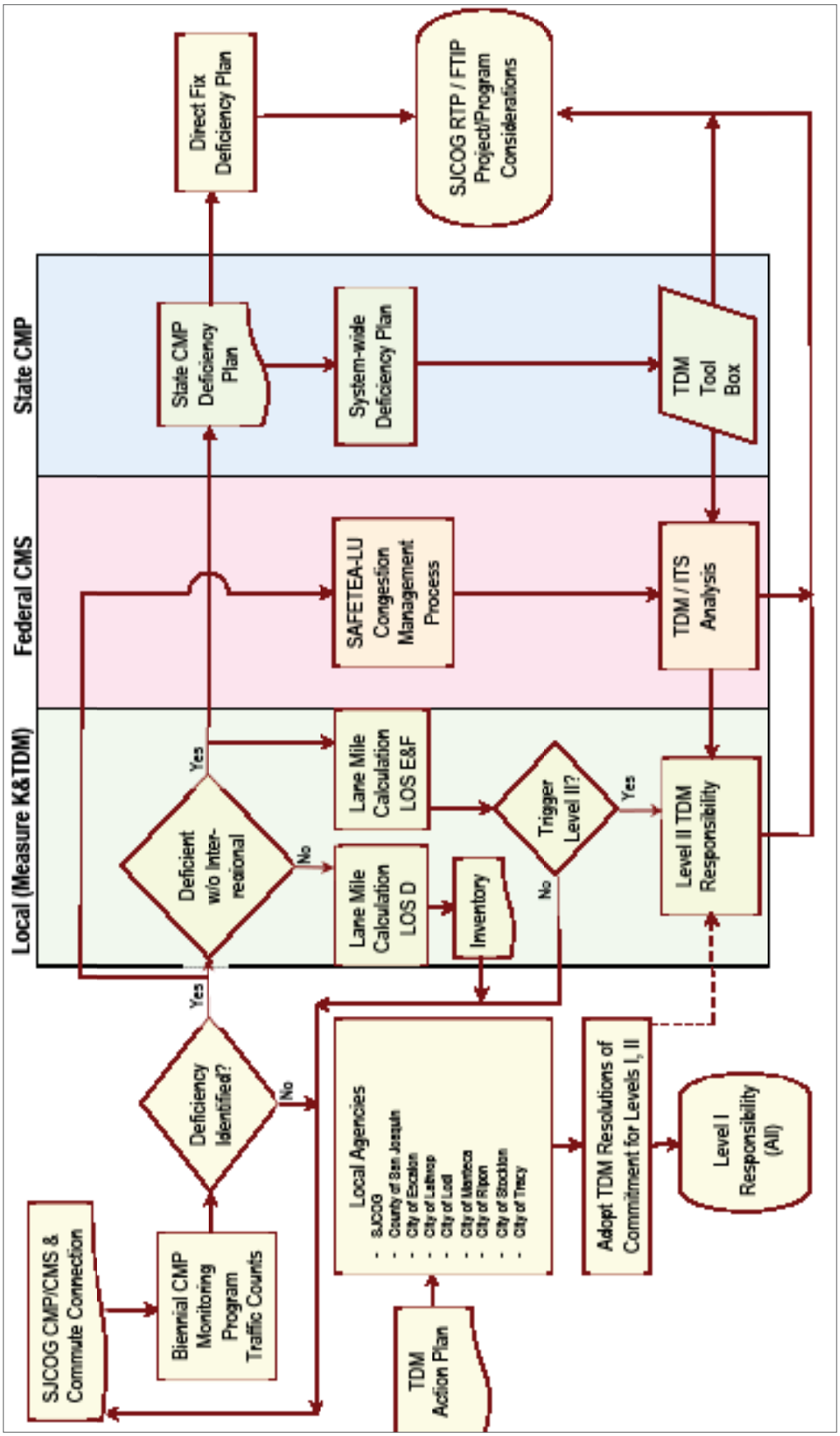
The above integration allows SJCOG and its' member agencies to implement an effective countywide congestion management program while more efficiently complying with established state and federal congestion management requirements. Both the state and federal statutes/requirements are provided in Appendix A.

Figure 8 1. SJCOG TDM/TSM Analysis Framework



Source: SJCOG Regional TDM Plan, August 2010

Figure 8 2. SJCOG RCMP Monitoring Process



SECTION 9

Capital Improvement Program

CHAPTER 9 CAPITAL IMPROVEMENT PROGRAM

9.1 INTRODUCTION

The Capital Improvement Program (CIP) is the action plan for the RCMP which provides a framework for the funding and implementation of projects that maintain or improve the transportation performance standards of the RCMP.

