2011 Riverside County Congestion Management Program

December 14, 2011

Riverside County Transportation Commission
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EXECUTIVE SUMMARY

INTRODUCTION

The Congestion Management Program (CMP) was first established in 1990 under Proposition 111. Proposition 111 established a process for each metropolitan county in California to designate a Congestion Management Agency (CMA) that would be responsible for development and implementation of the CMP within county boundaries. The Riverside County Transportation Commission (RCTC) was designated as the CMA in 1990, and therefore, prepares the CMP updates in consultation with the Technical Advisory Committee (TAC), which consists of local agencies, the County of Riverside, transit agencies, and subregional agencies. CMP legislation is provided in Appendix 1.

The intent of the CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation.

The Riverside County CMP was significantly modified in 1997 to focus on federal Congestion Management System (CMS) requirements as well as incorporate elements of the State CMP requirements. The 1997 CMP also focused on development of an Enhanced Traffic Monitoring System in which real-time traffic count data can be accessed by RCTC to evaluate the condition of the CMS, as well as meet other monitoring requirements at the state and federal levels. This monitoring effort was completed in 2004, which consisted of installing Smart Call Boxes (traffic counters in Call Box equipment) and traffic counters at Caltrans' Traffic Management Center (TMC) sites along the state highway system. Monitoring of the CMP system on local arterials will continue to occur through the Coachella Valley Association of Governments' (CVAG) monitoring program and through local agency monitoring efforts in Western Riverside County.

RCTC's adopted minimum Level of Service (LOS) threshold is LOS "E". Therefore, when a CMP street or highway segment falls to "F", a deficiency plan must be required. Preparation of a deficiency plan will be the responsibility of the local agency where the deficiency is located. Other agencies identified as contributors to the deficiency will also be required to coordinate with the development of the plan. The plan must contain mitigation measures, including consideration of Transportation Demand Management (TDM) strategies and transit alternatives, and a schedule for mitigating the deficiency.

To insure that the CMP is appropriately monitored to reduce the occurrence of LOS deficiencies, it is the responsibility of local agencies, when reviewing and approving development proposals, to consider the traffic impacts on the CMP System. When a deficiency is identified as part of the CMP Update LOS evaluation process, further detailed analysis of LOS must be conducted to determine whether an actual deficiency has occurred. The LOS analysis conducted as part of the CMP Update process is only considered to be a "screening" level analysis, therefore additional, more detailed assessment of a potential deficiency would be required before a deficiency is formally identified. Coordination with the affected local

jurisdiction(s) will be made to insure that appropriate data, geometrics, counts and other related information is applied to calculate LOS.

During preparation of the 2011 CMP, deficiencies were found on the CMP System based upon this year's monitoring effort. These segments will continue to be monitored to determine if the deficiencies reflect temporary or permanent conditions. If it is determined that deficiencies are permanent and not related to construction or other activities along a segment or elsewhere, a deficiency plan will be required to address the deficiency.

OTHER PROGRAM HIGHLIGHTS

This document is prepared to address each elements the State CMP legislation and federal CMS requirements. Below is a summary of each chapter highlighting the Riverside County CMP's approach in meeting the state CMP and federal CMS requirements.

Chapter 1 - Designation of the CMP Lead Agency:

- *The County Board of Supervisors, and a majority of cities representing a majority of population in the incorporated area, must designate by resolution, a public agency to prepare and adopt the Congestion Management Program.*

The Riverside County Transportation Commission was designated as the CMA for Riverside County on June 11, 1990. The County Board of Supervisors and a majority of the cities representing a majority of the population supported the designation.

Chapter 2 - Designation of the System of Highways and Roadways:

- *The CMA must designate a system of highways and roadways to include, at a minimum, all state highways and principal arterials.*

RCTC has designated, based upon a set of optional criteria referenced in Chapter 2, a system of Highways and Principal Arterials. All State highways within Riverside County have been included in accordance with CMP statutes, and a set of Principal Arterials has been identified (reference Exhibit 2-1 and Table 2-1).

Chapter 3 - Transportation Modeling:

- *The CMA is to provide a uniform database of traffic impacts "for use in a countywide transportation computer model."*

For purposes of this Program, the Commission has recognized use of the Southern California Association of Governments (SCAG) transportation model, the Coachella Valley Area Transportation System (CVATS) sub-regional transportation model, the Riverside County Traffic Analysis Model (RIVTAM) Final Report (May 2009), and local agency models to analyze traffic impacts associated with development proposals or land use plans. SCAG is currently in the process of preparing the 2012 Regional Transportation Plan (RTP) to address requirements set forth in SB 375 – Sustainable Communities Strategy (SCS). SB 375

also requires enhancements to the regional transportation model(s). Specific model enhancements will be reflected in the 2013 CMP following completion of modeling activity by SCAG.

Chapter 4 - Multimodal System Performance Standards:

- *AB 1963 identifies requirements in CMP legislation including development of multimodal system performance standards focusing on street and highway level of service and transit standards. This Chapter therefore incorporates minimum standards for both these important forms of transportation.*

CMP Street and Highway Standards

The methodology for measuring LOS must be that contained in Circular 212 or the most recent version of the Highway Capacity Manual (HCM); and traffic standards must be set no lower than LOS "E" for any segment or intersection on the CMP system, unless the current LOS is lower (i.e., "F").

For purposes of this CMP, LOS analysis for intersections and segments along the CMP System of Highways and Roadways, under current or existing conditions, is required to be developed using HCM-based methods.

Considering the transportation financing program in Riverside County established through Measure A, there are no advantages to set a higher minimum LOS standard than required by CMP legislation, LOS "E". As a result, the minimum LOS standard for intersections and segments along the CMP System of Highways and Roadways shall be "E" unless the intersection or segment had a lower LOS (LOS "F") in 1991 (reference Table 4-1 and Exhibit 4-1). Such facilities are exempt from CMP deficiency plan requirements.

Public Transit/Alternative Mass Transit System Standards

Transit standards must be established for service frequency (i.e., headways), routing, and coordination among multiple transit agencies operating within the CMP jurisdiction.

To meet the requirements of the Statutes, the performance measures outlined in the Short Range Transit Plans prepared by transit agencies in Riverside County are included in this chapter. In 2005, RCTC approved a Productivity Improvement Program (PIP) as part of a comprehensive effort to work with the county's eight public transit operators to provide better service and improve efficiency. The PIP identifies performance targets in which transit operators will strive to meet in developing its SRTP service and financial plan.

Chapter 5 – Enhanced Transportation System Management Program:

- *The CMP must include a program to analyze the impact of land use decisions by jurisdictions on the regional transportation system, including an estimate of costs to mitigate those impacts.*

This element describes the traffic data collection process to assess land use decision impacts on the Congestion Management System. Under the program, RCTC, CVAG and Caltrans would be the agencies

in Riverside County responsible for the traffic count data collection process. The count data can also be applied to comply with State and federal Congestion Management Plan/Congestion Management System/Transportation Management System (CMP/CMS/TMS) data collection requirements. CVAG currently has a Traffic Monitoring Program in place that addresses CMP System Monitoring requirements in the Coachella Valley. RCTC has implemented the Enhanced Traffic Monitoring Program using Smart Call Box (SCB) and Caltrans' Traffic Management Center (TMC) equipment at selected sites along the State Highway system in Riverside County.

Chapter 6 - LOS Deficiency Plans:

- *California Government Code Sections 65088 and 65089 provide for the development of deficiency plans. The Code states that "a city or county may designate individual segments or intersections as deficient when they do not meet the established level of service standards, if prior to the designation at a noticed public hearing, the city or county has adopted a deficiency plan".*

Deficient segments or intersections will be identified through the biennial traffic monitoring process. When a deficiency is identified as part of the CMP Update LOS evaluation process, further detailed analysis of LOS shall be conducted to determine whether an actual deficiency has occurred. The LOS analysis conducted as part of the CMP Update process is only considered to be a "screening" level analysis, therefore additional, more detailed assessment of a potential deficiency would be required before a deficiency is formally identified. Coordination with the affected local jurisdiction(s) will be made to insure that appropriate data, geometrics, counts and other related information is applied to calculate LOS.

The local agency where the deficiency is located will be responsible for the preparation of the deficiency plan. RCTC will prepare deficiency plans on the State Highway System when deficiencies are identified and will coordinate the development of the deficiency plan with affected local jurisdictions.

Chapter 7 - Transportation Demand Management (TDM)/Air Quality:

- *The CMP must include alternatives to single occupant auto use, such as transit, and van and carpooling; and must promote strategies to manage overall travel demand, such as a jobs/housing balance, flextime, telecommuting and parking strategies. Local agencies must also adopt a transportation demand management (TDM) ordinance to comply with CMP statutes.*

In 1991, all local agencies adopted TDM ordinances. In 1996, the State changed the CMP from a mandatory program to a voluntary program; therefore, RCTC has not required agencies to update their respective TDM ordinances. There are effective ways of achieving trip reduction in Riverside County other than through the adoption of local agency Transportation Demand Management (TDM) Ordinances, which was the focus of TDM efforts in the past. RCTC believes that there are other approaches that can be more effective and has facilitated the implementation of TDM projects through the Measure "A" Commuter Assistance Programs, and the implementation of a number of TDM projects (in cooperation with Caltrans and local agencies in Riverside County and in adjoining counties) to achieve TDM objectives. Such TDM strategies include the development of Park-N-Ride lots, commuter rail stations, and public transit feeder services.

In addition to TDM, Transportation Systems Management (TSM) strategies also provide for smoother traffic flow, especially along congested streets and highways in the County. Types of TSM strategies already implemented in Riverside County include bus bays, signal coordination systems, signal preemption for transit vehicles, improved signal timing projects, ramp metering, and focused intersection improvements.

Taken together, the individual programs, projects, and TDM ordinances that continue to be implemented by local agencies constitute a broad base effort to reduce reliance on the single occupant vehicle and address CMP objectives.

Chapter 8 - Capital Improvement Program (CIP):

- *The CIP is a 7-year program; projects in the CIP may be incorporated into the Regional Transportation Improvement Program (RTIP) for the programming of Flexible Congestion Relief (FCR) and Urban and Commuter Rail funds; CIP Projects must maintain or improve performance of the multi-modal system; and projects must conform to transportation-related emission air quality mitigation measures.*

To comply with the statutes, the 2011 CIP incorporates all CMP System projects listed in the most recent TIP including STIP, Measure "A", Transportation Uniform Mitigation Fee (TUMF), and other federally funded projects. To streamline this process, CIP requirements shall be the same as, and accomplished through the Regional Transportation Improvement Program (RTIP) development.

Chapter 9 - CMP Conformance and Monitoring Process:

- *RCTC must make a determination that its member cities and the county are conforming to the CMP, including consistency with traffic LOS and transit performance standards and implementation of a program to monitor and evaluate the performance of the transportation system. SCAG must also find the CMP consistent with the Regional Transportation Plan and certify that the CMP meets federal CMS requirements.*

The specific requirements of Conformance and Monitoring Process are described in Chapter 9.

Chapter 10 - CMP Development and Implementation Update Process:

- *This chapter focuses on the procedural, administrative, and coordination activities related to CMP development, adoption, and update in accordance with CMP legislation.*

The CMP includes a process that addresses each of the activities identified above including CMP development, adoption, and update.

Environmental Assessment – The California Environmental Quality Act (CEQA) identifies the CMP as an exempt project. As a result, compliance with CEQA requirements is not required.

CHAPTER 1
DESIGNATION OF THE CONGESTION MANAGEMENT AGENCY

STATUTORY REQUIREMENTS

According to CMP legislation (AB 471, AB 1791, AB 1963, and AB 2419), the Riverside County Board of Supervisors and a majority of cities representing a majority of the population in the incorporated area, must designate by resolution, a public agency to prepare and adopt a Congestion Management Program (CMP). The Congestion Management Agency (CMA) has the authority to monitor compliance with the adopted program. An amendment to the Government Code requires the CMA to update and adopt the CMP every two years (biennially) consistent with development of the Regional Transportation Improvement Program (RTIP). A copy of AB 2419 is provided as Appendix 1.

A key feature of AB 471 is the requirement that every urbanized county with a population of 50,000 or more must prepare and adopt a comprehensive CMP. The CMP represents a directive for local governments to measure and mitigate the impact of land use decisions on streets, highways, and regional transportation systems.

In 1996, the State of California amended the CMP legislation to change the requirement from mandatory to voluntary. However, federal Metropolitan Planning provisions require Metropolitan Planning Organization's (MPO) serving a transportation management area (TMA) (i.e. area with a population over 200,000) to include a Congestion Management System (CMS) component as part of their transportation planning process. Each of the six counties in the Southern California Association of Governments (SCAG) region has adopted and implemented a CMP. The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) jointly determine if the MPO's planning process meets the requirements of 23 U.S.C. 134 among other provisions. In the event that the FHWA/FTA determines that the planning process in a TMA does not substantially meet the requirements and do not certify the process, they may withhold federal project and funding approvals.

RCTC DESIGNATED AS THE CMA

On June 11, 1990, the Riverside County Transportation Commission (RCTC) was designated as the CMA for Riverside County by resolution from member agencies. The Coachella Valley Association of Governments (CVAG) and the Western Riverside Council of Governments (WRCOG) also supported the designation. It is the Commission's intent to continue working closely with WRCOG, CVAG, the cities and the County, toward development and implementation of an effective CMP.

The Commission will continue to develop and biennially update the CMP to coincide with the development of the State Transportation Improvement Program (STIP) and Regional Transportation Improvement Program (RTIP) in cooperation with local governments, Air Quality Management Districts, and subregional planning agencies (WRCOG and CVAG). The CMP must also be submitted to the MPO, which for Riverside County is the Southern California Association of Governments (SCAG). SCAG is responsible for

determining consistency of each CMP within the SCAG region with the Regional Transportation Plan (RTP) and air quality management plans.

The Riverside County Congestion Management Program combines the requirements of the State's CMP and the federal CMS with a greater emphasis on the CMS, resulting in an enhanced transportation monitoring system.

CHAPTER 2
DESIGNATION OF THE CMP SYSTEM OF HIGHWAYS AND ROADWAYS

STATUTORY REQUIREMENTS

Section 65089(a), referenced in AB 1963, requires development of a Congestion Management Program (CMP) to establish traffic level of service (LOS) standards for a system of highways and roadways designated by RCTC as the Congestion Management Agency (CMA). This system must include, at a minimum, all state highways and principal arterials, both new and existing facilities. Once designated, components of the system cannot be removed.

Designated System of Highways and Principal Arterials:

- All State Highway facilities in Riverside County.

Consideration may be given to the following conditions when designating Principal Arterials:

- ✓ Routes identified on Caltrans' "Functional Classification System" as "Principal Arterials";
- ✓ Designated expressways; and
- ✓ Facilities linking cities/communities (interregional facilities), and major activity centers (shopping malls, major industrial/business parks, stadiums, etc).

2009 CMP SYSTEM UPDATE PROCESS

An update to the CMP System considers the criteria identified above, including arterial facilities added to the Federal Functional Classification System. Local agencies may nominate arterials for inclusion on the CMP System at any time. Nominated arterials will be reviewed by the RCTC Technical Advisory Committee (TAC) for approval and forwarded to the RCTC Board for final approval.

The CMP System of Highways and Roadways in Riverside County is displayed on Exhibit 2-1. Based upon review of the revised Functional Classification System and the considerations listed above, no additional facilities were designated as principal arterials during the 2011 CMP update process.

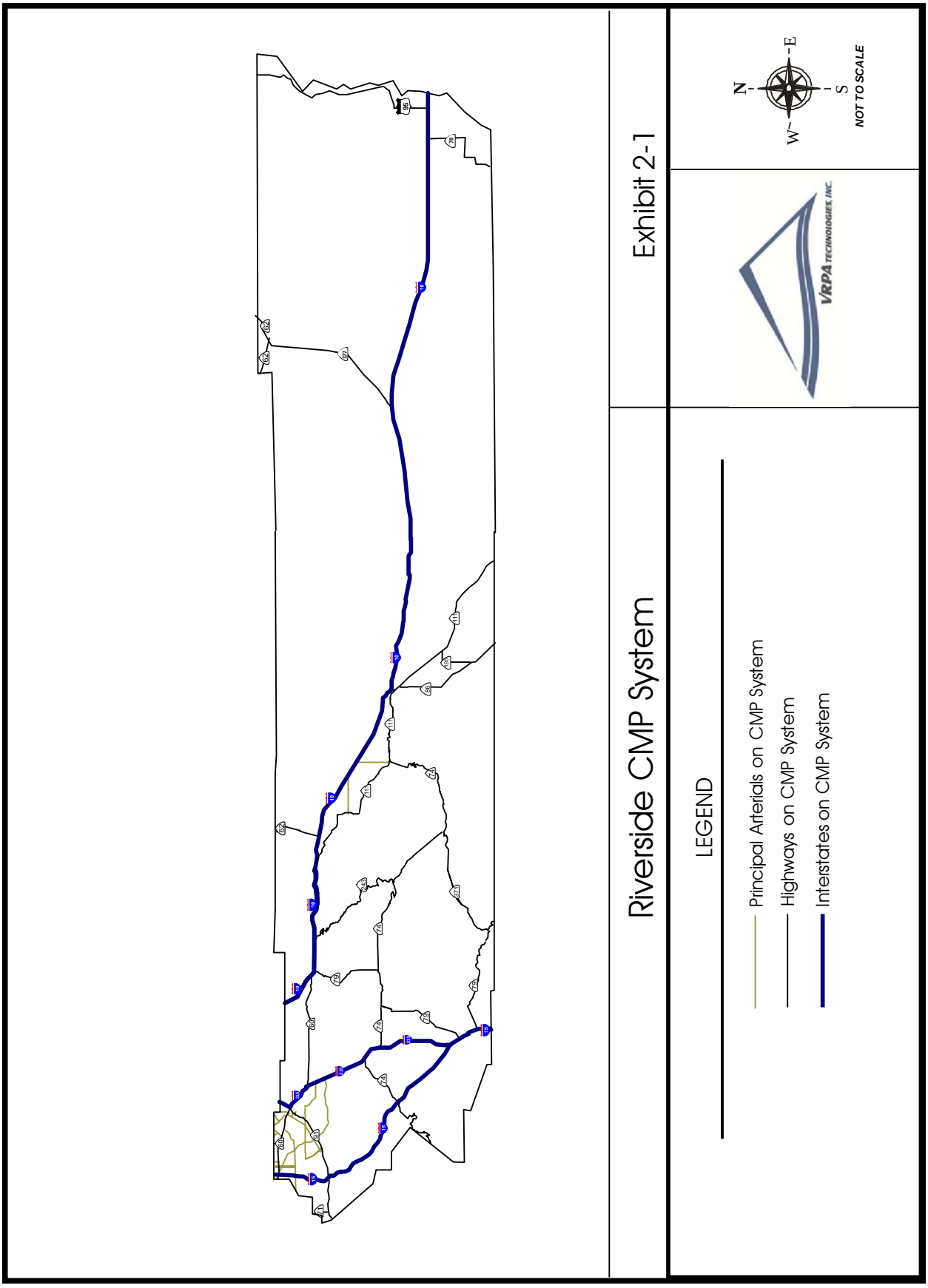
Exhibit 2-1
Riverside CMP System
N
E
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NOT TO SCALE
VRPA TECHNOLOGIES, INC.
LEGEND
Principal Arterials on CMP System
Highways on CMP System
Interstates on CMP System

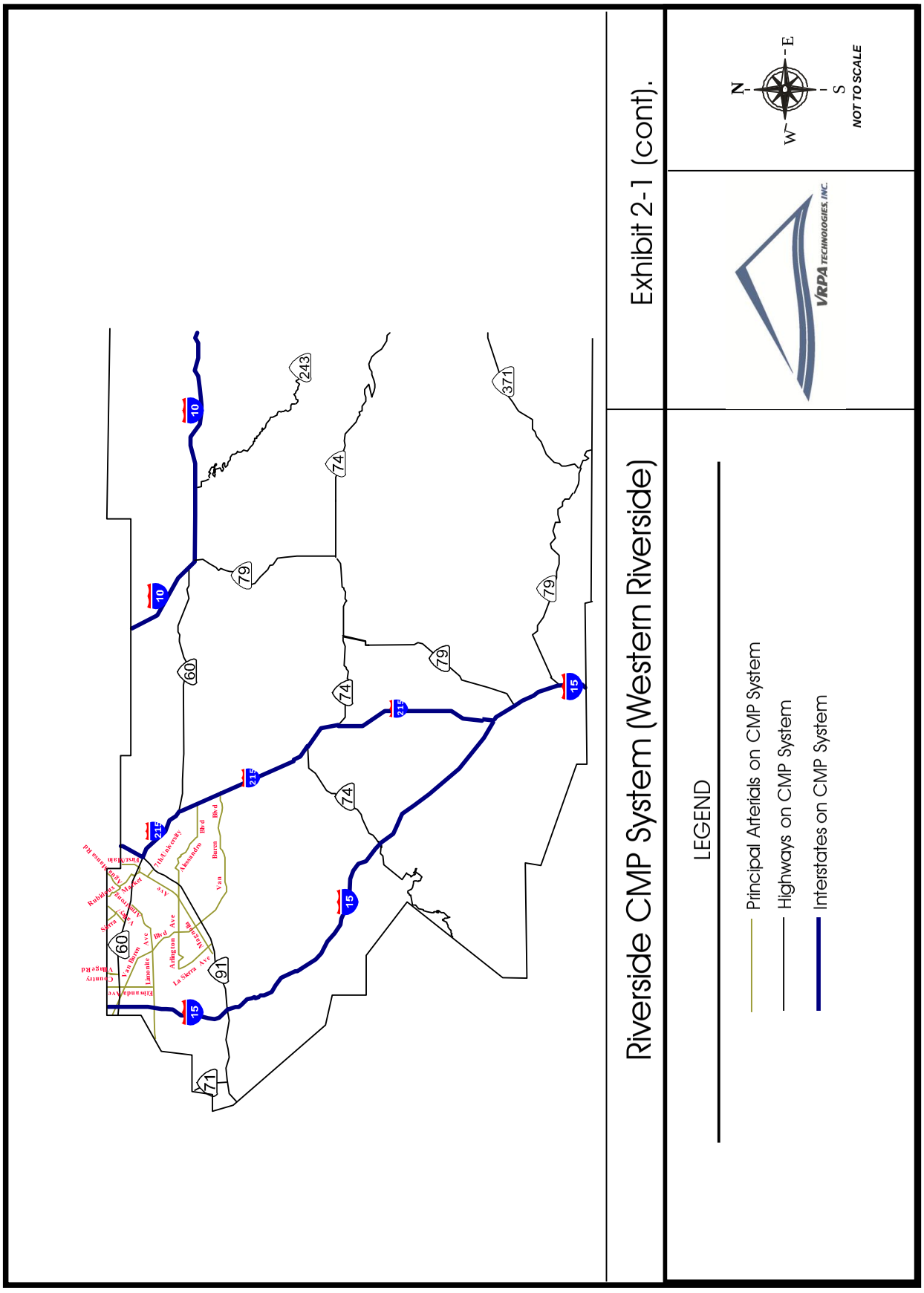
Exhibit 2-1 (cont).
Riverside CMP System (Western Riverside)
LEGEND
Principal Arterials on CMP System
Highways on CMP System
Interstates on CMP System
VRPA TECHNOLOGIES, INC.
N
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10
243
74
79
371
60
15
215
91
71

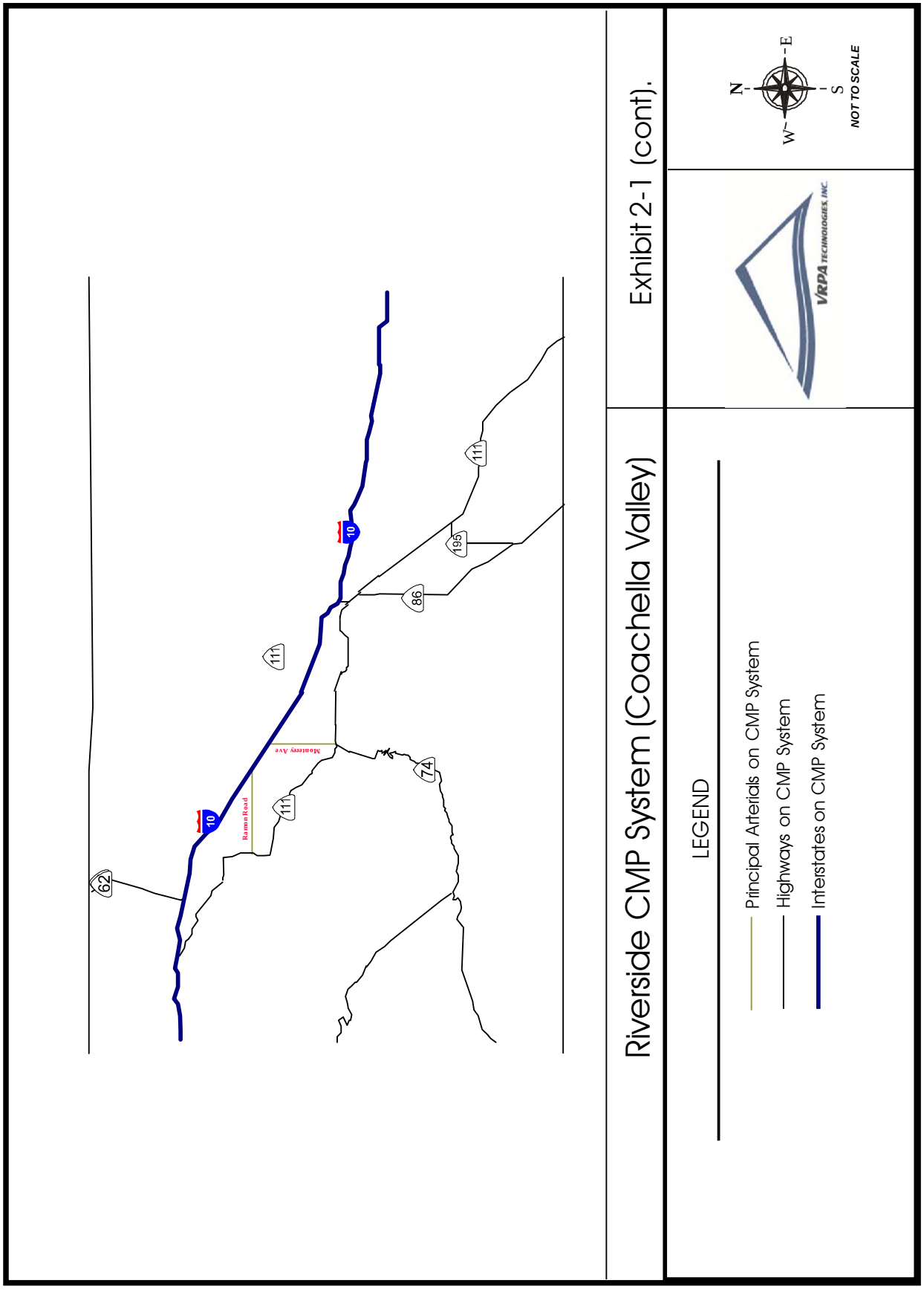
Exhibit 2-1 (cont).
Riverside CMP System (Coachella Valley)
LEGEND
Principal Arterials on CMP System
Highways on CMP System
Interstates on CMP System
VRPA TECHNOLOGIES, INC.
N
W
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NOT TO SCALE
10
10
62
111
111
111
86
195
74
Monterey Ave
Ramon Road

TABLE 2-1
CMP SYSTEM OF HIGHWAYS AND ROADWAYS

- *State Highways:*

Facility Name	*Limits*
1. I-10	San Bernardino Co. Line to the Arizona State Line
2. I-15	San Bernardino Co. Line to the San Diego Co. Line
3. I-215	San Bernardino Co. Line to I-15
4. US 95	San Bernardino Co. Line to I-10
5. SR 60	San Bernardino Co. Line to I-10
6. SR 62	San Bernardino Co. Line to I-10
7. SR 71	San Bernardino Co. Line to SR 91
8. SR 74	Orange Co. Line to SR 111
9. SR 78	Imperial Co. Line to I-10
10. SR 79	I-10 to San Diego Co. Line
11. SR 86	SR 111 to Imperial Co. Line
12. SR 91	Orange Co. Line to I-215
13. SR 111 / Highway 111[*1]	I-10 to Imperial Co. Line
14. SR 177	SR 62 to I-10
15. SR 195	SR 86 to SR 111
16. SR 243	I-10 to SR 74
17. SR 371	SR 79 to SR 74

- *Principal Arterials - Western Riverside County:*

Facility Name	*Limits*
1. Alessandro Blvd.	Intersection of Central, Arlington & Chicago to I-215
2. Agua Mansa Rd.	San Bernardino County Line to Market St.
3. Arlington Blvd.	California to Intersection of Central, Alessandro & Chicago
4. Armstrong Rd./Valley Way	Sierra Ave. to SR 60
5. Country Village Rd.	San Bernardino County Line to SR 60
6. La Sierra Ave.	Arlington Blvd. to SR 91
7. Limonite Ave.	San Bernardino County Line to Mission Blvd.
8. Magnolia Ave.	SR 91 to Market St.
9. Main St./First St.	San Bernardino County Line to Market St.
10. Market St./Rubidoux Blvd.	San Bernardino County Line to Magnolia Ave.
11. Mission Inn and University	Market to SR 91
12. Sierra Ave.	San Bernardino County Line to Valley Way/Armstrong Rd.
13. Etiwanda Ave.	Limonite Ave. - San Bernardino County Line
14. Van Buren Blvd.	San Bernardino County Line to I-215

- *Principal Arterials - Coachella Valley:*

Facility Name	*Limits*
1. Monterey Ave.	SR 111 to I-10
2. Ramon Rd.	SR 111 to I-10

[*1] SR 111 in Riverside County is a designated State Route (SR) between I-10 and Golf Club Drive and between SR 74 and the Imperial County Line. That section between Golf Club Drive and SR 74 was relinquished to adjacent jurisdictions.

CHAPTER 3
TRANSPORTATION MODELING

STATUTORY REQUIREMENTS

Section 65089.3 (c) of the Government Code requires that RCTC, as the Congestion Management Agency (CMA), in consultation with the Southern California Association of Governments (SCAG), cities and the County, develop a uniform database on traffic impacts for use in a countywide transportation model. Further, RCTC, in consultation with SCAG, must approve transportation computer models that will be used by local jurisdictions and the county to determine the quantitative impacts of development on the circulation system. Local transportation models shall be consistent with the databases used by SCAG.

RCTC TRANSPORTATION MODELING

Transportation computer models applied in Riverside County include the Riverside County Traffic Analysis Model (RIVTAM) and the SCAG Regional Transportation Model. The newly developed RIVTAM model was a multi-agency effort to develop a more detailed roadway network than the SCAG Regional Model. RIVTAM added 570 centerline miles of roadways to the network and incorporates all facilities in the Riverside County General Plan classified as Secondary and above. In addition, some Collectors were included, as necessary, to insure that all Traffic Analysis Zones (TAZs) are connected to the network of General Plan roadways. A Memorandum of Understanding has been approved by the Riverside County Transportation Department (RCTD), CVAG, WRCOG, and RCTC to establish roles and responsibilities for updating and maintaining the model including use of the model by the local agencies. The RCTD serves as the lead agency for RIVTAM.

During 2008, SCAG prepared an update to the SCAG models based upon new growth forecasts developed for the Year 2035. The RIVTAM model is based on the SCAG 2008 model with refinements to reflect local conditions within Riverside County. Local transportation models are also developed by local agencies to determine land use impacts on its transportation system. SCAG is currently in the process of preparing the 2012 Regional Transportation Plan (RTP) to address requirements set forth in SB 375 – Sustainable Communities Strategy (SCS). SB 375 also requires enhancements to the regional transportation model(s). Specific model enhancements will be reflected in the 2013 CMP following completion of modeling activity by SCAG.

TRANSPORTATION MODEL IMPROVEMENTS

The SCAG model was last revised/updated (calibrated/validated) in 2008 and has been available for use by local agencies in reviewing regionally significant development projects, or projects that generate greater than 500 peak hour trips through the Intergovernmental Review (IGR) process.

In addition, SCAG developed a regionwide demographic database system to collect accurate data for development of the Regional Transportation Plan (RTP). The RTP is the region's long range transportation

plan that considers land use development patterns, transportation systems, population and housing needs to develop policies and strategies that will accommodate future growth and demand. Locally, WRCOG, CVAG, and the County of Riverside have taken lead roles in the development of a Geographic Information System (GIS) to monitor growth in the County so that socioeconomic and land use databases can be easily developed and maintained.

SCAG has developed model consistency guidelines to assist public agencies and traffic engineering professionals with the development of local models that are consistent with the SCAG regional transportation model. The objective of these guidelines is to comply with CMP consistency requirements, improve communications between affected agencies to simplify the exchange of data, and improve databases and modeling results at both the local and regional level. A copy of the current *Consistency Guidelines for Transportation Modeling - Riverside and San Bernardino Counties* is available at RCTC or at the SCAG Inland Empire Office in Riverside.

MODELING FOR CMP PURPOSES

During implementation of the Riverside County CMP, transportation computer models are used for several purposes, including:

- Determining and monitoring traffic levels of service (LOS) for the current and future years;
- Analyzing the impacts of land use decisions resulting from the IGR or CEQA processes and when an LOS deficiency occurs along the CMP System; and
- Evaluating and prioritizing transportation improvement projects, such as capital projects, transit projects, Transportation Systems Management (TSM) projects, Transportation Demand Management (TDM) strategies, and other programs that improve the transportation system and air quality.

CHAPTER 4
MULTIMODAL SYSTEM PERFORMANCE STANDARDS

STATUTORY REQUIREMENTS

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. The performance measures must also support mobility, air quality, land use, and economic objectives, and must be used in the development of the Riverside County Capital Improvement Program (CIP) required pursuant to paragraph (5), deficiency plans required pursuant to Section 65089.4, and the land use analysis program required pursuant to paragraph (4) of the Government Code.

According to AB 471 and AB 1791, traffic level of service (LOS) must be measured by: a) Circular 212; b) the most recent version of the Highway Capacity Manual (HCM) prepared by the Transportation Research Board (TRB); or c) by an alternative uniform methodology adopted by the Congestion Management Agency (CMA), which the Metropolitan Planning Organization (MPO) determines is consistent with the HCM. In no case can the standards established be below LOS "E" or the current level, whichever is farthest from LOS "A".

RCTC PERFORMANCE STANDARDS

This Chapter describes the multimodal system performance standards for Riverside County in accordance with CMP legislation. Therefore, standards are presented in this Chapter for the CMP System of Streets and Roads and for the Public Transit/Alternative Mass Transit System.

CMP System of Streets and Highways

- **Established Minimum Level of Service**

  With the intent of the legislation in mind, the RCTC Technical Advisory Committee (TAC) CMP Subcommittee approved a *"two-tiered"* approach to establish the minimum LOS standard. Tier 1 involves the *"locally established minimum traffic LOS - or - ceiling,"* while Tier 2 involves the CMP minimum LOS standard - or - *"floor."*

  Most local agencies in Riverside County and Caltrans have adopted LOS standards of "C" or "D" (representing the *"ceiling"* in Tier 2) in an effort to maintain a desired LOS for the local circulation system. To address CMP legislative requirements, and establish a minimum LOS along the regional system of roadways and highways within the County (representing the *"floor"* in Tier 2), RCTC approved a minimum traffic LOS standard of "E."

- **Exempt Facilities**

  Table 4-1 and Exhibit 4-1 identify facilities (roadway segments or intersections) along the CMP System that had a LOS of "F" in 1991. As a result, these facilities continue to be "exempt" from CMP requirements in accordance with CMP Statutes.

- **Methodology to Determine Level of Service**

  RCTC determined that the traffic LOS method that incorporated a "delay" analysis was the most applicable for CMP purposes. Consideration of delay through HCM-based software programs provided a closer approximation of LOS than under the Circular 212 or similar methodologies.

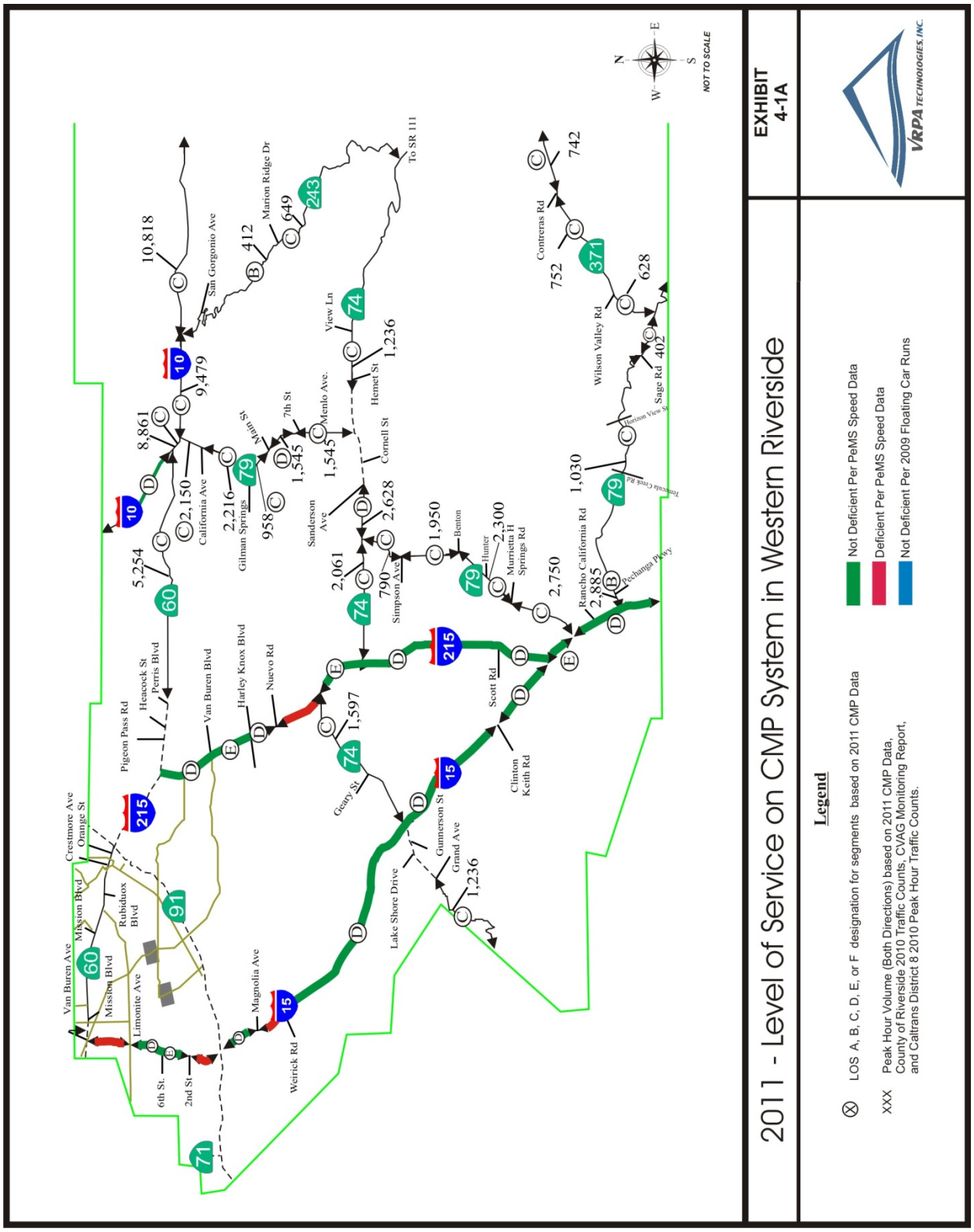
  For purposes of this Program, LOS analysis for intersections and segments along the CMP System of Highways and Roadways (under current or existing conditions), should be developed or established using the following HCM-based methods in the order presented:

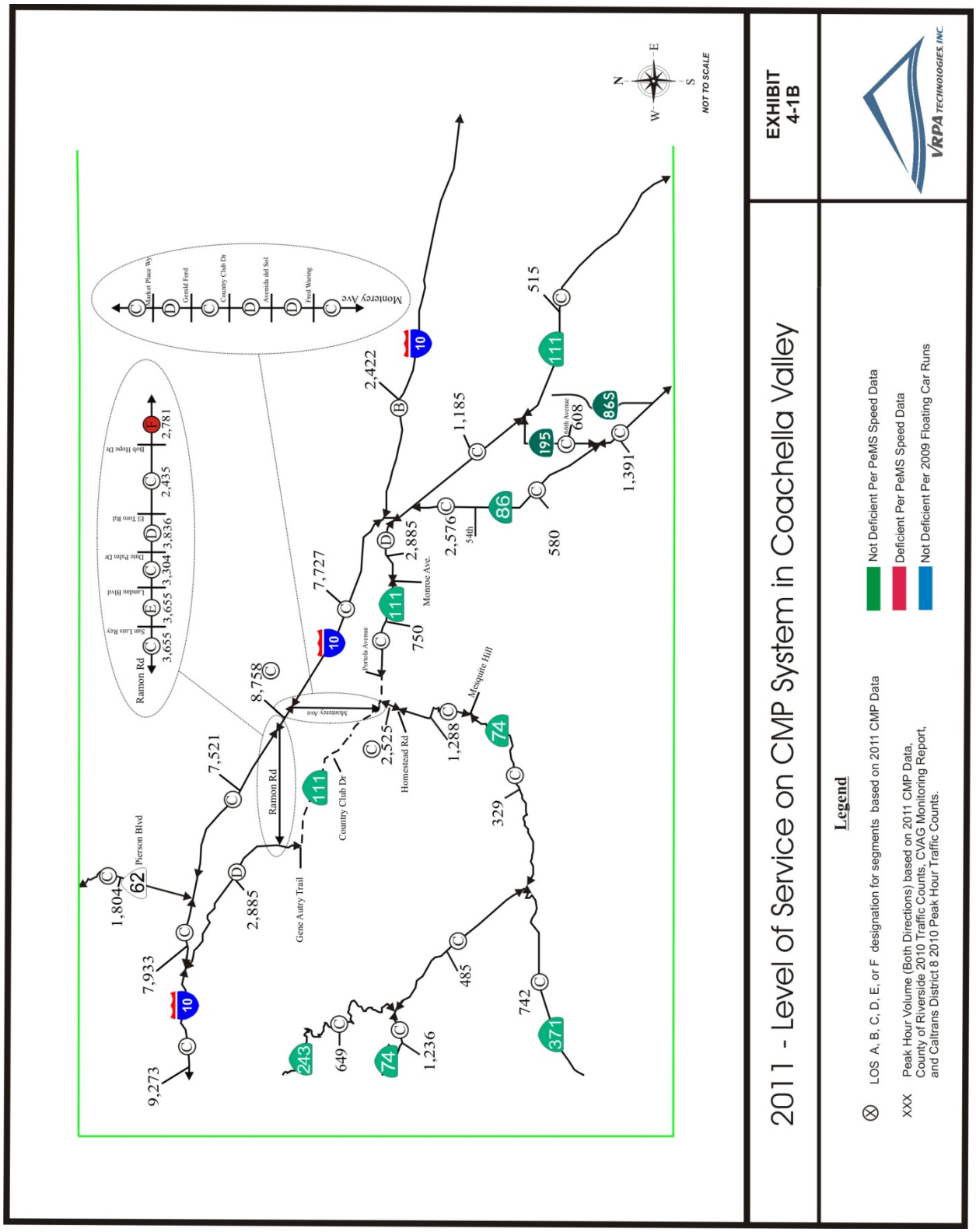
  1. Segment (freeway and principal arterial) floating car runs or stopped delay LOS analysis at intersections;
  2. Segment and intersection LOS analysis using HCM; and
  3. Segment analysis using the Modified HCM LOS Tables (or revised Florida LOS Tables).

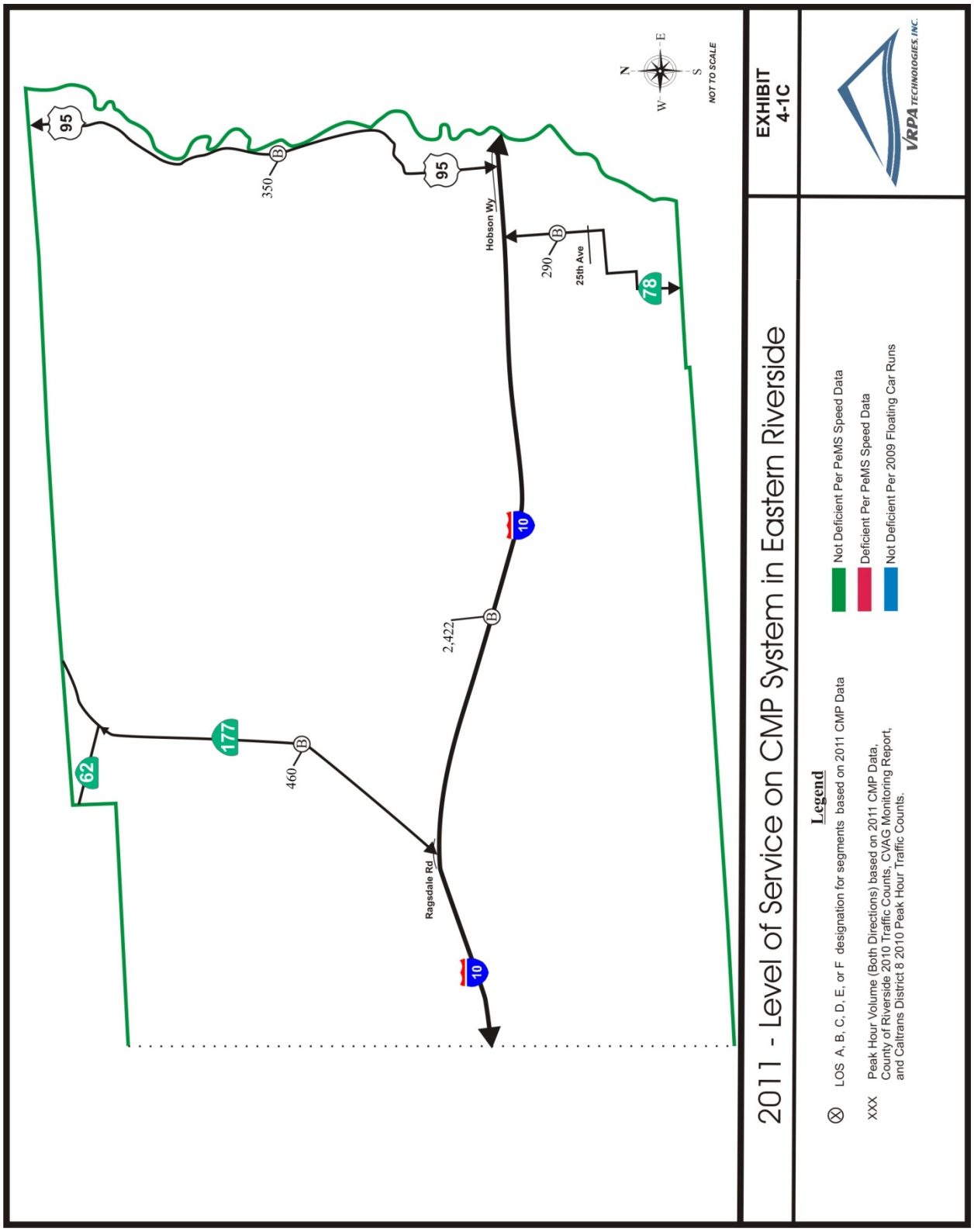
  Staff continues to recommend the use of HCM methods through applicable software packages applied to various types of facilities (reference Table 4-2 -- LOS Methodology Applications). Appropriate defaults to be applied by local agencies in their analysis of LOS are referenced in Appendix 2.

  HCM-based methodologies applied to calculate LOS for CMP purposes will be the responsibility of local agencies as new development or land use plan revisions/updates (reflective of specific development proposals) are considered. This process shall be consistent with the Enhanced Transportation System Management Program described in Chapter 5.

  The initial LOS analysis conducted as part of the CMP Update process is considered to be a “screening” level analysis. A more detailed assessment is conducted on key critical segments. If the analysis results in LOS deficiencies, the LOS analysis would continue on a quarterly basis to determine the average peak hour LOS and determine if the LOS deficiencies are due to temporary or permanent conditions. Coordination with the affected local agency(s) also will be made to insure that appropriate data, geometrics, counts and other related information is applied to calculate LOS.


2011 - Level of Service on CMP System in Western Riverside
EXHIBIT 4-1A
VRPA TECHNOLOGIES, INC.
NOT TO SCALE
Legend
LOS A, B, C, D, E, or F designation for segments based on 2011 CMP Data
XXX Peak Hour Volume (Both Directions) based on 2011 CMP Data, County of Riverside 2010 Traffic Counts, CVAG Monitoring Report, and Caltrans District 8 2010 Peak Hour Traffic Counts.
Not Deficient Per PeMS Speed Data
Deficient Per PeMS Speed Data
Not Deficient Per 2009 Floating Car Runs
Van Buren Ave
Mission Blvd
Crestmore Ave
Orange St
Rubidoux Blvd
Limonite Ave
6th St.
2nd St
Magnolia Ave
Weirick Rd
Pigeon Pass Rd
Heacock St
Perris Blvd
Van Buren Blvd
Harley Knox Blvd
Nuevo Rd
Geary St
Lake Shore Drive
Gunnerson St
Grand Ave
Scott Rd
Clinton Keith Rd
California Ave
Gilman Springs
Main St
7th St
Menlo Ave.
Sanderson Ave
Simpson Ave
Cornell St
Hemet St
View Ln
San Gorgonio Ave
Marion Ridge Dr
To SR 111
Benton
Hunter
Murrieta Hot Springs Rd
Rancho California Rd
Pechanga Pkwy
Temecula Creek Rd
Wilson Valley Rd
Sage Rd
Horizon View Dr
Contreras Rd
10,818
412
649
9,479
8,861
2,150
2,216
958
1,545
1,545
1,236
2,628
2,061
790
1,950
2,300
2,750
1,030
2,885
628
402
742
752
5,254
1,597
1,236


2011 - Level of Service on CMP System in Coachella Valley
EXHIBIT 4-1B
VRPA TECHNOLOGIES, INC.
Legend
LOS A, B, C, D, E, or F designation for segments based on 2011 CMP Data
XXX Peak Hour Volume (Both Directions) based on 2011 CMP Data, County of Riverside 2010 Traffic Counts, CVAG Monitoring Report, and Caltrans District 8 2010 Peak Hour Traffic Counts.
Not Deficient Per PeMS Speed Data
Deficient Per PeMS Speed Data
Not Deficient Per 2009 Floating Car Runs
NOT TO SCALE
N
S
E
W
Monterey Ave
Market Place Wy
Gerald Ford
Country Club Dr
Avenida del Sol
Fred Waring
Ramon Rd
Bob Hope Dr
El Toro Rd
Date Palm Dr
Jaguar Blvd
San Luis Rey
Pierson Blvd
Gene Autry Trail
Country Club Dr
Portola Avenue
Monroe Ave.
Homestead Rd
Mesquite Hill
54th
66th Avenue
10
62
111
74
86
86S
195
243
371
9,273
7,933
1,804
7,521
2,885
8,758
7,727
2,422
1,185
515
1,391
580
2,576
2,885
750
2,525
1,288
329
742
485
1,236
649
3,655
3,655
3,304
3,836
2,435
2,781
608


95
350
B
95
Hobson Wy
290
B
25th Ave
78
10
2,422
B
177
460
B
62
Ragsdale Rd
10
N
E
W
S
NOT TO SCALE
EXHIBIT
4-1C
2011 - Level of Service on CMP System in Eastern Riverside
VRPA TECHNOLOGIES, INC.
Legend
LOS A, B, C, D, E, or F designation for segments based on 2011 CMP Data
XXX Peak Hour Volume (Both Directions) based on 2011 CMP Data, County of Riverside 2010 Traffic Counts, CVAG Monitoring Report, and Caltrans District 8 2010 Peak Hour Traffic Counts.
Not Deficient Per PeMS Speed Data
Deficient Per PeMS Speed Data
Not Deficient Per 2009 Floating Car Runs

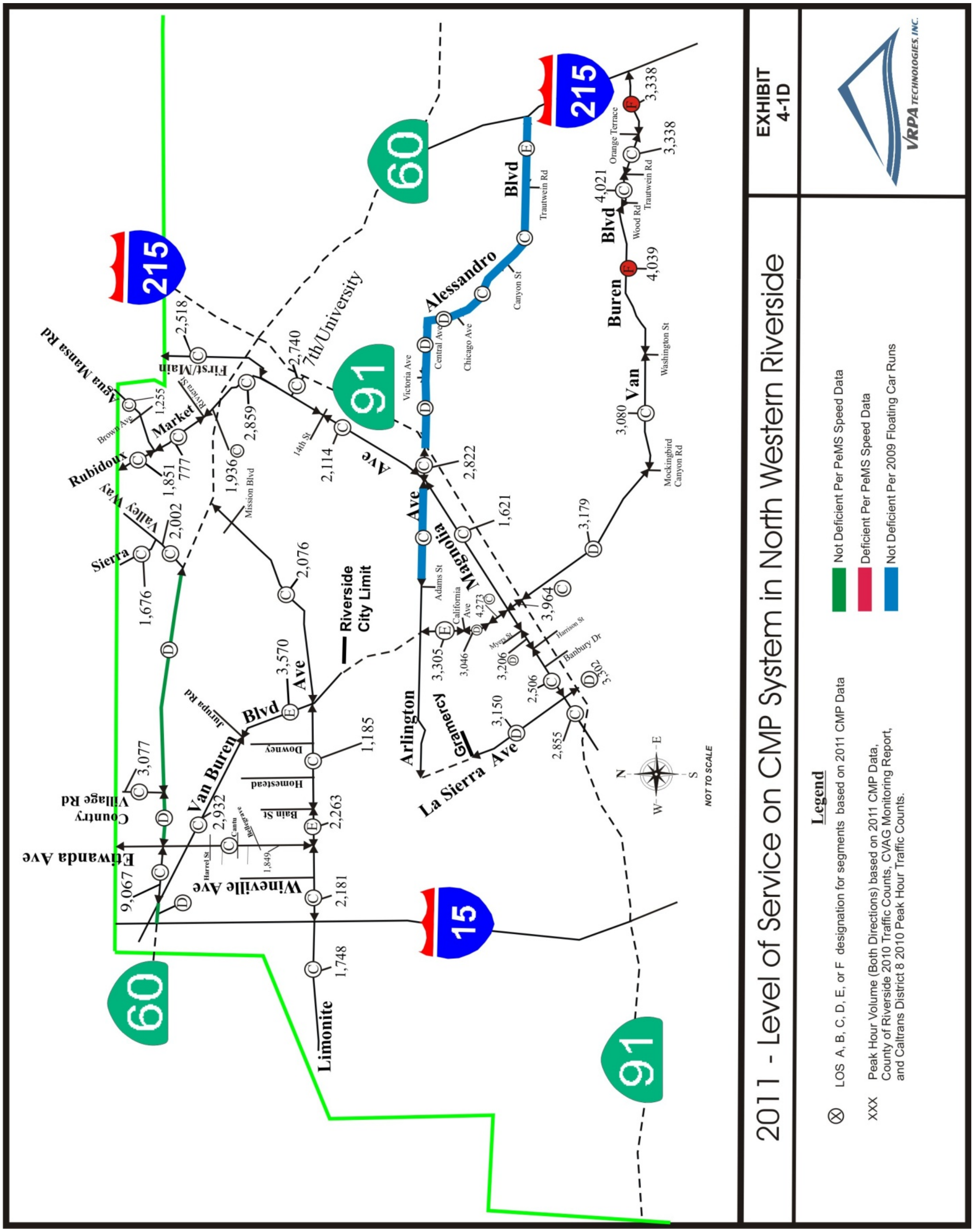

2011 - Level of Service on CMP System in North Western Riverside
EXHIBIT 4-1D
Legend
⊗ LOS A, B, C, D, E, or F designation for segments based on 2011 CMP Data
XXX Peak Hour Volume (Both Directions) based on 2011 CMP Data, County of Riverside 2010 Traffic Counts, CVAG Monitoring Report, and Caltrans District 8 2010 Peak Hour Traffic Counts.
Not Deficient Per PeMS Speed Data
Deficient Per PeMS Speed Data
Not Deficient Per 2009 Floating Car Runs
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
Riverside City Limit
Van Buren Blvd
Alessandro Blvd
Magnolia Ave
Arlington Ave
La Sierra Ave
Limonite
Etiwanda Ave
Rubidoux
Market
First/Main
7th/University
Agua Mansa Rd
Valley Way
Sierra
Country Village Rd
Wineville Ave
Jurupa Rd
Gramercy

TABLE 4-1

EXEMPT FACILITIES IN 2011
STATE HIGHWAYS
ON STATE ROUTE 60:
RIVERSIDE COUNTY LINE TO JCT I-15
VALLEY WAY TO JCT SR 60/SR 91/I-215
JCT SR 60 EAST TO PERRIS BOULEVARD
ON STATE ROUTE 71:
SAN BERNARDINO COUNTY LINE TO JCT SR 91
ON STATE ROUTE 74:
GRAND AVENUE TO LAKESHORE DRIVE
LAKESHORE TO I-15
SANDERSON AVENUE TO CORNELL STREET
CORNELL STREET TO HEMET AVENUE
ON STATE ROUTE 91:
RIVERSIDE COUNTY LINE TO JCT SR 71
JCT SR 71 TO MAPLE STREET
MAPLE STREET TO JCT I-15
JCT I-15 TO 0.6 MILE WEST OF MCKINLEY
0.6 MILE WEST OF MCKINLEY TO MAGNOLIA AVENUE
MAGNOLIA AVENUE TO 14TH STREET
14TH STREET TO JCT SR 60/SR 91/I-215
ON I-215:
EAST JCT SR 60 TO JCT SR 60/SR 91/I-215
JCT SR 60/SR 91/I-215 TO SAN BERNARDINO COUNTY LINE
ON STATE ROUTE 111:
DISTRICT 11 BOUNDARY TO JCT SR 74
JCT SR 74 TO GENE AUTRY TRAIL
PRINCIPAL ARTERIALS – WESTERN RIVERSIDE COUNTY
ON LA SIERRA AVENUE:
ARLINGTON TO GRAMERCY
ON VAN BUREN BOULEVARD:
NORTHERLY CITY LIMIT TO JURUPA
JURUPA TO CENTRAL
CENTRAL TO ARLINGTON

TABLE 4-2

HIGHWAY CAPACITY MANUAL BASED - LEVEL OF SERVICE METHODOLOGY APPLICATIONS

	CAPSIL*3	HCS	MODIFIED HCM LOS TABLES	HCM STOP DELAY ANALYSIS	HCM FLOATING CAR METHODOLOGY
BASE YEAR *1					
URBAN					
Signalized Intersections	x	x		x	
Unsignalized Intersections - 4-Way Stop Controls *4					
Unsignalized Intersections - 2-Way Stop Controls *4		x			
Links, Expressways, & Arterials		x	x		x
Freeway Links, Ramps, & Weaving Sections		x	x		x
RURAL					
Signalized Intersections	x	x		x	
Unsignalized Intersections - 4-Way Stop Controls *4					
Unsignalized Intersections - 2-Way Stop Controls *4		x			
Links, Expressways, & Arterials		x	x		x
Freeway Links, Ramps, & Weaving Sections		x	x		x
FUTURE YEAR *2					
URBAN					
Signalized Intersections	x	x		x	
Unsignalized Intersections - 4-Way Stop Controls *4					
Unsignalized Intersections - 2-Way Stop Controls *4		x			
Links, Expressways, & Arterials			x		x
Freeway Links, Ramps, & Weaving Sections			x		x
RURAL					
Signalized Intersections	x	x		x	
Unsignalized Intersections - 4-Way Stop Controls *4					
Unsignalized Intersections - 2-Way Stop Controls *4		x			
Links, Expressways, & Arterials			x		x
Freeway Links, Ramps, & Weaving Sections			x		x

NOTES:

*1 - Current year traffic conditions

*2 - Future year (2030) traffic conditions

*3 - Used as an example only, other HCM compatible software will also be accepted.