This program gathers all the anticipated transportation-related improvements on the RCMP networks, regardless of funding source, in order to provide a method for coordinating improvements across jurisdictional boundaries. The CIP also serves as a tool for identifying projects that involve State funding sources in the Regional Transportation Improvement Program (RTIP). All CIP projects must be incorporated into San Joaquin's Regional Transportation Program (RTP).

SJCOG is required to adopt a seven-year CIP every odd-numbered year which, according the State statute, is intended to:

- Maintain or improve traffic level of service established in the RCMP and maintain or improve the performance of the multimodal system;
- Mitigate regional transportation impacts of local land use decisions; and
- Conform to transportation-related vehicle emission air quality mitigation measures.

9.2 PROJECTS INCLUDED IN THE CIP

The source of the RCMP CIP project list is SJCOG's Regional Traffic Impact Fee (RTIF) program . The RTIF Program is a countywide, multi-jurisdictional capital improvement funding program in San Joaquin County. The RTIF Program enables all local public agencies in the county that regulate land use to collect an impact fee from new development for the purpose of contributing funding to regional transportation improvements necessary to offset the impacts of growth. Given the regional emphasis of the program, the RTIF network designation is nearly identical to the designated RCMP network. In essence, the RTIF program acts as a funding source to mitigate deficiencies/impacts to the RCMP system of roadways.

The San Joaquin County Council of Governments (SJCOG) led establishment of the RTIF Program as the agency responsible for regional planning and programming of the regional transportation network, the countywide network of highways, major arterials, and related transit services.

The RTIF Capital Project List is updated every five years based on input from all jurisdictions in San Joaquin County. RTIF projects must also be identified as Tier I in the most recently adopted Regional Transportation Plan (RTP). Projects must be in Tier I of the RTP to be eligible to use RTIF revenue for project delivery.

Capital projects such as street improvements and new roadway infrastructure are included as are upgrades to the transit, pedestrian and bicycle network. TDM programs and local land use evaluation programs are also part of the CIP.

The following types of projects must be included in the RCMP CIP:

- Capital projects intended to improve roadway LOS, multi-modal LOS or transit performance (frequency and/or coverage) that is identified as part of adopted RCMP Deficiency Plans.
- Capital projects which have been identified as mitigations that are required as a condition of local land use decisions i.e., the RCMP Land Use Analysis Program.
- Roadway projects that improve operations along RCMP road segments (as determined by the local agency) regardless of project funding source. This may include projects funded by Proposition 111 monies, Measure K funds, Local Transportation Funds, federal funds or developer fees. It is not necessary to delay work on these projects pending inclusion in the CIP. Work on a project may begin prior to adoption of the biennial CIP, but that project should be submitted in the next CIP cycle.
- All transit or trip reduction capital projects that are designed to increase transit utilization or reduce single-occupancy vehicle use on the RCMP road network (as determined by the local agency).
- All TDM programs and local land use programs that reduce SOV travel or encourage the use of alternates to the SOV.
- All projects funded by the RTIF.
- Multi-modal improvement projects that are not on the RCMP designated networks but will improve operations or reduce SOV trips. These projects are listed in the CIP if the jurisdiction believes that these projects will improve system performance or mitigate land use impacts on the RCMP system. For example, a jurisdiction may include improvements to parallel facilities in the CIP.
- Projects applying for funding from states sources as outlined in the funding eligibility section of this chapter.

9.3 FUNDING ELIGIBILITY

Under the CMP legislation, inclusion in the CIP has become an important step in the process for local highway or transit projects to receive State funding. According to CMP legislation, there are several sources of funding which may only be given to local highway and transit projects which are included in the Capital Improvement Program.

The following list outlines which sources of funding are restricted to those projects which are included in the CIP:

- State Flexible Congestion Relief (FCR);
- Traffic Systems Management;
- Urban Commuter Rail; and,
- State funding via the RTIP process.

In addition to the above mentioned funding sources, jurisdictions may also decide to include in the CIP, projects applying for Transit Capital Improvement (TCI) funds. While inclusion in the CIP is required by a number of funding sources, includ-

ing a project can also help improve the likelihood of a project receiving funding from other State sources.

9.4 PROCEDURES FOR CIP DEVELOPMENT

Every two years SJCOG updates the Seven-Year CIP based on input provided by local jurisdictions and transit providers. These entities identify a number of projects which fall under the guidelines discussed earlier in this section. In order to facilitate this process, local jurisdictions must prepare for SJCOG a list of projects that are within their own CIPs and that are on the RCMP network (or that may have an effect on the RCMP network). The list should be organized by project funding source, in priority order, in a format consistent with the RTIP format. The submission deadline for CIP/RTP is July 31st of each even-numbered year.

SJCOG will then assemble the individual project lists submitted by jurisdictions and combine them into a complete CIP. Any regional projects that meet the CIP criteria will also be added to the list at this time. SJCOG reviews, edits, and incorporates the CIP into the RTP.

9.5 LIST OF PROJECTS

Table 9-1 summarizes the CIP projects that were identified in the San Joaquin County Regional Traffic Impact Fee (December 2011). The projects listed as Tier I in the 2011 RTP provided the basis for the RTIF Master Improvement list. Although the RCMP CIP is a seven-year CIP, long-term RTIP improvements are also listed for completeness.

The following CIP projects were identified in the SJCOG Regional Deficiency Plan (August, 2010).

Short-term Improvements:

Countywide implementation of the Regional TDM Plan

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 (Juncture of I-5 and SR-12)	$ 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

Widening I-5 to accommodate an HOV lane in each will provide the requisite capacity to remedy this deficiency. It should be noted that all listed improvement costs are considered planning level cost estimates. More detailed engineering based cost estimates are only possible when the projects enter design phases.

Table 9-1. RTIF Update Project List

ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
1	SR-4 Extension	New alignment from Fresno Ave. to Navy Drive	Fresno Ave. to Navy Drive	$174,000,000	2016
2	I-5 Widening	Widen and construct HOV lanes in median with auxilliary lanes	Hammer Lane to Eight Mile Road	$75,000,000	2024
3	I-5 Widening	Widen and construct HOV lanes in median from Country Club Blvd. To Hammer Lane and restripe existing median lanes to HOV lanes from Charter Way to Country Club Blvd.	Country Club to Hammer Lane	$87,000,000	2015
4	I-5 Widening	Widen 6 to 8 lanes (Inside) (Includes HOV Lane)	French Camp Road to Charter Way	$63,900,000	2022
5	I-5 Widening	Widen 6 to 8 lanes (Inside)	SR 120 to French Camp Road	$71,000,000	2025
6	SR-12	Widen 2 to 4 lanes (Outside), add turn lanes, from SR-99 to SR-88	SR-99 to SR-88	$50,500,000	2025
7	SR-99 Widening	Widen 4 to 6 lanes using inside median w/ interchange modifications & realignment of the SR-4 east approach & connection to SR-99	Arch Road to Crosstown/SR-99 interchange	$210,500,000	2015
8	SR-120 Widening	Widen 4 to 6 lanes (Inside)	I-5 to SR-99	$90,600,000	2027
9	I-205 Widening / HOV	Widen 6 to 8 lanes (Inside/Outside)	I-580 to I-5	$268,000,000	2030
		TOTAL MAINLINE HIGHWAY PROJECTS		$1,090,500,000	
ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
10	SR-99 @ Mariposa Road	Reconstruct interchange	SR-99 @ Mariposa Road	$40,000,000	2015
11	SR-99 @ French Camp Road	Reconstruct interchange	SR-99 @ French Camp Road	$47,500,000	2014
		Total Caltrans Interchange Projects		$87,500,000	
12	I-5 @ Lathrop Road	Reconstruct interchange	I-5 @ Lathrop Road	$33,000,000	2018
13	I-5 @ Roth Road	Reconstruct interchange	I-5 @ Roth Road	$16,800,000	2018
14	I-205 / Chrisman Road	Phase 1: Construct new interchange east-west ramps	I-205 / Chrisman Road	$30,000,000	2015
		Total Lathrop Interchange Projects		$79,800,000	
15	SR-99 @ Harney Lane	Reconstruct interchange to provide 6 through lanes on SR 99, 4 lanes on Harney and modify on-ramps and off-ramps	SR-99 @ Harney Lane	$39,183,247	2016
		Total Lodi Interchange Projects		$39,183,247	

Table 9-1. RTIF Update Project List (cont'd)

ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
16	SR-120 @ McKinley Ave.	Reconstruct/Improve Interchange including necessary auxilliary lanes (P.M. 2.2/.2)	SR-120 @ McKinley Avenue	$30,200,000	2016
17	SR-99 @ McKinley Exp.	Construct new interchange	SR-99 @ McKinley Exp.	$18,600,000	2021
		Total Manteca Interchange Projects		$48,800,000	
18	SR-99 @ Eight Mile Road	Reconstruct Interchange (PM 35.1-35.5)	SR-99 @ Eight Mile Road	$122,100,000	2017
19	SR-99 @ March Lane/ Wilson	New interchange - Construct combined Wilson Way, March Lane Interchange (P.M. 21.1-22.1)	SR-99 @ March Lane/Wilson	$198,100,000	2019
20	I-5 @ French Camp/Arch Sperry Road (HR 3-193 #2067)	Reconstruct existing French Camp Road Interchange, construct auxilliary lane on I-5 , and realign Manthey Road (P.M. 20.8-21.2)	I-5 @ Arch Sperry/French Camp	$60,400,000	2014
21	I-5 @ Gateway Bouelvard	Construction of a new interchange and auxillary lanes (PM 36.0/36.9)	I-5 @ Gateway Boulvard	$80,300,000	2018
22	SR-99 @ Gateway Blvd.	Construction of new interchange	SR-99 @ Gateway Boulvard	$105,800,000	2018
23	SR-99 @ Morada Lane	Reconstruct interchange (PM 23.5-24.5)	SR-99 @ Morada Lane	$110,800,000	2017
24	I-5 @ Eight Mile Road	Modification of interchange	I-5 @ Eight Mile Road	$47,000,000	2017
25	I-5 @ Otto Drive	Construction of new interchange and auxillary lanes (PM 33.3/34.2)	I-5 @ Otto Drive	$80,500,000	2015
26	I-5 @ Hammer Lane	Interchange Modification and auxillary lanes (PM 32.6)	I-5 @ Hammer Lane	$20,000,000	2016
		Total Stockton Interchange Projects		$825,000,000	
27	SR-132 @ I-5 and Bird Road	Upgrade interchange, lengthen ramps, widen approaches, install signal controls w/ necessary auxillary lanes (P.M. 2.2/2.2)	SR-132 @ I-5 and Bird Road	$20,000,000	2011
		Total San Joaquin County Interchange Projects		$20,000,000	
28	I-205 @ Lammers Road	Construction of new interchange	I-205 @ Lammers Road	$89,000,000	2015
29	I-205 @ Grantline Road	Modification of existing interchange	I-205 @ Grantline Road	$30,966,820	2017
		Total Tracy Interchange Projects		$119,966,820	
		TOTAL INTERCHANGE PROJECTS		$1,220,250,067	
ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
30	Lower Sacramento Road	Widen from 2 to 6 lanes	Eight Mile Road to Grider Way	$41,590,000	2013

Table 9-1. RTIF Update Project List (cont'd)

ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
31	Lower Sacramento Road	Widen from 2 to 6 lanes	Grider Way to Armor Drive	$8,000,000	2015
32	Lower Sacramento Road	Widen from 2 to 6 lanes	Armor Drive to Morada Lane	$3,470,000	2015
33	Eight Mile Road	Widen from 5 to 8 lanes	I-5 to Thornton Road	$7,060,000	2015
34	Eight Mile Road	Widen from 2 to 8 lanes	Thornton Road to Lower Sacramento Rd.	$25,000,000	2019
35	Eight Mile Road	Widen from 2 to 6 lanes	Lower Sacramento Road to West Lane	$5,620,000	2020
36	Eight Mile Road	Widen from 2 to 6 lanes	West Lane to Holman Road	$20,900,000	2020
37	Eight Mile Road	Widen from 2 to 6 lanes	Holman Road to SR-99	$9,700,000	2015
38	Pacific Avenue	Widen from 6 to 8 lanes	Hammer Lane to March Lane - between the Calaveras River and Hammer Lane	$55,800,000	2020
39	March Lane Extension	Construct a new 8 lane Road	Holman to SR-99	$14,390,000	2019
40	Airport Way	Widen from 4 to 6 lanes	Arch/Sperry Road to French Camp Road	$31,500,000	2019
41	Thornton Road	Widen from 4 to 6 lanes	Pershing Avenue to Bear Creek Bridge	$15,000,000	2015
42	Thornton Road	Widen from 4 to 6 lanes	Bear Creek Bridge to Hammer Lane	$1,000,000	2015
		Total Stockton Regional Roadway Projects		$239,030,000	
43	Harney Lane	Widen from 2 to 4 lanes	SR-99 to Lower Sacramento Road (2.6 miles)	$22,008,760	2011
		Total Lodi Regional Roadway Projects		$22,008,760	
44	Airport Way	Widen from 4 to 6 lanes	SR120-Lathrop Road (Manteca)	$4,900,000	2025
45	Lathrop Rd.	Widen from 2 to 4 lanes	From east of UPRR to SR-99	$2,870,280	2018
46	McKinley Expressway	Construct new 4 lane expressway	SR-120 to SR-99	$9,300,000	2021
		Total Manteca Regional Roadway Projects		$17,070,280	