*4 - Results of analysis should be evaluated considering actual intersection conditions or 4-or 2-way stop or signal warrants.

♦ 2011 Level of Service (LOS) Results

✓ Coachella Valley

The Coachella Valley Associated Governments (CVAG) has implemented a valleywide traffic monitoring program for many years. Count information contained in CVAG's *2011 Traffic Census Report* was utilized in the LOS analysis as well as a growth rate applied to 2009 CMP traffic count data. The analysis conducted by VRPA Technologies indicates that there is one (1) deficiency in the Coachella Valley for 2011 along Ramon Road between Bob Hope Drive and I-10.

✓ Western Riverside County

Based on LOS calculations along the CMP system in Western Riverside County using Caltrans and local agency counts as well as a growth rate applied to 2009 CMP traffic count data, two (2) deficiencies were found. The deficiencies occur along Van Buren Boulevard between Washington Street and Wood Road and between Orange Terrace and I-215.

✓ State Highways

Traffic count information was collected from the Caltrans 2010 Traffic Monitoring Report, from the Caltrans Performance Measurement System (PeMS), and from existing Smart Call Boxes (SCB) located along the State Highway system. In addition, peak hour traffic counts were collected from various transportation studies and local agencies. The data was then adjusted and evaluated by VRPA Technologies using HCM-based LOS tables.

Previous deficiencies in 2009 along State Highways included one (1) segment along I-15 (SR-60 to Weirick Rd) and one (1) segment along I-215 (I-15 to Scott Rd). After additional monitoring and the analysis of PeMS speed data in 2011, a portion of the I-15 segment still remains deficient as noted below. Results of this process are provided in Chapter 5 and indicate that three (3) smaller segments of the larger segment along I-15 (SR-60 to Limonite Ave, 2nd St to SR-91, and Magnolia Ave to Weirick Rd) are currently operating at LOS "F" and therefore are deficient. These segments however, will likely be improved to LOS "E" or better once construction of the I-15 Corridor Improvement Project (CIP) is initiated and completed. In addition, one (1) segment along I-215 (Nuevo Rd to SR-74/4th St) is operating at LOS "F". This segment will likely be improved to LOS "E" or better once construction of the I-215 widening project is initiated and completed and the I-215/SR-74 interchange reconstruction project (currently under construction) is completed. Each of these deficient segments will be monitored using PeMS speed data over the next 9 months on a quarterly basis to determine the LOS. Results of this monitoring process will be provided to the TAC following the 12-month monitoring process or during preparation of the 2013 CMP Update.

It will also be important to closely monitor LOS "E" segments on a quarterly basis. Once a LOS "E" segment falls to LOS "F" during the quarterly monitoring process, the segment will be further analyzed as to what the cause may be. If the LOS is at "F" for more than one (1) year and is the average annual peak hour condition with no extenuating circumstances causing the deficiency (e.g., construction, special event, etc), the local agency will be notified to prepare a deficiency plan in accordance to Chapter 6.

Public Transit/Alternative Mass Transit Standards

- **Statutory Requirements**

  Section 65089.(b)(2) of the Government Code specifically requires development of standards established for the frequency and routing of public transit, and for the coordination of transit service provided by separate operators.

- **Public Transit and Alternative Mass Transit Facility Standards**

  RCTC, as the Regional Transportation Planning Agency, is responsible for planning and coordinating all public mass transit services within the jurisdiction of the Commission and between the jurisdiction of other county commissions or transit operators. On an annual basis, transit operators prepare a Short Range Transit Plan (SRTP), which is a three-year document detailing the operating and capital costs that are planned for transit services. Each operator adopts such a plan and then provides quarterly data to RCTC regarding performance. Once the SRTPs are approved by RCTC, transit operators are charged with the responsibility for providing the service levels and purchasing the capital equipment identified in year-one of the SRTP. Once approved by RCTC, the SRTPs must be amended if an operator wants to deviate from the original plan. The Commission encourages all operators to coordinate public transportation services including routes, fare structure and transfer agreements as the overall goal is the improvement of public transportation services to the general public. To assist with the coordination efforts, quarterly meetings are held with the public transit operators to ensure that efficient, effective transportation services are provided.

  Public Utilities Code Section 99244 requires the Commission to annually identify, analyze and recommend potential productivity improvements for transit operators through the SRTP process. This process requires the transit operators to address recommendations made through the triennial performance audit. In 2005, the Commission reaffirmed its commitment to a Productivity Improvement Program (PIP), which was originally adopted in 1998 as part of a comprehensive effort to work with the county's eight public transit operators to provide better service and improve efficiency. Table 4-3 details the performance targets as identified in the PIP that transit operators will strive to meet in developing its SRTP service and financial plan:

  As an alternative mode to the single-occupant vehicle, mass transit services (commuter rail services) should be considered during the assessment of local development proposals that impact the Congestion Management System and during the development of deficiency plans by local agencies. Further, future rail passenger services should be considered as appropriate mitigation measures to offset potential deficiencies. If feasible, future transit and passenger rail facility systems should be described as potential services that could reduce vehicle trips and relieve congestion at or above the minimum LOS standard.

TABLE 4-3
TRANSIT SYSTEM PERFORMANCE INDICATORS

Performance Indicator	Method for Establishing Performance Targets
1) Operating Cost per Revenue Hour	Increases no more than CPI
2) Fare Box Recovery Ratio	Per PUC requirements and RCTC policy
3) Subsidy per Passenger	+/- 15% variance
4) Subsidy per Passenger Mile	+/- 15% variance
5) Subsidy per Revenue Hour	+/- 15% variance
6) Subsidy per Revenue Mile	+/- 15% variance
7) Passengers per Revenue Hour	+/- 15% variance
8) Passengers per Revenue Mile	+/- 15% variance
9) Ridership growth	2% minimum growth annually (Applies to Commuter Rail)

RCTC CONFORMANCE AND MONITORING PROCESS

It is the local agency's responsibility to ensure implementation of development project mitigation measures identified by the project proponent. RCTC and local agencies will monitor the implementation of deficiency plans that include transit and roadway improvements intended to improve traffic LOS. If through the biennial traffic monitoring process, the LOS along a deficient arterial or highway facility improves to LOS "E" or better, mitigation measures that have not been implemented as specified in the deficiency plan, would no longer be required for CMP compliance purposes.

CHAPTER 5
ENHANCED TRANSPORTATION SYSTEM MANAGEMENT PROGRAM

STATUTORY REQUIREMENTS

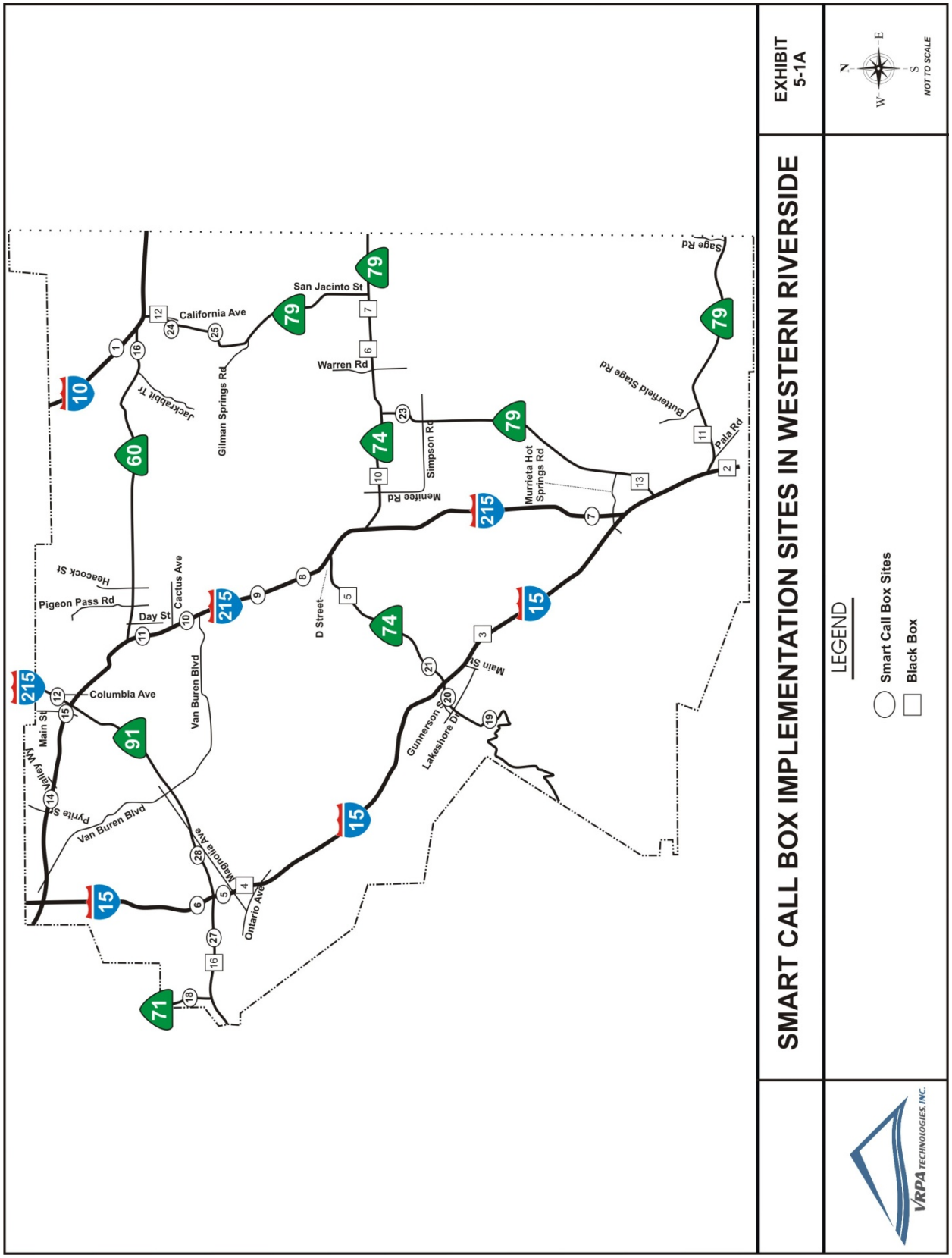
Section 65089 (b)(4) of the Government Code requires that RCTC develop a program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts. In no case must the program outlined in this Chapter include an estimate of the costs of mitigating the impacts of interregional travel, but it must provide credit for local public and private contributions to improvements on regional transportation systems. In the case of toll road facilities, credit must only be allowed for local public and private contributions, which are unreimbursed from toll revenues or other state or federal sources. RCTC must calculate the amount of the credit to be provided.

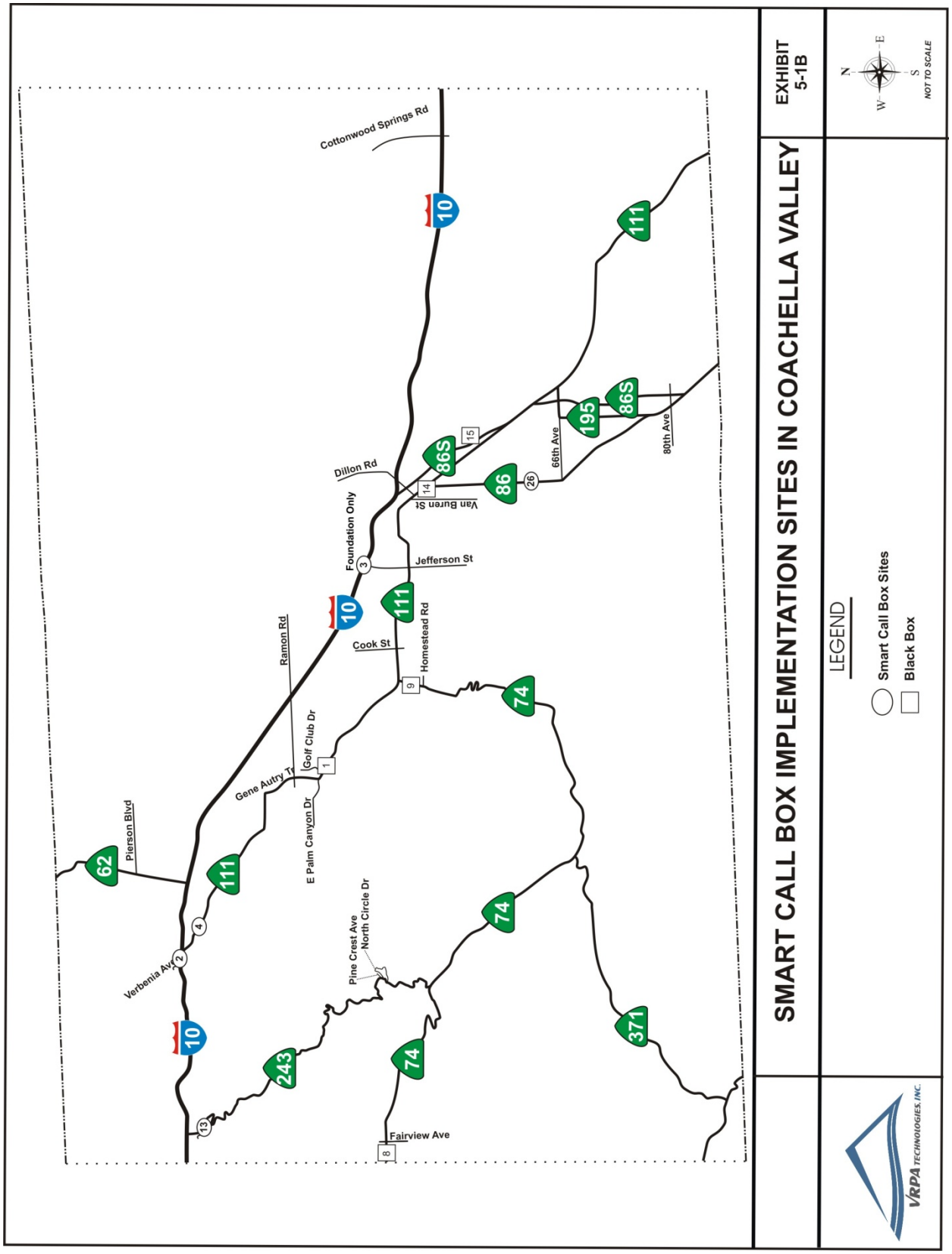
RCTC ENHANCED TRANSPORTATION SYSTEM MANAGEMENT PROGRAM

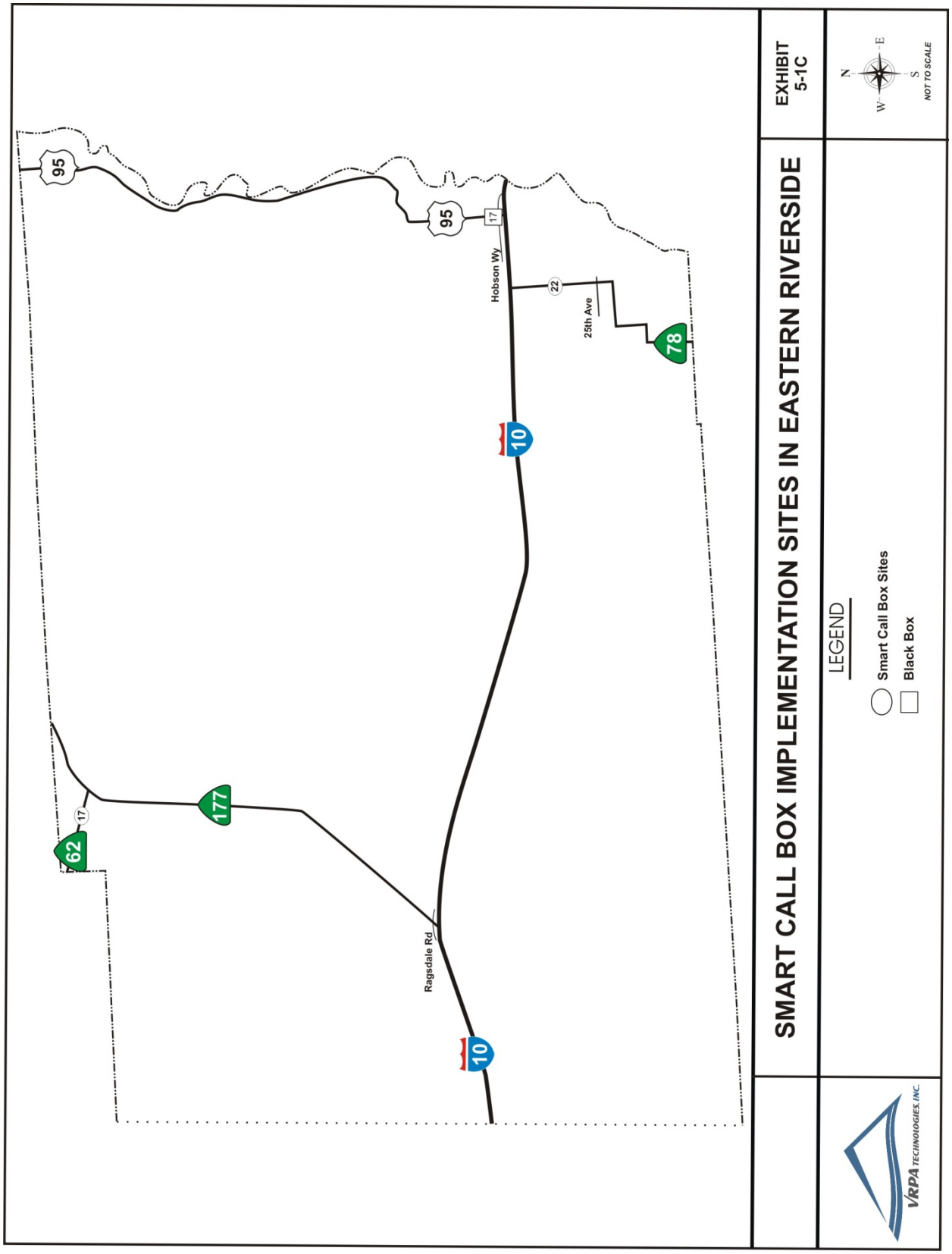
The RCTC CMP Enhanced Transportation System Management Program was designed to meet the federal Highway Performance Monitoring System (HPMS) and Congestion Management System/Traffic Management System (CMS/TMS) requirements, as well as to monitor the CMP System of Highways and Roadways. The intent of the Enhanced Transportation System Management Program is to effectively identify those facilities that have congestion problems, track the degree of congestion, and apply evaluation criteria to the system so that federal and State funds are targeted or programmed to relieve the congestion.

The Enhanced Transportation System Management Program utilizes "loop or pavement sensors" currently installed along the State Highway system at call boxes (reference Figures 5-1A through 5-1C) and Caltrans' Performance Measurement System (PeMS) sites (reference 5-2A through 5-2C). Traffic counters were installed at these sites allowing RCTC and Caltrans to retrieve count data. Many PeMS sites now have the capability to retrieve speed, truck flow, vehicle miles traveled (VMT), vehicle hours traveled (VHT), and delay data. The Enhanced Transportation System Management Program will improve traffic monitoring for the CMP and other planning or technical purposes.

The federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requires that metropolitan transportation planning processes include a Congestion Management Process similar to the federal CMS requirements. To address the SAFETEA-LU requirements, SCAG and the county Congestion Management Agencies (CMAs) established and implemented a Congestion Management Process, which is designed to relieve traffic congestion and maintain high levels of service on the roadway network in the SCAG region. The Congestion Management Process includes the Regional Transportation Plan (RTP), the counties' CMPs, and the Regional Transportation Improvement Program (RTIP), which should all maintain a level of consistency with each other. A review of Federal CMS/TMS requirements is provided in Appendix 3.


SMART CALL BOX IMPLEMENTATION SITES IN WESTERN RIVERSIDE
EXHIBIT 5-1A
LEGEND
Smart Call Box Sites
Black Box
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
10
60
91
71
15
74
79
215
California Ave
San Jacinto St
Warren Rd
Gilman Springs Rd
Jackrabbit Tr
Simpson Rd
Menifee Rd
Murrieta Hot Springs Rd
Butterfield Stage Rd
Sage Rd
Pala Rd
Heacock St
Pigeon Pass Rd
Day St
Cactus Ave
Columbia Ave
Main St
Van Buren Blvd
Valley Wy
Pyrite St
Magnolia Ave
Ontario Ave
D Street
Main St
Gunnerson St
Lakeshore Dr


SMART CALL BOX IMPLEMENTATION SITES IN COACHELLA VALLEY
EXHIBIT 5-1B
LEGEND
Smart Call Box Sites
Black Box
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
Cottonwood Springs Rd
Dillon Rd
Foundation Only
Van Buren St
Jefferson St
Cook St
Homestead Rd
Ramon Rd
Golf Club Dr
Gene Autry Trl
E Palm Canyon Dr
Pierson Blvd
Verbenia Ave
Pine Crest Ave
North Circle Dr
Fairview Ave
66th Ave
80th Ave
10
111
86S
86
195
74
62
243
371


SMART CALL BOX IMPLEMENTATION SITES IN EASTERN RIVERSIDE
EXHIBIT 5-1C
LEGEND
Smart Call Box Sites
Black Box
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
95
95
17
Hobson Wy
22
25th Ave
78
10
177
17
62
Ragsdale Rd
10

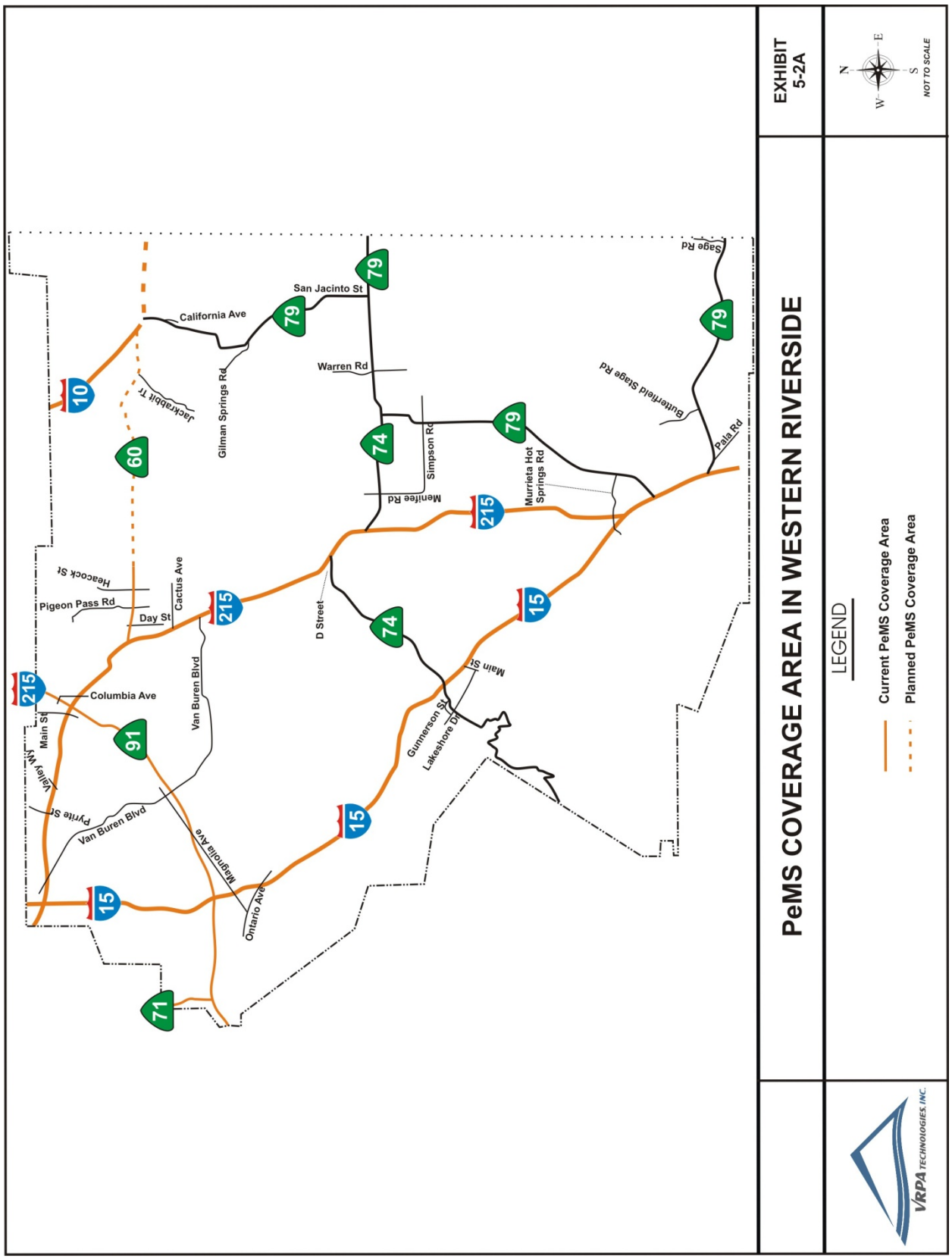


EXHIBIT 5-2A
PeMS COVERAGE AREA IN WESTERN RIVERSIDE
LEGEND
Current PeMS Coverage Area
Planned PeMS Coverage Area
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
California Ave
San Jacinto St
Warren Rd
Gilman Springs Rd
Jackrabbit Tr
Simpson Rd
Menifee Rd
Murrieta Hot Springs Rd
Butterfield Stage Rd
Sage Rd
Pala Rd
Heacock St
Pigeon Pass Rd
Day St
Cactus Ave
D Street
Columbia Ave
Main St
Van Buren Blvd
Valley Wy
Pyrite St
Magnolia Ave
Ontario Ave
Gunnerson St
Lakeshore Dr
Main St
10
60
79
74
215
15
91
71

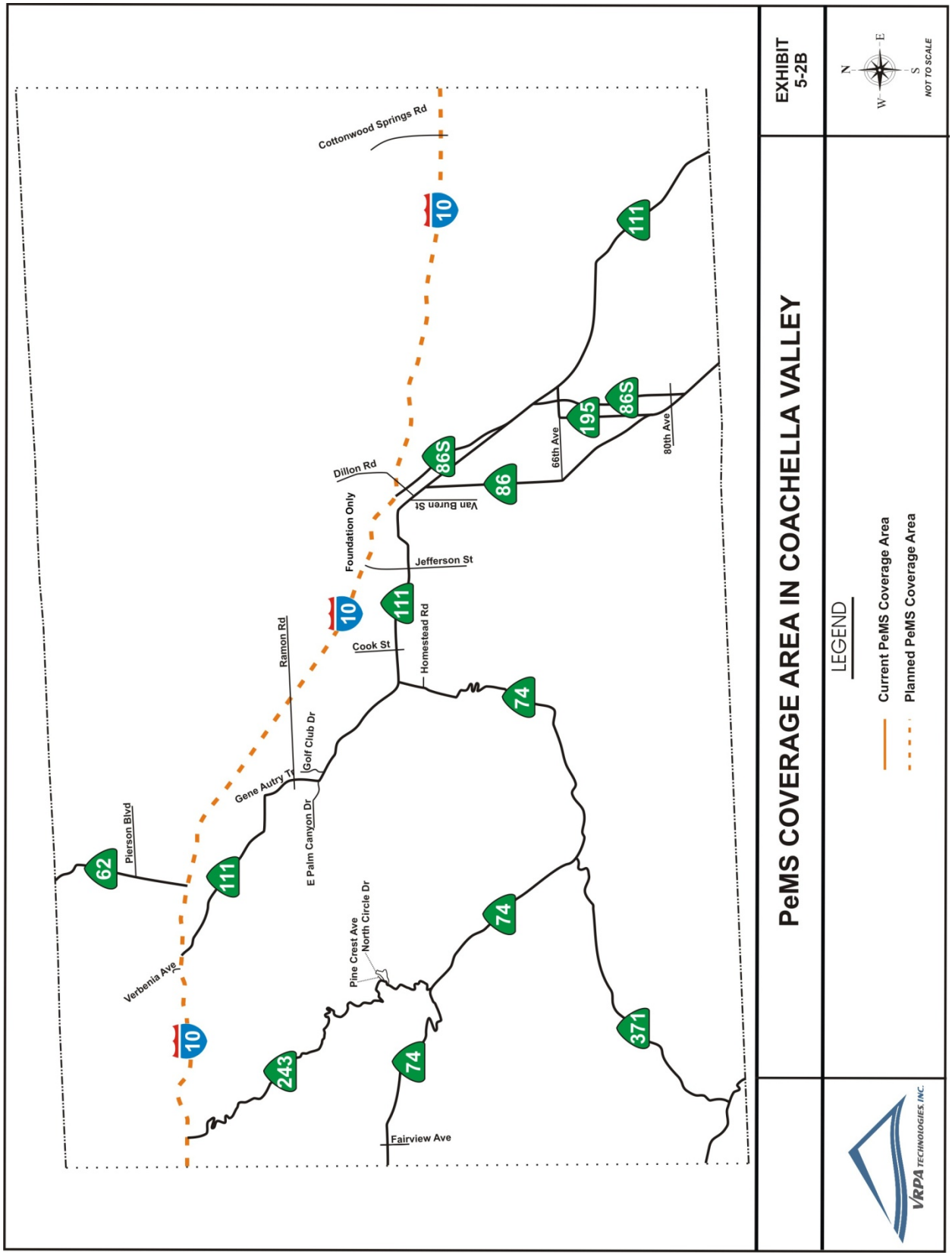


EXHIBIT 5-2B
PeMS COVERAGE AREA IN COACHELLA VALLEY
LEGEND
Current PeMS Coverage Area
Planned PeMS Coverage Area
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
Cottonwood Springs Rd
10
111
86S
195
86
66th Ave
80th Ave
Dillon Rd
Van Buren St
Foundation Only
Jefferson St
Cook St
Homestead Rd
Ramon Rd
Golf Club Dr
Gene Autry Tr
E Palm Canyon Dr
74
62
Pierson Blvd
Verbenia Ave
Pine Crest Ave
North Circle Dr
243
371
Fairview Ave

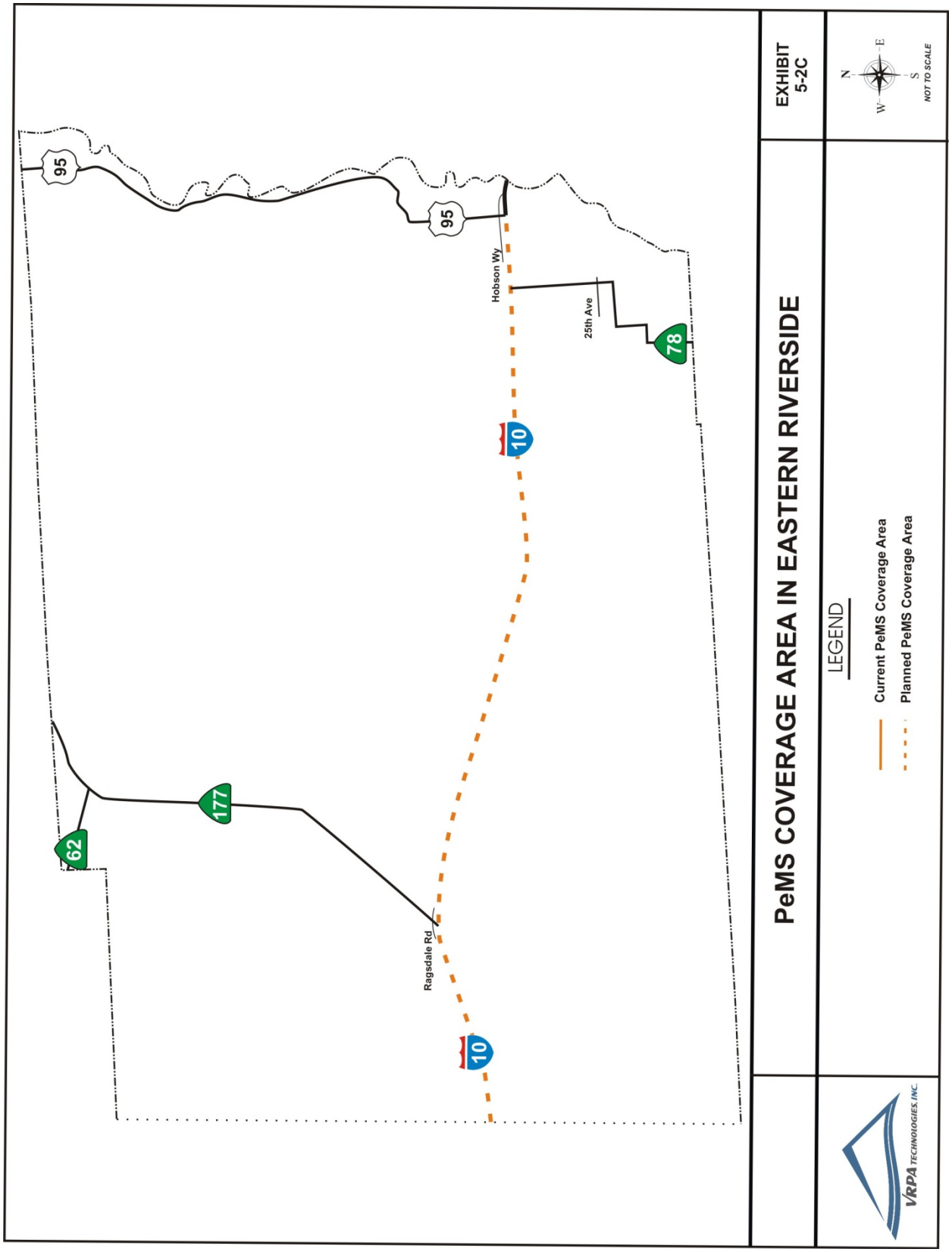


EXHIBIT 5-2C
PeMS COVERAGE AREA IN EASTERN RIVERSIDE
LEGEND
Current PeMS Coverage Area
Planned PeMS Coverage Area
NOT TO SCALE
VRPA TECHNOLOGIES, INC.
95
95
Hobson Wy
25th Ave
78
10
177
62
Ragsdale Rd
10

TRAFFIC MONITORING

State Highways

Monitoring the state highways for CMP purposes involves the downloading of traffic count data from Caltrans' PeMS Website (as necessary) and from Smart Call Box (SCB) sites (on a monthly basis). A level of service analysis will be performed to determine the condition of the CMP System. When a deficiency or LOS "F" is identified as part of the CMP Update LOS evaluation process, further detailed analysis of LOS shall be conducted to determine whether an actual deficiency has occurred. The best approach to determine LOS along freeway segments is through the use of floating car runs or PeMS speed data on a quarterly basis. In 2011, PeMS speed data was downloaded and analyzed by RCTC's CMP consultant, VRPA Technologies. Results of this analysis are provided in Chapter 4.

Local Arterials

Local arterial monitoring involves the continuation of the CVAG Traffic Monitoring Program in the Coachella Valley and the local traffic counting efforts on behalf of the local agencies in Western Riverside County.

To further insure that the CMP System is appropriately monitored to reduce the occurrence of CMP deficiencies, proposed development projects are evaluated by each affected agency to determine potential impacts along the regional and sub-regional Systems. As a result, these evaluations will likely reduce the incidence of LOS deficiencies along the CMP System given that each local agency has established LOS thresholds at higher levels. To insure that major development projects and plans are evaluated and reflected in the Southern California Association of Governments (SCAG) Transportation Model and local models, local agencies are encouraged to work with affected agencies to mitigate the impacts considering the California Environment Quality Act (CEQA).

Monitoring of Potential Deficiencies

As a result of the 2011 LOS screening analysis, three (3) LOS "F" segments along I-15, one (1) along I-215, two (2) along Van Buren Boulevard, and one (1) along Ramon Road were identified using PeMS speed data and/or recent traffic count data (reference Table 5-1).

- **I-15**

  The segments along I-15 (SR-60 to Limonite Avenue, 2nd Street to SR-91, and Magnolia Avenue to Weirick Road) are operating at LOS "F" based on PeMS speed data. These segments are expected to be improved to LOS "E" or better once the I-15 Corridor Improvement Project (CIP) and/or SR-91 CIP are completed. The I-15 CIP (SR-60 to just north of I-15/I-215) includes the potential construction of one high occupancy vehicle (HOV) lane and one general purpose lane in each direction from SR-74 to SR-60, or two tolled express lanes and one general purpose lane in each direction from SR-74 to SR-60. Both alternatives propose one HOV lane from I-215 to SR-74. The SR-91 CIP (Orange County Line to I-15) includes the potential construction of a general purpose traffic lane in each direction, improved ramps and intersections in Corona, better connections between I-15 and SR-91, and the extension of SR-91 Express Lanes.

TABLE 5-1
CMP SEGMENT DEFICIENCY ANALYSIS

Roadway	Segment	Deficient Per Floating Car Runs (Y/N)	Deficient Per Traffic Volumes (Y/N)	Overriding Considerations (Y/N)	Reason for Overriding Considerations	Multi-Modal Aspect
I-15	SR-60 to Limonite Ave	Y	N/A	Y	I-15 Corridor Improvement Project, SR-91 Corridor Improvement Project	Tolled Express Lanes/HOV Lanes
	2nd St to SR-91	Y	N/A	Y	I-15 Corridor Improvement Project, SR-91 Corridor Improvement Project	Tolled Express Lanes/HOV Lanes
	Magnolia Ave to Weirick Rd	Y	N/A	Y	I-15 Corridor Improvement Project, SR-91 Corridor Improvement Project	Tolled Express Lanes/HOV Lanes
I-215	Nuevo Rd to SR-74 (4th St)	N/A	Y	Y	I-215 Widening Project, I-215/SR-74 Interchange Reconstruction Project	Perris Valley Line
Van Buren Blvd	Washington St to Wood Rd	N/A	Y	Y	TUMF Regional Arterial Project	Existing RTA transit service
	Orange Terrace to I-215	N/A	Y	Y	I-215 Interchange Project	Existing RTA transit service, Perris Valley Line
Ramon Rd	I-10 to Bob Hope Dr	N/A	Y	Y	I-10 Interchange Project	Existing SunLine Transit Agency service

- **I-215**

The segment along I-215 (Nuevo Road to SR-74/4th Street) is operating at LOS "F" based on recent Caltrans' traffic counts. It is expected, however, that the segment will be improved to LOS "E" or better once the I-215 widening and I-215/SR-74 interchange reconstruction projects are completed. The central portion of the I-215 widening project (Scott Road to Nuevo Road) includes construction of a general purpose lane in each direction. The I-215/SR-74 interchange reconstruction project includes construction of a new 8-lane bridge over I-215 and improvements to freeway ramps, local streets and intersections. LOS along I-215 may also improve with construction of the Perris Valley Line, which is planned to run parallel to I-215 along this segment with a stop located in Downtown Perris.