Table 9-1. RTIF Update Project List (cont'd)

ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
47	Golden Valley Parkway	Parallel facility along north/west side of I-5	Lathrop Road to Paradise Road	$59,290,000	2020
48	Lathrop Rd.	Widen from 2 to 4 lanes	I-5 to east UPRR	$2,771,026	2013
		Total Lathrop Regional Roadway Projects		$62,061,026	
49	Corral Hollow Road	Widen from 2 to 4 lanes	Parkside Drive to Linne Road	$22,618,820	2016
50	Lammers Road	Widen from 2 to 4 Lanes	Phase I: I-205 to Old Schulte Road	$35,000,000	2017
51	Linne Road	Widen from 2 to 4 lanes	Corral Hollow Road to Chrisman Road	$8,600,000	2017
		Total Tracy Regional Roadway Projects		$66,218,820	
52	McHenry @ Ullrey Intersection	Intersection Improvement	McHenry @ Ullrey Intersection including UPRR Crossing	$1,495,805	2015
		Total Escalon Regional Roadway Projects		$1,495,805	
53	River Road, Phase I	Widen from 2 to 6 lanes	North Ripon Road to Jack Tone Road	$5,000,000	2019
		Total Ripon Regional Roadway Projects		$5,000,000	
		TOTAL REGIONAL ROADWAY PROJECTS		$412,884,691	
ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
54	Bus Rapid Transit Vehicles	Purchase of buses for service expansion (Intercity/Interregional)	San Joaquin County - Capital	$10,000,000	2035
55	BRT Project Pase III: Hammer Lane Corridor	Costs associated with the implementation of the BRT service along the corridor including traffic signal upgrades, bus stop amenities, and access enhancements	San Joaquin County - Capital	$10,000,000	2035
56	BRT Project Pase III: Hammer Lane Corridor / Hybrid Diesel - Electric Bus Procurement	Hammer Triangle Transfer Station	San Joaquin County - Capital	$6,000,000	2035
57	BRT Project Pase III: Hammer Lane Corridor	Hammer Triangle Transfer Station	San Joaquin County - Capital	$35,000,000	2035
58	Intercity/ Interregional	Fleet Expansion	San Joaquin County - Capital	$50,000,000	2035

Table 9-1. RTIF Update Project List (cont'd)

ID	Facility Name/ Route	Project Description	Project Limits	Project Cost	Year Open to Traffic
59	Regional Transportation Center	Expand capacity of Regional Transportation Center from 110 to 250	San Joaquin County - Capital	$28,000,000	2015
		Total RTD Projects		$139,000,000	
60	Altamont Commuter Express	Acquisition of ACE Corridor	Stockton to San Jose	$45,000,000	2035
61	Altamont Commuter Express	Maintenance facility expansion from 9 train sets to 17 train sets Phase I	Not Applicable	$17,000,000	2015
62	Altamont Commuter Express	Double track in Lathrop and track extension in Stockton	Between Stockton and Lathrop	$4,000,000	2013
		Total SJRRC Projects		$66,000,000	
		TOTAL TRANSIT PROJECTS		$271,000,000	
		TOTAL ALL RTIF PROJECTS		$2,994,634,758	

SECTION 10

Conformity Requirements

CHAPTER 10 COMPLIANCE

10.1 INTRODUCTION

SJCOG is required to monitor all elements of the RCMP (Section 65089.3) and to ensure that the County and cities are conforming to the Regional Congestion Management Program. Compliance findings are a requisite step for local agency eligibility for Section 2105 state gas tax subvention funds made available by the passage of Proposition 111 (state CMP statutes), Federal Surface Transportation Program funds (STP), Federal Congestion Mitigation and Air Quality funds (CMAQ), and State Regional Improvement funds (RTIP). RCMP implementation is also tied to the Measure K half cent sales tax referendum which was approved by the voters of San Joaquin County in 2006.