- **Van Buren Boulevard**

The segments along Van Buren Boulevard (Washington Street to Wood Road and Orange Terrace to I-215) are operating at LOS "F" based on the County's recent counts. It is expected, however, that the segments will be improved to LOS "E" or better once the TUMF regional arterial and interchange projects are completed. The TUMF regional arterial project includes construction of one additional lane in each direction between Washington Street and Wood Road. The I-215 interchange project includes reconstruction of the existing interchange, widening of I-215, local street improvements, and modification and signalization of the ramp intersections. The March Joint Powers Authority (JPA) is expecting future improvements to Van Buren Boulevard west of I-215 when development north and south of Van Buren occurs. These improvements could include a

multi-use trail. Both deficient Van Buren segments currently experience RTA bus service. LOS along Van Buren Boulevard may also improve with construction of the Perris Valley Line, which is planned to run parallel to I-215 in this area with a stop located in Moreno Valley/March Field Station.

- **Ramon Road**

  The segment along Ramon Road (I-10 to Bob Hope Drive) is operating at LOS "F" based on CVAG's recent traffic counts. It is expected, however, that the segment will be improved to LOS "E" or better once the interchange project is completed. The I-10 interchange project includes a new interchange at Bob Hope Drive, new 8-lane overcrossing on Bob Hope Drive, new 6-lane bridge over Union Pacific (UP) railroad, modifications to Varner Road and Rio Del Sol, and ultimate removal of most ramps on Ramon Road. This segment currently experiences SunLine Transit Agency's Sun Bus service.

Each of these deficient segments will continue to be monitored using PeMS speed data and recent traffic counts over the next 9 months on a quarterly basis to determine the LOS.

If the LOS is at "F" for more than one (1) year with no extenuating circumstances causing the deficiency (e.g., construction, special event, etc), the affected local agency will be notified that a deficiency plan must be prepared in accordance with requirements set forth in Chapter 6. As a result, it will be important to continue to monitor the LOS along these segments to identify the LOS through the use of traffic counts or PeMS speed data on a quarterly basis in 2012 and 2013.

It will also be important to closely monitor critical LOS "E" segments. Once a LOS "E" segment falls to LOS "F", the segment will be further analyzed as to what the cause may be. If the LOS is at "F" for more than one (1) year and is the average annual peak hour condition with no extenuating circumstances causing the deficiency (e.g., construction, special event, etc), the local agency will be notified that a deficiency plan must be prepared in accordance with requirements set forth in Chapter 6.

CHAPTER 6
LOS DEFICIENCY PLANS

STATUTORY REQUIREMENTS

Section 65089(b)(1)(B) of the Government Code specifically states that the Level of Service (LOS) standards established by RCTC, as the Congestion Management Agency (CMA) in Riverside County, not be below LOS "E" or the current level, whichever is farthest from LOS "A". Applicable Government Code Sections are included in Appendix 1. When the LOS on a segment or at an intersection fails to attain the established level of service standard, a deficiency plan must be adopted pursuant to Section 65089.4.

In addition, Section 65089.4 requires a local jurisdiction to prepare a deficiency plan when highway or roadway LOS standards are not maintained on segments or intersections of the designated system. The deficiency plan must be adopted by the city or the County at a noticed public hearing.

RCTC DEFICIENCY PLAN PROCESS

RCTC will prepare deficiency plans or identify mitigation strategies for deficient segments along the State Highway System on behalf of local agencies. RCTC will coordinate development of such plans with affected local agencies, WRCOG or CVAG, and Caltrans. These agencies will have an opportunity to work with RCTC during the development of a deficiency plan, provide comments, and meet with other affected agencies to discuss issues prior to completion of a plan. To comply with the intent of the CMP legislation, a deficiency plan prepared by a city, the County or RCTC must include the principal elements specified in the CMP Legislation (reference Appendix 1). To date, the CMP minimum LOS threshold has been met for a majority of the CMP system, therefore deficiency plans have not been required. In the cases where the CMP minimum LOS threshold has been exceeded, there have either been overriding considerations (e.g. construction, traffic diversions, etc) or improvements already programmed to improve the facility.

PROCEDURE TO IDENTIFY DEFICIENT SEGMENTS

The procedure for identifying deficient segments or intersections along the CMP System of Highways and Roadways is documented in Chapter 5, Enhanced Transportation System Management Program. Deficient segments would be identified as part of the CMP Update LOS evaluation process. Upon initial identification of a deficiency, further detailed analysis of LOS shall be conducted to determine whether an actual deficiency has occurred or if the initial analysis identified a deficiency due to extenuating circumstances (e.g. construction, incident, etc.) or faulty data (e.g. traffic counter equipment malfunction, etc.). Coordination with the affected local jurisdiction(s) will be made to insure that appropriate data, geometrics, counts and other related information is applied to calculate LOS.

If a deficiency is identified, affected agencies will be notified. A review of mitigation measures, including capital improvement, transit, and TDM projects, will be conducted to determine how the deficiency can be mitigated. The recommended mitigation measure(s) will be reviewed by the Technical Advisory Committee (TAC).

CRITERIA TO DETERMINE APPROPRIATE MITIGATION MEASURES

Mitigation strategies that measurably improve the CMP System must be identified in the deficiency plan. Such strategies would include capital improvement projects or other measures that shift trips to alternative modes that may be included in or consistent with local Transportation Demand Management (TDM) ordinances. Further, mitigation measures should be developed considering both the existing and planned circulation system and the highest peak hour trip estimates or forecasts.

Coachella Valley and Western Riverside County TUMF Programs

Coachella Valley and Western Riverside County local agencies and the County of Riverside have adopted Transportation Uniform Mitigation Fee (TUMF) programs. In general, the programs impose fees on development specifically to address transportation impacts on local arterials. The fees are then used for selected transportation improvement projects along the adopted TUMF arterial network. The Coachella Valley Association of Governments (CVAG) implements the TUMF program in the Coachella Valley and the Western Riverside Council of Governments (WRCOG) implements the program in Western Riverside County.

If, during the annual LOS monitoring process, an intersection or segment along the CMP system within the Transportation Uniform Mitigation Fee (TUMF) areas fall below LOS "E," an evaluation of planned improvements necessary to mitigate the deficiency must be undertaken. The adopted TUMF programs would then be reviewed to determine if the deficiency would be mitigated through the implementation of TUMF projects, and within a reasonable timeframe. If an improvement project(s) is programmed that will mitigate the deficiency, the arterial program would be considered as a deficiency plan for CMP purposes. If projects in the arterial program do not meet the required mitigation for the deficiency, then RCTC will work with the appropriate agency(s) to identify mitigation measures. Agencies that do not participate in the TUMF programs would be required to prepare a deficiency plan in accordance with this chapter.

REVIEW OF DEFICIENCY PLANS

Deficiency Plans will be reviewed by the RCTC Technical Advisory Committee (TAC) with a recommendation of approval or nonapproval forwarded to the RCTC Board for action. In accordance with Chapter 5 - Enhanced Transportation System Management Program, mitigation measures must be identified to offset deficiencies. The Deficiency Plan preparation/approval schedule and process will be in accordance with Section 65089 (reference Appendix 1).

CHAPTER 7
TRANSPORTATION DEMAND MANAGEMENT/ AIR QUALITY

STATUTORY REQUIREMENTS

Section 65089(b)(3)(A) of the State code requires that RCTC prepare a CMP trip reduction and travel demand element that promotes alternative transportation methods. Such methods must include, but are not limited to, carpools, vanpools, transit, bicycles, and park-and-ride lots; improvements in the balance between jobs and housing; and other strategies, such as, flexible work hours, telecommuting, and parking management programs. CMP Legislation also requires consideration of parking cash-out programs.

INTRODUCTION

There are effective ways of achieving trip reduction in Riverside County other than through the adoption of local agency Transportation Demand Management (TDM) Ordinances, which was the focus of TDM efforts in the past. RCTC believes that there are other approaches that can be more effective and has facilitated the implementation of TDM projects through the Measure "A" Commuter Assistance Programs, and the implementation of a number of TDM projects (in cooperation with Caltrans and local agencies in Riverside County and in adjoining counties) to achieve TDM objectives. Such TDM strategies include the development of Park-N-Ride lots, commuter rail stations, and public transit feeder services. Taken together, the individual programs and projects constitute a broad base effort to reduce reliance on the single occupant vehicle in Riverside County.

In addition to TDM, Transportation Systems Management (TSM) strategies also provide for smoother traffic flow, especially along congested streets and highways in the County. Types of TSM strategies already implemented in Riverside County include bus bays, signal coordination systems, signal preemption for transit vehicles, improved signal timing projects, ramp metering, and focused intersection improvements. A study completed in the Coachella Valley that integrates both TDM and TSM solutions is the Washington Street and Highway 111 Commercial Corridors TDM/TSM Study affecting the cities of La Quinta, Palm Desert, Indio, Indian Wells, and the County of Riverside. TSM and TDM alternatives were analyzed to determine cost effective ways of easing future congestion and reducing delay along the Washington/Highway 111 corridors. These alternatives included adding capacity, through traffic synchronization (if feasible), encouraging motorists to use transit, car/van pooling, encouraging motorists to travel at less congested times, and/or encouraging pedestrian and bicycle usage. The Study explored a number of transportation solutions and strategies for getting people where they need to go by auto, foot, bicycle, or bus, and it provides a baseline of data and analysis for helping to make those decisions in the future.

RCTC's approach to trip reduction and congestion relief through TDM and TSM can be particularly effective in a rapidly growing county such as Riverside. This chapter identifies the types of strategies that local agencies can also implement to achieve further reductions in trips and enhance traffic flow, especially along already congested CMP facilities and other major streets and highways.

TRAVEL DEMAND MANAGEMENT STRATEGIES

The intent of this section is to identify ways that local agencies can seek to maximize the efficient use and capacity of a roadway and/or transit facility, often with limited transportation resources. Developing a viable transportation system not only includes building new roadways and adding transit, but also involves managing the demand for travel on these systems. TDM is a term applied to a broad range of strategies that are primarily intended to reduce and reshape demand (use) of the transportation systems. TDM strategies are designed to make best use of existing transportation facilities and maximize future transportation investments. Using strategies that promote alternative modes, increase vehicle occupancy, maximize the efficient use of parking, reduce travel distances, and ease peak-hour congestion, TDM increases the efficiency of the transportation system.

TDM includes programs and strategies to promote alternatives to single occupancy vehicle (SOV) travel as well as methods of eliminating incident based traffic congestion and pre-trip traffic information, including such activities as carpools, vanpools, transit, bicycles, park-and-ride lots, freeway service patrols, and Intelligent Transportation Systems (ITS). These programs will contribute to improved air quality in the region and meet the goals of Air Quality Attainment Plans, including climate change goals. It is important that RCTC, Caltrans, and local governments throughout the County consider the application of TDM strategies during preparation of transportation plans, circulation elements, and transportation corridor studies, and traffic impact studies. The California Air Pollution Control Officers Association (CAPCOA) has prepared a resource document (*Quantifying Greenhouse Gas Mitigation Measures – A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures, August 2010)* that can be used to quantify vehicle miles traveled (VMT) and vehicle trips (VT) reductions associated with TDM measures within the State of California

Planning and preliminary engineering of major corridor investment projects in Riverside County present significant opportunities for the coordinated integration of TDM strategies. TDM is recognized as the quickest and least expensive component of transportation solutions, resulting in reduced construction impacts, increased use of new and existing transit services, and extension of the life of a roadway through reduced congestion. In addition, a basic tenet of TDM programs is developing partnerships between multiple organizations that have influence on commuting and travel habits necessary to develop programs and policies that will reduce congestion, increase accessibility and mobility, and improve air quality.

The solutions to contemporary transportation problems can no longer be found solely in the construction of new or even wider roadways. The TDM strategy recommendations presented below have been drafted with an understanding that any viable solution must include the participation of all available players in the County. RCTC, local agencies, land developers, local employers and their employees, transit agencies, as well as the general public all need to work together cooperatively to resolve the transportation related issues that are currently affecting, and will continue to affect, Riverside County's economic viability and environmental health.

TDM strategies that can be effective in the region have been organized under the following five categories:

- Enhance Vehicle Occupancy (carpools/vanpools/park-n-ride)
- Shift auto travel to Transit (bus and rail system improvements)
- Shift auto travel to Non-Motorized Transportation modes (bicycling and walking)

- Shift travel demand to "nonpeak" periods or eliminate trips through Alternative Work-Hour Programs and Telecommuting
- Maximize the efficient use of parking resources through Parking Management

Recommended strategies within any of these categories should be used as individual TDM methods where appropriate, but will have the most significant impact when they are used in combination with other strategies. One example is when a company offers a flex time work schedule to its employees who live within moderate distances. The employees may change their commute travel mode from a single occupant vehicle to walking or bicycling due the increased flexibility of starting times. The research suggests that for shorter commute distances, the vehicle trips for an employment site may be reduced by 1%. However, when that same employer also provides lockers and shower facilities, employees that begin their work commute from an even further distance may also feel comfortable with a walking or bicycling commute increasing the reduction in vehicle trips up to 9%.

The "TDM web or net" becomes much wider in terms of capturing more mode shifting employees based on a wider geographic scope. The actual trip reduction under the right conditions may be increased to as high as 30%. Following are some potential strategies:

- Complete Streets Analysis or Multimodal Level of Service (LOS): The modes analyzed in the multimodal LOS analysis should be dependent on the place type. For example, in most cases, rural inter-city travel need not look at pedestrian capacity. The plan should provide mitigation and a monitoring program to offset impacts to all modes through incident and demand management strategies.
- Corridor Analysis: Corridor impacts to a mode may be mitigated by providing capacity on a parallel facility. For example, an impacted facility may lack pedestrian and bike facilities; however, a parallel bike/pedestrian path within the corridor could offset this deficiency. In addition, impacts to transit buses stuck in the same traffic congestion as single occupancy vehicles could be mitigated by the provision of a transit/High Occupancy Vehicle (HOV) lane in the congested travel direction during peak periods. Additional mitigation for congestion could be through the provision of a freeway service patrol to rapidly clear traffic accidents and disabled vehicles during peak periods.
- Multimodal Circulation Plans: Local traffic circulation elements should consider multimodal LOS standards and meet requirements set forth in the Federal and State Complete Streets Acts. These acts require that the road network and circulation plans consider include bike, pedestrian, and transit networks. The bike/pedestrian/transit networks should provide for transit oriented development (TOD) centers that could serve as transfer points and nodes for future express and/or regional service. The centers also should provide a connected network linking to the future High Speed Trains and passenger rail stations. These centers should be reflected in the Land Use Elements of local agency General Plans with higher densities and a mix of land uses that make for a vibrant pedestrian oriented destination. The centers should use multi-modal LOS standards within their boundaries to ensure capacity for bike, walk, and transit.

Enhancing Vehicle Occupancy

TDM strategies designed to increase vehicle occupancy including casual and organized ridesharing, have been categorized under the concept of Enhancing Vehicle Occupancy. Ridesharing requires a match of people that reside in the same general area and work at the same location or in close proximity. The region can promote the activity through marketing the services of ridematching firms and encouraging local

companies to make the rideshare services a part of their TDM program. If a group of employees are interested in forming a formal rideshare arrangement, local agencies should assist them in applying for funding or in connecting them to another appropriate agency. Peer-to-peer carpooling programs are also available through smart phones such as AVEGO. This service allows a commuter to connect with other commuters in their area directly

Perhaps the most significant deterrent to participating in a carpool of vanpool is the fear of not having a personal vehicle to use in case an emergency arises while at work. Local agencies in the region should develop a guaranteed ride home program for employees that participate in any alternative transportation mode, including walking or bicycling.

RCTC, through Inland Empire Commuter Services (IECS), offers these services and more to local employers. By partnering with IECS, employers have access to rideshare marketing materials and services to extend to their employees at no cost such as region-wide ridematching, a guaranteed ride home program, and RCTC's Rideshare Incentive and Rideshare Plus Rewards programs.

Transit System Improvements

The region and its communities share a common goal of insuring transit services are available to provide alternative mobility for its residents. The presence of viable and sustainable transit services is critical to ensure the economic viability and the region's general well being. Transit system improvements that should continue to be implemented or researched include:

- Expansion of transit services, including additional regular or express service, Metrolink service, Bus Rapid Transit (BRT) systems, and other similar transit services.
- Multi-modal transit centers linking alternative modes of transportation including transit, non-motorized transportation, rail, etc., allowing intercity and regional connections
- Provision of alternative methods of transportation for paratransit riders
- Provision of current schedules, rates (including procedures for obtaining transit passes), and routes of mass transit service to employment sites or service areas.
- On-site waiting and loading facilities for transit.
- Provision of a convenient and safe shuttle service to transport workers/patrons to and from their residences, a park-and-ride lot, or other staging area to a workplace/service area.
- A monthly transit or rail pass subsidy of 50% or the maximum taxable benefit limit, whichever is greater.
- Transit shelters along a designated bus route or posting a bond for future construction when the transit route is extended to an employment/service site. Credit is given when the transit shelter is constructed in conformance with city/county regulations and when the employment/service site is on, or adjacent to, an existing or planned bus route.

Each of the local agencies in the County should work with affected transit providers to study transit enhancements and systems that will effectively reduce auto trips, especially along congested corridors.

Non-Motorized Transportation Improvements

The system of bicycle and pedestrian facilities must continue to be designed for all users. The skill level and preferences of bicycle riders can vary greatly. Riders who use bicycles to commute to work are likely

comfortable on the majority of roads, including those without designated bicycle facilities. However, the casual user may be uncomfortable on routes that do not include separate bicycle designations. There are several types of bicycle facilities that can accommodate the various types of bicyclists. All type of accommodations should be considered in the effort to provide the area with the best system of bicycle and pedestrian accommodations. The most common type of bicycle facilities is:

- Bicycle Lanes: Bicycle lanes are established by pavement markings and signage along streets where there is significant bicycle demand and the necessary street conditions to accommodate bike lanes. Bike lanes delineate the right of way by assigning separate lanes to motorists and bicyclists and lead to more predictable movements by each.
- Paved Shoulders: These are primarily implemented in rural areas, often on state and local highways. Paved shoulders provide a separated space for bicyclists, similar to bicycle lanes.
- Signed Shared Roadway: These roads are designated by bike route signs, generally either to provide continuity with other bicycle facilities (such as bike lanes) or to designate preferred routes through high-demand corridors. The purpose of signing the shared roadway is to indicate to bicyclists that there are advantages to using that particular route over others. Signage also alerts vehicle drivers that bicyclists are likely to be present.
- Shared Roadway (No Separate Bicycle Facility or Signage): Most minor residential streets would qualify as shared roadways as they have minimal and low-speed traffic and, therefore, do not need any bicycle designations or accommodations.

There are many factors to consider when determining the best type of bicycle accommodation for a particular road, including traffic volume, speed limit, lane widths, parking, and so on. It should be kept in mind that many streets, especially low-volume residential ones, are safe for bicycling without any modifications. Arterials and collectors may be best suited by signage, wide outside lanes, or designated bike lanes. When planning for new facilities with consideration to peak hour trip reduction and mitigation, the following issues should be considered:

- Traffic Signal Design: Traffic signals are not always capable of responding to the presence of a cyclist. In areas where signals change due to the presence of vehicles, a bicyclist may have to wait an excessive amount of time for a green light or may cross on a red light. Where appropriate, new traffic signal detectors should be implemented to recognize the presence of cyclists and cyclists should be educated on how to utilize detectors so the signal will change for them. Also, crossing lights for bicyclists/pedestrians and motorists should be examined, particularly on busy roadways, to ensure minimal points of conflict between road users.
- Bicycle Parking: Bike racks, lockers, or some other form of bicycle parking must be provided throughout the metropolitan area. While providing the route to get to a destination is often the primary consideration, bicyclists must have a place to secure their bikes once there. Areas that should provide bicycle parking include all public buildings, parks, transit stops, and places near businesses and multi-unit residential dwellings.
- Bicycle Racks on Transit Buses: Bicycling and transit are two transportation modes that are often used on the same trip. Bicycle racks on buses increases the mobility of bicyclists as it enables them to travel across the metropolitan area. Transit agencies should have bike racks installed on all new bus purchases.
- Showers/Locker Rooms: Bicycling to work would likely be more attractive to people if they were able to shower or freshen up and change in comfortable facilities. Local agencies can work on providing

shower and changing areas in public buildings and work with private employers to provide these facilities to encourage bicycling to work.

Recently, there has been a movement to plan for and implement "Complete Streets". According to the *Complete the Streets* organization (www.completestreets.org), complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists, and transit riders of all ages and abilities must be able to safely move along and across a complete street. There are many benefits to complete streets, the most prominent being improved safety for all users. In addition, complete streets encourage other modes of travel besides personal automobile, thereby improving health, decreasing air pollution from emissions, and decreasing congestion.

The design of a complete street can vary greatly, depending on the characteristics of the roadway. Local, residential streets that are low-speed and have low traffic volumes are likely already complete streets as they do not require separate accommodations for other modes of travel. Busier streets may require more infrastructure to make them complete. Items that could be part of a complete street include:

- Sidewalks
- Bike lanes
- Wide shoulders
- Separate trails
- Crosswalk striping/raised crosswalks
- Median refuges/islands
- Bus pullouts/bus only lanes
- Audible pedestrian signals/countdown pedestrian signals

The optimal design for a particular street will depend upon many factors, including its traffic volume, speed limit, lane widths, parking, and so on.

RCTC encourages each local agency to consider the elements noted above when designing new or improved transportation corridors, preparing transportation plans and circulation elements, developing a non-motorized transportation plan, or when reviewing new development proposals.

Article 3 of the California Transportation Development Act establishes 2% of Local Transportation Funds to be made available to cities and the county to build facilities for the exclusive use of pedestrians and bicyclists. Every April, the Commission releases a call for projects (SB 821) for pedestrian and bicycle facilities in which all Riverside County jurisdictions are eligible to apply for funding.

Alternative Work Schedules/Telecommuting

Alternative work schedules (also known as variable work hours) are comprised of three different strategies: flextime, compressed work weeks, and staggered shifts. The definition of each follows:

- Flextime—Employees work specified hours each week, but are given flexibility on when they arrive to work, take lunch, and leave work.
- Compressed work weeks—Employees work more hours than typical, but work fewer days per week or pay period.

- Staggered shifts—Employees arrive and depart work at different times in shifts. Shifts may be staggered anywhere from 15 minutes to two hours.

In general, alternative work schedule strategies provide the following benefits:

- Reduce peak period congestion directly
- Make ridesharing and transit use more feasible
- Reduce parking lot and entrance/exit congestion
- Less employee stress/better productivity
- Facilitate better employee morale/retention
- Reduce tardiness
- Are economical to provide
- Can offer flexibility needed for other commute solutions
- Staggered hours allow for more coverage because of extended workday
- More flexibility for personal and work time
- Can offer flexibility needed for other commute solutions
- Often reduces commute time by avoiding rush hour traffic
- Less traffic congestion during peak hours
- Better air quality from reduced congestion

Telecommuting involves a situation where an employee is working anywhere but in his/her traditional office. A typical scenario involves employees working at home either full or part time, but they could also be working on travel assignments, at remote work centers, or on the road day-by-day. Telecommuting benefits include:

- Reduced parking needs
- Reduced office space needs and overhead costs
- Less employee stress/better productivity
- Better employee morale/retention
- Decreased absenteeism and sick leave
- More flexibility for personal and work time
- Higher productivity
- Less traffic congestion
- Better air quality
- Reduced fuel use
- Eligibility in the IECS Rideshare Incentive/Rideshare Plus Rewards programs

Alternative work schedules and telecommuting should continue to be highlighted as TDM plans and programs are required by local agencies during review of development and redevelopment proposals. Both of these TDM strategies have the greatest potential for significant trip reduction in the region.

Parking Management

Parking management techniques include a range of practices, such as preferred parking spaces for high occupancy vehicles and alternative fuel vehicles, reduced parking charges for carpools and vanpools, shared parking facilities, daily rather than monthly parking charges, establishing parking maximums for new

developments, and the taxing of parking facilities. As is the case with most other TDM strategies, parking management can be even more effective when combined with other TDM techniques such as free transit passes, cash-incentive programs, and the availability of high-quality transit service. Local agencies should consider these management strategies as new developments and redevelopment projects are proposed and reviewed.

TRANSPORTATION SYSTEMS MANAGEMENT

Transportation Systems Management (TSM) is defined as a program to reduce demand on, and increase the capacity of, the existing transportation system. Specifically, TSM is an integrated program that will optimize the performance of existing infrastructure through the implementation of systems, services, and projects designed to preserve capacity and improve security, safety, and reliability. TSM strategies include the following:

- 511 Traveler Information Service which provides Riverside County with real-time traffic information and commute alternatives by calling 511 or visiting ie511.org
- Ramp metering
- Congestion pricing
- Changeable message signs
- Signal coordination
- Roadway improvements
- Improved signal timing
- Intelligent Transportation Systems (ITS) improvements, such as detection and video surveillance
- Re-routing of traffic to less congested routes
- Pedestrian facilities including restricted pedestrian crossings and consideration of pedestrian overcrossings
- Placement of transit stops and bus bays
- Corridor access improvements
- Advanced traffic signal timing programs, such as SCOOT (Split Cycle Offset Optimization Technique) or SCAT (Sydney Coordinated Adaptive Traffic) systems
- Neighborhood Electric Vehicles

RCTC, Caltrans, and each of the local agencies within the County should consider the design and implementation of TSM improvements (where feasible) as they plan for and design street and highway improvement projects; especially along heavily congested streets and highways. Local agencies that fund ITS projects with federal or state funds are required to be consistent with the Regional Architecture Plan. This Plan is incorporated into SCAG's RTP.

SCAG COMPASS BLUEPRINT

The Southern California Council of Governments' (SCAG) Compass Blueprint was enacted to encourage creative and sustainable development strategies that fit local needs and support shared regional values. The SCAG Compass Blueprint is regional in scope and supports the integration of land use, transportation, and resource planning. The planning process considers the "Three Es" of sustainable communities: prosperous economy, quality environment, and social equity. Blueprint planning is a comprehensive undertaking that requires innovation, collaborative planning, thinking on a macro scale, and a willingness to

follow through to implementation. Through partnerships with local governments, the SCAG Compass Blueprint serves communities by applying the best available tools to create successful examples to accommodate regional growth. A principal objective of the Compass Blueprint is to balance job growth with housing growth in order to reduce trips and vehicle miles traveled (VMT).

Local agencies in Riverside County that have completed or are currently working with SCAG on Compass planning include Cathedral City, Coachella, Corona, Desert Hot Springs, Hemet, Lake Elsinore, Moreno Valley, Norco, Perris, Riverside, Murrieta, and Temecula. Some of the various Compass-related projects in Riverside County that these and other agencies are currently implementing or will initiate shortly include the following:

- City of Alhambra – Alhambra Vision 2035
- City of Anaheim – Anaheim Platinum Necklace Urban Greenways
- City of Calimesa – Calimesa Creek Riverwalk Master Plan
- City of Fullerton – Fullerton Smart Growth 2030
- City of La Mirada, California Air Resources Board (ARB), Caltrans – La Mirada I-5 Corridor Specific Plan
- Los Angeles County Metropolitan Transportation Authority (LACMA/Metro) – Los Angeles Metro Orange Line Sustainable Corridor Implementation Plan
- City of Los Angeles, Caltrans, Metro, Los Angeles Department of Transportation (LADOT) – Los Angeles PARK 101 District Phase 2
- City of Bellflower – Bellflower Alondra Mixed-Use Overlay Zone
- City of Cathedral City – Cathedral City Date Palm Drive Connector Phase 2
- City of Highland, San Bernardino Association of Governments (SANBAG), Omnitrans – Highland Base Line Corridor Study
- City of Los Angeles, LADOT – Los Angeles Transit Oriented Development (TOD) Parking Data Collection
- City of Moreno Valley – Moreno Valley Alessandro Boulevard Corridor Vision Phase 2
- City of Oxnard – Oxnard Downtown East Transit Oriented Development Study
- City of Rancho Mirage, The Agua Caliente Band of Cahuilla Indians, Coachella Valley Association of Governments (CVAG) – Rancho Mirage Interim Energy Park Study
- City of Santa Clarita – Santa Clarita North Newhall Specific Plan

SENATE BILL (SB) 375

SB 375 (Steinberg) is California state law that became effective January 1, 2009. This new law requires California's Air Resources Board (CARB) to develop regional reduction targets for greenhouse gas emissions (GHG). Future growth and development in California and within the Riverside County region will be planned consistent with Senate Bill (SB) 375, which calls for the integration of transportation and land use and housing planning through the development of "Sustainable Community Strategies" (SCS). California's 18 Metropolitan Planning Organizations (MPOs) have been tasked with creating SCSs and demonstrating actions necessary to attain the proposed reduction targets by 2020 and 2035. According to SCAG, by April 2012, the SCS will be included as a required element in its 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); thereby providing "a plan for meeting emissions reduction targets set forth by CARB." On September 23, 2010, CARB issued a regional reduction target of

8% per capita for the planning year 2020, and a 13% conditional target for 2035. SCAG is in the process of identifying how it will meet the targets focusing on a variety of strategies to be incorporated in the 2012 RTP/SCS.

The efforts presented in this Chapter are consistent with the objectives of SB 375 and AB 32 by supporting sustainable community strategies for the purpose of reducing GHG emissions, improving air quality, aligning planning for transportation and housing, and creating opportunities for the implementation of TDM and TSM strategies that reduce trips and vehicle miles traveled. Once the 2012 RTP/SCS is adopted, RCTC will use strategies listed in the 2012 RTP/SCS in the 2013 CMP Update.

CHAPTER 8
CAPITAL IMPROVEMENT PROGRAM

STATUTORY REQUIREMENTS

Section 65089(b)(5) of the CMP Statutes requires that RCTC prepare a seven-year capital improvement program, developed using the performance measures described in paragraph (2) to determine effective projects that maintain or improve the performance of the multimodal system for the movement of people and goods, and to mitigate regional transportation impacts identified pursuant to paragraph (4).

RCTC CIP PROGRAM

For purposes of this CMP Update, the 2011 Capital Improvement Program (CIP) consists of the STIP, Measure "A", TUMF programs, and other federally funded projects programmed on the CMP system. RCTC submits state, local and federally funded projects to the Southern California Association of Governments (SCAG) for inclusion in the FTIP. Locally funded non-regionally significant projects are not required to be included in the FTIP.

The following list of goals and objectives from SCAG's 2008 RTP reflect a vision that guides the transportation planning process, including development of the RTP, FTIP, and subregional CMPs:

- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment, improve air quality and promote energy efficiency
- Encourage land use and growth patterns that complement our transportation investments
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies

The following performance measures are also identified to determine whether the goals and objectives are being met:

- Mobility – speed delay
- Accessibility – percent PM peak period work trips within 45 minutes of home
- Reliability – percent variation in travel time
- Productivity – percent capacity utilized during peak conditions
- Safety – accident rates
- Sustainability – total cost per capita to sustain system performance at Base Year levels
- Preservation – maintenance cost per capita to preserve system at Base Year conditions
- Cost-Effectiveness – benefit to cost (B/C) ratio

- Environmental – emissions generated by travel
- Environmental Justice – distribution of benefits and costs

The RTP Subcommittee is contemplating the addition of several performance measures as part of the 2012 SCAG RTP/SCS and includes the following:

- Location Efficiency – focus on transit viability and alternative modes of travel
- Reliability – variability of travel time for trucks
- Safety and Health – focus on location of roadways in relation to residential land uses and rates of noise and air quality impacts
- System Sustainability – cost per capita to preserve multi-modal system

CHAPTER 9
CMP CONFORMANCE AND MONITORING

STATUTORY REQUIREMENTS

Section 65089.3 of the Government Code requires RCTC to monitor the implementation of all elements of the Congestion Management Program (CMP). Caltrans is responsible for data collection and analysis on State highways, unless the agency designates that responsibility to another entity. RCTC may also assign responsibility of data collection and analysis to other owners and operators of facilities or services if the responsibilities are specified in its adopted program. RCTC must also consult with Caltrans and other affected owners and operators in developing data collection and analysis procedures and schedules prior to program adoption.

RCTC CONFORMANCE AND MONITORING

At least biennially, RCTC will determine if the County and cities are conforming to the CMP, including, but not limited, to the following:

(a) Consistency with levels of service standards, except as provided in Section 65089.4.
(b) Evaluation of performance of the transportation system.
(c) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

In addition to conformity requirements referenced in specific sections of the Government Code, the County and cities must work with the Congestion Management Agency (CMA) to provide Level of Service (LOS) monitoring information along the CMP System. This process is detailed in Chapter 5, Enhanced Transportation System Management Program.

RCTC will continue to work with its Technical Advisory Committee (TAC) to introduce new or revised requirements. Additional CMP workshops, to be held at the request of individual jurisdictions, offer the opportunity for planning and engineering staff to gain a better understanding of the CMP in an informal environment.

1) Consistency with LOS Standards

To simplify the process of collecting traffic counts from Caltrans and the local agencies, RCTC has implemented the Enhanced Transportation System Management Program. LOS calculations will primarily be based upon the newly installed traffic counting equipment along the state highway system. Counts along the local arterial system will be provided by the subregional agencies, affected local agencies, or from counts conducted by RCTC. Currently, 28 Smart Call Boxes (SCB) sites have been installed by RCTC to collect traffic counts along the State highway system. RCTC also coordinates with Caltrans for traffic count data collected from its Performance Measurement System (PeMS).

The Enhanced Transportation System Management Program utilizes "loop or pavement sensors" currently installed along the State Highway system at call boxes and PeMS sites along the highway system. The program provides Caltrans and RCTC the ability to retrieve real-time count information. Chapter 5 of this CMP contains a full explanation of the SCB and PeMS implementation program.

2) Program to Manage and Analyze the System

To insure that the CMP System is appropriately monitored to reduce the occurrence of CMP deficiencies, proposed development projects can be evaluated by each affected agency to determine potential regional and sub-regional impacts along the CMP Systems. As a result, such evaluation will reduce the incidence of LOS deficiencies along the CMP System.

Local agencies are encouraged to work with other affected agencies to mitigate the impacts considering California Environmental Quality Act (CEQA) and Intergovernmental Report (IGR) requirements to insure that major development projects and plans are evaluated and reflected in the Southern California Association of Governments (SCAG) Transportation Model.

When a LOS deficiency is identified as part of the CMP Update, further detailed analysis of LOS shall be conducted to determine whether an actual deficiency has occurred. The LOS analysis conducted as part of the CMP Update process is only considered to be a “screening” level analysis, and a more detailed assessment of a potential deficiency would be required before a deficiency is formally identified. Coordination with the affected local jurisdiction(s) will be made to insure that appropriate data, geometrics, counts and other related information is applied to calculate LOS.

3) Transportation Model Consistency Requirements

Transportation Modeling Guidelines have been developed by SCAG to assist local agencies in developing transportation models to analyze the circulation system within their jurisdiction or for special transportation studies. These guidelines are available at RCTC and at the SCAG Inland Empire office in Riverside. In addition, the Riverside County Transportation Department, in coordination with RCTC, WRCOG, CVAG, and local agencies, developed transportation modeling guidelines for the RIVTAM model. RCTC requires that these guidelines be followed during development of traffic models for all projects of regional significance. The guidelines have several objectives; however, the primary objective is to insure that the legislative requirements for transportation modeling and database consistency are achieved. In addition, the guidelines have been designed to ease the transfer of information from the regional and subregional models to local models and vice-versa.

REQUIRED CMP UPDATES

The CMPs were required to be updated annually between 1992 and 1995. An amendment to the CMP legislation changed the update to occur biennially. Table 9-1 outlines the updates approved since inception: The 2011 CMP update consists of monitoring the CMP System, and reporting the results of the analysis including deficiencies. Update of the 2011 CMP is required to be updated and adopted by December 2011.

SCAG CONSISTENCY REVIEW

The 2011 CMP will be reviewed by SCAG for consistency with the Regional Transportation Plan (RTP) and with CMPs of adjoining counties (San Bernardino, Orange, and Los Angeles Counties). Under the MPO planning regulations, SCAG is required to certify that it meets federal CMS requirements, which includes a review and consistency determination of all CMPs within the SCAG region.

TABLE 9-1

CMP UPDATES SINCE INCEPTION

Year	Major Effort/Revisions	Adopted
1992	The Commission originally adopted the CMP	December 1992
1993	The CMP was revised focusing on LOS evaluation	December 1993
1994	The Commission updated Chapters 3 and 5 of the CMP	December 1994
1995	The CMP was revised and updated, primarily focusing on Chapter 5, Land Use Coordination and the inclusion of legislative amendments	December 1995
1997	The CMP was thoroughly amended focusing on replacement of the Traffic Impact Assessment (TIA) process contained in the Land Use Coordination Program (Chapter 5). The TIA process was replaced with the Enhanced Traffic Monitoring Program	December 1997
1999	The CMP was revised focusing on LOS evaluation	December 1999
2001	Minor revisions were included in the update and RCTC issued the RFP for the traffic counter installations at Smart Call Box and Traffic Management Center Sites.	December 2001
2003	The 2003 CMP Update was focused on continued implementation of the CMP to meet Federal Congestion Management System (CMS) requirements. The traffic counter installations project was nearing completion. Test runs were initiated.	December 2003
2005	The 2005 CMP Update focused on a review of LOS and monitoring of various street and highway segments that were approaching deficient levels of service. Several segments were identified as deficient through the application of floating car runs. These segments fell deficient due to construction activity and road closures in adjacent areas.	May 2006
2007	The 2007 CMP Update also focused on a review of LOS and monitoring of various street and highway segments that were approaching deficient levels of service as referenced for 2005. Several segments were identified as deficient through the application of floating car runs. These segments fell deficient due to construction activity and road closures in adjacent areas.	December 2007
2009-2010	The CMP Update focused on a review of LOS, monitoring of various street and highway segments that were approaching deficient levels of service as referenced in the 2007 CMP, and incorporating TDM and TSM efforts implemented by RCTC and local agencies. Several segments were identified as deficient in 2007 through the application of floating car runs. These segments fell deficient due to construction activity and road closures in adjacent areas. In 2010, the LOS improved along some of these segments as a result of construction and road closures being completed. For the other segments where construction is affecting the existing LOS, continued monitoring of the segments was undertaken. In addition, there were a few segments that were identified as deficient; however, short-term future improvement projects are programmed to address those deficiencies and other modal services are available to address mode shift opportunities along the segments.	March 2010

CHAPTER 10
CMP DEVELOPMENT AND IMPLEMENTATION/ UPDATE PROCESS

STATUTORY REQUIREMENTS

Section 65089(a) of the Government Code requires that the Congestion Management Program (CMP) must be developed, adopted, and updated biennially, consistent with the schedule for the adoption and update of the Regional Transportation Improvement Program (RTIP), for every county that includes an urbanized area, and must include every city and the county. Development of the CMP must also be coordinated with the Southern California Association of Governments (SCAG), regional transportation providers, local governments, Caltrans, and respective air districts.

RCTC DEVELOPMENT, IMPLEMENTATION, AND UPDATE PROCESS

As described above, CMP legislation requires that the Program be developed, adopted, implemented, monitored, and updated biennially. This chapter primarily focuses on procedural, administrative, and coordination activities related to CMP development, adoption, implementation and update. To meet the requirements of the legislation, the CMP shall be developed, adopted, implemented, and updated in accordance with procedures described in the following sections.

CMP DEVELOPMENT

The CMP is developed to meet federal CMS requirements and also includes elements of the State's CMP guidelines. State CMP statutes AB 471, 1791, AB 3093, AB 1963, and AB 2419 (reference Appendix 1).