This chapter provides a summary of RCMP local conformance requirements and discusses the procedures for making the biennial RCMP local conformance findings. Local agency compliance with the Regional Travel Demand Management Plan and the federal Congestion Management Process are also integrated and addressed as part of the RCMP conformance assessment.

10.2 CONFORMANCE PROCEDURE

The conformity determination is made in September of each even numbered year. SJCOG will develop the RCMP Conformance Report. The information will be first circulated to SJCOG's Technical Advisory Committee in July of each odd numbered year. This will allow approximately two months for a local agency to remedy any issues of nonconformance prior to SJCOG board action in September.

The RCMP Compliance Report will document each local agency's performance over the previous two years to comply with the following RCMP requirements:

- Complying with the RCMP Monitoring Program traffic count sharing responsibilities (see Chapter 3).
- For RCMP designated facilities (RCMP intersections and RCMP roadways) located within a jurisdiction – demonstrated compliance with the RCMP LOS Standard (See Chapter 4).
- Local adoption and SJCOG approval of RCMP Deficiency Plans within 12 months of the RCMP deficiency finding by SJCOG (See Chapter 7).
- Progress made in the implementation of previously adopted Deficiency Plan CIP improvement projects (See Chapter 9);
- Complying with the requirements of the RCMP Land Use Analysis Program (See Chapter 6) including:
  - Informing internal agency departments and private consultants of the requirements of the RCMP Land Use Analysis Program and ensuring that all CEQA related traffic studies comply with the program requirements.
  - Implementation progress of mitigation measures identified as part of the RCMP Land Use Analysis Program. SJCOG will also provide this status update mitigation improvement information to local agencies as part SJCOG's state and federal flexible funding cycle "call for projects".
  - Compliance with the CEQA mitigation monitoring requirements specific to identified RCMP impacts. The status of CEQA mitigation monitoring plans of RCMP impacts will be continuously tracked by SJCOG and reported.
  - Documenting land use decisions made during the previous two years (GPAs and General Plan updates).

Local agency implementation status of the Tier I (and Tier II if applicable to a jurisdiction) transportation demand management requirements as detailed in the Regional Travel Demand Management Plan (August, 2010).

Assisting SJCOG in addressing the federal Congestion Management Process when direct-fix deficiency plans are adopted – i.e., assessment of demand and system management and alternate modal programs where capacity increasing projects are proposed on the RCMP network;

Submitting improvement projects identified in deficiency plans or as part of the RCMP Land Use Analysis Program (i.e., mitigation) during discretionary funding cycles i.e., "call for projects".

Elements of the RCMP compliance determination will also inform other SJCOG reporting requirement mandates. For instance, local agency compliance with the CEQA mitigation monitoring requirements of RCMP impacts will be part of the annual Measure K and RTIF reporting requirements to the SJCOG board.

Based on the information described above, SJCOG will make a determination and finding of conformance, as applicable. All findings will be considered non-discretionary. However, SJCOG will work closely with its member agencies to address any concerns regarding conformance prior to a determination of nonconformance. If there is a compliance issue, SJCOG will contact the jurisdiction with initial findings and work with the local agency to ostensibly remedy the issue before the final report is submitted to the Board for action

10.3 NON-CONFORMANCE PROCEDURES

Although SJCOG will work with all its member agencies to comply with these state/federal requirements, for those agencies where a determination of nonconformance with the RCMP is made, following a public hearing, the following process applies (Section 68089.5(a)(b) & (c).

SJCOG will notify the City or County in writing of the specific areas which are in nonconformance. The City or County will then have up to 90 days to come into conformance or SJCOG will make a finding of nonconformance to the California Transportation Commission and the State Controller. This will result in the withholding of the funds distributed to the locality under Street and Highways Code Section 2105 by the State Controller.

If the jurisdiction returns to conformance at any time within the twelve-month period following the notice of nonconfor-

mance, any withheld funds will be released to the local jurisdiction by the State Controller. If the jurisdiction remains in nonconformance after twelve months, the funds withheld from the jurisdiction will be provided to SJCOG for use on regionally-significant transportation projects that are included in the Capital Improvement Program or in an adopted Deficiency Plan. The Commission will use the information in determining project awards under the Flexible Congestion Relief and Transportation Systems Management funding programs.

10.4 IMPLEMENTATION RESPONSIBILITIES

RCMP implementation responsibilities for each agency in San Joaquin County are summarized in ***Table I0-1***.

Table 10-1. RCMP Implementation Responsibilities

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

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