CMP ADOPTION PROCEDURE

The following procedure has been developed to outline the process toward preparation and adoption of the CMP. RCTC staff shall coordinate the development of the CMP with the RCTC Technical Advisory Committee (TAC).

- Local agencies should continue to monitor the CMP System. It is suggested that the local agency collect ground counts at least every four (4) months to provide for average annual traffic conditions.
- Beginning in April of each odd numbered year, RCTC will obtain counts, PeMS speed data or LOS analysis from Caltrans, CVAG, and local agencies.
- In May of each odd numbered year, RCTC must initiate a CMP update. RCTC staff will review individual Chapters with the RCTC TAC, as necessary.
- In October of each odd numbered year, RCTC must submit a Preliminary Draft of the CMP to SCAG and the RCTC TAC CMP Subcommittee for review and comment.

- In November of each odd numbered year, RCTC staff will submit the Draft CMP to the TAC for formal review and approval.

- Between November and December of each odd numbered year, RCTC staff will submit the Final Draft to the Commission for review and approval

CMP IMPLEMENTATION

The CMP is to be implemented and monitored in accordance with procedures described in Chapter 9 - CMP Conformance and Monitoring.

CMP UPDATE PROCEDURE

The CMP update process should be initiated at least six months prior to adoption. Revision of the CMP may occur any time during the year to address specific issues.

The update should include a thorough review of each Chapter or required element contained in the current CMP. A suggested review process follows:

- Legislative revisions or new enactments to CMP statutes should be thoroughly reviewed and incorporated into the CMP update. (Chapter 1, 2)

- Review agency requests for adding road segments to the CMP System. According to the CMP legislation, facilities may only be added to CMP system. All facilities included in the adopted CMP must be retained. (Chapter 1, 2)

- Review adjacent county CMP Systems to determine if facilities were added or are proposed for addition. Review and analyze any additions considering SCAG's Consistency Guidelines on file at RCTC. (Chapter 2)

- Review, in coordination with SCAG and local agencies, the existing and future year databases used for transportation modeling purposes to insure consistency in the development of socioeconomic estimates and projections. (Chapter 3)

- Review the adopted CMP Minimum level of service (LOS) standard. The CMP LOS standard can only be increased above the level identified in the adopted Program. (Chapter 4)
- Review LOS estimates to determine if the LOS along CMP facilities has dropped below LOS "E".

- Document the purpose for, and status of, deficiency plans that may have been prepared by local agencies during the previous year including proposed mitigation measures.

- Document segments or intersections that are at LOS “E”, close to falling below the adopted CMP threshold.

- Review the Productivity Improvement Program Transit System Performance Indicators for any changes/updates.

- Document whether public transit or passenger rail service was identified as a mitigation measure or potential mitigation measure in the development of deficiency plans.

- Review the CMP Conformance and Monitoring Process to determine whether the process is consistent with changes or revisions identified within other CMP elements.

- Review federal MPO planning regulations for any changes and additions to federal CMS requirements.

APPENDIX 1

CALIFORNIA GOVERNMENTS STATUTES REFERENCING CONGESTION MANAGEMENT PROGRAMS (Sections 65088-89)

65088. The Legislature finds and declares all of the following:

(a) Although California's economy is critically dependent upon transportation, its current transportation system relies primarily upon a street and highway system designed to accommodate far fewer vehicles than are currently using the system.

(b) California's transportation system is characterized by fragmented planning, both among jurisdictions involved and among the means of available transport.

(c) The lack of an integrated system and the increase in the number of vehicles are causing traffic congestion that each day results in 400,000 hours lost in traffic, 200 tons of pollutants released into the air we breathe, and three million one hundred thousand dollars ($3,100,000) added costs to the motoring public.

(d) To keep California moving, all methods and means of transport between major destinations must be coordinated to connect our vital economic and population centers.

(e) In order to develop the California economy to its full potential, it is intended that federal, state, and local agencies join with transit districts, business, private and environmental interests to develop and implement comprehensive strategies needed to develop appropriate responses to transportation needs.

(f) In addition to solving California's traffic congestion crisis, rebuilding California's cities and suburbs, particularly with affordable housing and more walkable neighborhoods, is an important part of accommodating future increases in the state's population because homeownership is only now available to most Californians who are on the fringes of metropolitan areas and far from employment centers.

(g) The Legislature intends to do everything within its power to remove regulatory barriers around the development of infill housing, transit-oriented development, and mixed use commercial development in order to reduce regional traffic congestion and provide more housing choices for all Californians.

(h) The removal of regulatory barriers to promote infill housing, transit-oriented development, or mixed use commercial development does not preclude a city or county from holding a public hearing nor finding that an individual infill project would be adversely impacted by the surrounding environment or transportation patterns.

65088.1. As used in this chapter the following terms have the following meanings:

(a) Unless the context requires otherwise, "regional agency" means the agency responsible for preparation of the regional transportation improvement program.

(b) Unless the context requires otherwise, "agency" means the agency responsible for the preparation and adoption of the congestion management program.

(c) "Commission" means the California Transportation Commission.

(d) "Department" means the Department of Transportation.

(e) "Local jurisdiction" means a city, a county, or a city and county.

(f) "Parking cash-out program" means an employer-funded program under which an employer offers to provide a cash allowance to an employee equivalent to the parking subsidy that the employer would otherwise pay to provide the employee with a parking space. "Parking subsidy" means the difference between the out-of-pocket amount paid by an employer on a regular basis in order to secure the availability of an employee parking space not owned by the employer and the price, if any, charged to an employee for use of that space. A parking cash-out program may include a requirement that employee participants certify that they will comply with guidelines established by the employer designed to avoid neighborhood parking problems, with a provision that employees not complying with the guidelines will no longer be eligible for the parking cash-out program.

(g) "Infill opportunity zone" means a specific area designated by a city or county, pursuant to subdivision (c) of Section **65088**.4, zoned for new compact residential or mixed use development within one-third mile of a site with an existing or future rail transit station, a ferry terminal served by either a bus or rail transit service, an intersection of at least two major bus routes, or within 300 feet of a bus rapid transit corridor, in counties with a population over 400,000. The mixed use development zoning shall consist of three or more land uses that facilitate significant human interaction in close proximity, with residential use as the primary land use supported by other land uses such as office, hotel, health care, hospital, entertainment, restaurant, retail, and service uses. The transit service shall have maximum scheduled headways of 15 minutes for at least 5 hours per day. A qualifying future rail station shall have broken ground on construction of the station and programmed operational funds to provide maximum scheduled headways of 15 minutes for at least 5 hours per day.

(h) "Interregional travel" means any trips that originate outside the boundary of the agency. A "trip" means a one-direction vehicle movement. The origin of any trip is the starting point of that trip. A roundtrip consists of two individual trips.

(i) "Level of service standard" is a threshold that defines a deficiency on the congestion management program highway and roadway system which requires the preparation of a deficiency plan. It is the intent of the Legislature that the agency shall use all elements of the program to implement strategies and actions that avoid the creation of deficiencies and to improve multimodal mobility.

(j) "Multimodal" means the utilization of all available modes of travel that enhance the movement of people and goods, including, but not limited to, highway, transit, nonmotorized, and demand management strategies including, but not limited to, telecommuting. The availability and practicality of specific multimodal systems, projects, and strategies may vary by county and region in accordance with the size and complexity of different urbanized areas.

(k) "Performance measure" is 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. Use of a performance measure as part of the program does not trigger the requirement for the preparation of deficiency plans.

(l) "Urbanized area" has the same meaning as is defined in the 1990 federal census for urbanized areas of more than 50,000 population.

(m) "Bus rapid transit corridor" means a bus service that includes at least four of the following attributes:

(1) Coordination with land use planning.

(2) Exclusive right-of-way.

(3) Improved passenger boarding facilities.

(4) Limited stops.

(5) Passenger boarding at the same height as the bus.

(6) Prepaid fares.

(7) Real-time passenger information.
(8) Traffic priority at intersections.
(9) Signal priority.
(10) Unique vehicles.

65088.3.
This chapter does not apply in a county in which a majority of local governments, collectively comprised of the city councils and the county board of supervisors, which in total also represent a majority of the population in the county, each adopt resolutions electing to be exempt from the congestion management program.

65088.4.
(a) It is the intent of the Legislature to balance the need for level of service standards for traffic with the need to build infill housing and mixed use commercial developments within walking distance of mass transit facilities, downtowns, and town centers and to provide greater flexibility to local governments to balance these sometimes competing needs.

(b) Notwithstanding any other provision of law, level of service standards described in Section 65089 shall not apply to the streets and highways within an infill opportunity zone. The city or county shall do either of the following:

(1) Include these streets and highways under an alternative areawide level of service standard or multimodal composite or personal level of service standard that takes into account both of the following:

(A) The broader benefits of regional traffic congestion reduction by siting new residential development within walking distance of, and no more than one-third mile from, mass transit stations, shops, and services, in a manner that reduces the need for long vehicle commutes and improves the jobs-housing balance.

(B) Increased use of alternative transportation modes, such as mass transit, bicycling, and walking.

(2) Approve a list of flexible level of service mitigation options that includes roadway expansion and investments in alternate modes of transportation that may include, but are not limited to, transit infrastructure, pedestrian infrastructure, and ridesharing, vanpool, or shuttle programs.

(c) The city or county may designate an infill opportunity zone by adopting a resolution after determining that the infill opportunity zone is consistent with the general plan and any applicable specific plan. A city or county may not designate an infill opportunity zone after December 31, 2009.

(d) The city or county in which the infill opportunity zone is located shall ensure that a development project shall be completed within the infill opportunity zone not more than four years after the date on which the city or county adopted its resolution pursuant to subdivision (c). If no development project is completed within an infill opportunity zone by the time limit imposed by this subdivision, the infill opportunity zone shall automatically terminate.

65088.5.
Congestion management programs, if prepared by county transportation commissions and transportation authorities created pursuant to Division 12 (commencing with Section 130000) of the Public Utilities **Code**, shall be used by the regional transportation planning agency to meet federal requirements for a congestion management system, and shall be incorporated into the congestion management system.

65089.

(a) A congestion management program shall be developed, adopted, and updated biennially, consistent with the schedule for adopting and updating the regional transportation improvement program, for every county that includes an urbanized area, and shall include every city and the county. The program shall be adopted at a noticed public hearing of the agency. The program shall be developed in consultation with, and with the cooperation of, the transportation planning agency, regional transportation providers, local governments, the department, and the air pollution control district or the air quality management district, either by the county transportation commission, or by another public agency, as designated by resolutions adopted by the county board of supervisors and the city councils of a majority of the cities representing a majority of the population in the incorporated area of the county.

(b) The program shall contain all of the following elements:

(1) (A) Traffic level of service standards established for a system of highways and roadways designated by the agency. The highway and roadway system shall include at a minimum all state highways and principal arterials. No highway or roadway designated as a part of the system shall be removed from the system. All new state highways and principal arterials shall be designated as part of the system, except when it is within an infill opportunity zone. Level of service (LOS) shall be measured by Circular 212, by the most recent version of the Highway Capacity Manual, or by a uniform methodology adopted by the agency that is consistent with the Highway Capacity Manual. The determination as to whether an alternative method is consistent with the Highway Capacity Manual shall be made by the regional agency, except that the department instead shall make this determination if either (i) the regional agency is also the agency, as those terms are defined in Section **65088**.1, or (ii) the department is responsible for preparing the regional transportation improvement plan for the county.

(1) (B) In no case shall the LOS standards established be below the level of service E or the current level, whichever is farthest from level of service A except when the area is in an infill opportunity zone. When the level of service on a segment or at an intersection fails to attain the established level of service standard outside an infill opportunity zone, a deficiency plan shall be adopted pursuant to Section 65089.4.

(2) 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, these performance measures shall incorporate highway and roadway system performance, and 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 capital improvement program required pursuant to paragraph (5), deficiency plans required pursuant to Section 65089.4, and the land use analysis program required pursuant to paragraph (4).

(3) A travel demand element that promotes alternative transportation methods, including, but not limited to, carpools, vanpools, transit, bicycles, and park-and-ride lots; improvements in the balance between jobs and housing; and other strategies, including, but not limited to, flexible work hours, telecommuting, and parking management programs. The agency shall consider parking cash-out programs during the development and update of the travel demand element.

(4) A program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts. This program shall measure, to the extent possible, the impact to the transportation system using the performance measures described in paragraph (2). In no case shall the program include an

estimate of the costs of mitigating the impacts of interregional travel. The program shall provide credit for local public and private contributions to improvements to regional transportation systems. However, in the case of toll road facilities, credit shall only be allowed for local public and private contributions which are unreimbursed from toll revenues or other state or federal sources. The agency shall calculate the amount of the credit to be provided. The program defined under this section may require implementation through the requirements and analysis of the California Environmental Quality Act, in order to avoid duplication.

(5) A seven-year capital improvement program, developed using the performance measures described in paragraph (2) to determine effective projects that maintain or improve the performance of the multimodal system for the movement of people and goods, to mitigate regional transportation impacts identified pursuant to paragraph (4). The program shall conform to transportation-related vehicle emission air quality mitigation measures, and include any project that will increase the capacity of the multimodal system. It is the intent of the Legislature that, when roadway projects are identified in the program, consideration be given for maintaining bicycle access and safety at a level comparable to that which existed prior to the improvement or alteration. The capital improvement program may also include safety, maintenance, and rehabilitation projects that do not enhance the capacity of the system but are necessary to preserve the investment in existing facilities.

(c) The agency, in consultation with the regional agency, cities, and the county, shall develop a uniform data base on traffic impacts for use in a countywide transportation computer model and shall approve transportation computer models of specific areas within the county that will be used by local jurisdictions to determine the quantitative impacts of development on the circulation system that are based on the countywide model and standardized modeling assumptions and conventions. The computer models shall be consistent with the modeling methodology adopted by the regional planning agency. The data bases used in the models shall be consistent with the data bases used by the regional planning agency. Where the regional agency has jurisdiction over two or more counties, the data bases used by the agency shall be consistent with the data bases used by the regional agency.

(d) (1) The city or county in which a commercial development will implement a parking cash-out program that is included in a congestion management program pursuant to subdivision (b), or in a deficiency plan pursuant to Section 65089.4, shall grant to that development an appropriate reduction in the parking requirements otherwise in effect for new commercial development.

(2) At the request of an existing commercial development that has implemented a parking cash-out program, the city or county shall grant an appropriate reduction in the parking requirements otherwise applicable based on the demonstrated reduced need for parking, and the space no longer needed for parking purposes may be used for other appropriate purposes.

(e) Pursuant to the federal Intermodal Surface Transportation Efficiency Act of 1991 and regulations adopted pursuant to the act, the department shall submit a request to the Federal Highway Administration Division Administrator to accept the congestion management program in lieu of development of a new congestion management system otherwise required by the act.

65089.1.

(a) For purposes of this section, "plan" means a trip reduction plan or a related or similar proposal submitted by an employer to a local public agency for adoption or approval that is designed to facilitate employee ridesharing, the use of public transit, and other means of travel that do not employ a single-occupant vehicle.

(b) An agency may require an employer to provide rideshare data bases; an emergency ride program; a preferential parking program; a transportation information program; a parking cash-out program, as defined in subdivision (f) of Section **65088**.1; a public transit subsidy in an amount to be determined by the employer; bicycle parking areas; and other noncash value programs which encourage or facilitate the use of alternatives to driving alone. An employer may offer, but no agency shall require an employer to offer, cash, prizes, or items with cash value to employees to encourage participation in a trip reduction program as a condition of approving a plan.

(c) Employers shall provide employees reasonable notice of the content of a proposed plan and shall provide the employees an opportunity to comment prior to submittal of the plan to the agency for adoption.

(d) Each agency shall modify existing programs to conform to this section not later than June 30, 1995. Any plan adopted by an agency prior to January 1, 1994, shall remain in effect until adoption by the agency of a modified plan pursuant to this section.

(e) Employers may include disincentives in their plans that do not create a widespread and substantial disproportionate impact on ethnic or racial minorities, women, or low-income or disabled employees.

(f) This section shall not be interpreted to relieve any employer of the responsibility to prepare a plan that conforms with trip reduction goals specified in Division 26 (commencing with Section 39000) of the Health and Safety **Code**, or the Clean Air Act (42 U.S.C. Sec. 7401 et seq.).

(g) This section only applies to agencies and employers within the South Coast Air Quality Management District.

65089.2.

(a) Congestion management programs shall be submitted to the regional agency. The regional agency shall evaluate the consistency between the program and the regional transportation plans required pursuant to Section 65080. In the case of a multicounty regional transportation planning agency, that agency shall evaluate the consistency and compatibility of the programs within the region.

(b) The regional agency, upon finding that the program is consistent, shall incorporate the program into the regional transportation improvement program as provided for in Section 65082. If the regional agency finds the program is inconsistent, it may exclude any project in the congestion management program from inclusion in the regional transportation improvement program.

(c) (1) The regional agency shall not program any surface transportation program funds and congestion mitigation and air quality funds pursuant to Section 182.6 and 182.7 of the Streets and Highways **Code** in a county unless a congestion management program has been adopted by December 31, 1992, as required pursuant to Section 65089. No surface transportation program funds or congestion mitigation and air quality funds shall be programmed for a project in a local jurisdiction that has been found to be in nonconformance with a congestion management program pursuant to Section 65089.5 unless the agency finds that the project is of regional significance.

(2) Notwithstanding any other provision of law, upon the designation of an urbanized area, pursuant to the 1990 federal census or a subsequent federal census, within a county which previously did not include an urbanized area, a congestion management program as required pursuant to Section 65089 shall be adopted within a period of 18 months after designation by the Governor.

(d) (1) It is the intent of the Legislature that the regional agency, when its boundaries include areas in more than one county, should resolve inconsistencies and mediate disputes which arise between agencies related to congestion management programs adopted for those areas.

(2) It is the further intent of the Legislature that disputes which may arise between regional agencies, or agencies which are not within the boundaries of a multicounty regional transportation planning agency, should be mediated and resolved by the Secretary of Business, Housing and Transportation Agency, or an

employee of that agency designated by the secretary, in consultation with the air pollution control district or air quality management district within whose boundaries the regional agency or agencies are located.

(e) At the request of the agency, a local jurisdiction that owns, or is responsible for operation of, a trip-generating facility in another county shall participate in the congestion management program of the county where the facility is located. If a dispute arises involving a local jurisdiction, the agency may request the regional agency to mediate the dispute through procedures pursuant to subdivision (d) of Section 65089.2. Failure to resolve the dispute does not invalidate the congestion management program.

65089.3.

The agency shall monitor the implementation of all elements of the congestion management program. The department is responsible for data collection and analysis on state highways, unless the agency designates that responsibility to another entity. The agency may also assign data collection and analysis responsibilities to other owners and operators of facilities or services if the responsibilities are specified in its adopted program. The agency shall consult with the department and other affected owners and operators in developing data collection and analysis procedures and schedules prior to program adoption. At least biennially, the agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:

(a) Consistency with levels of service standards, except as provided in Section 65089.4.

(b) Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.

(c) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

65089.4.

(a) A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service standards are not maintained on segments or intersections of the designated system. The deficiency plan shall be adopted by the city or county at a noticed public hearing.

(b) The agency shall calculate the impacts subject to exclusion pursuant to subdivision (f) of this section, after consultation with the regional agency, the department, and the local air quality management district or air pollution control district. If the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, the agency shall make a finding at a publicly noticed meeting that no deficiency plan is required and so notify the affected local jurisdiction.

(c) The agency shall be responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of this section. The deficiency plan shall include all of the following:

(1) An analysis of the cause of the deficiency. This analysis shall include the following:

(A) Identification of the cause of the deficiency.

(B) Identification of the impacts of those local jurisdictions within the jurisdiction of the agency that contribute to the deficiency. These impacts shall be identified only if the calculated traffic level of service following exclusion of impacts pursuant to subdivision (f) indicates that the level of service standard has not been maintained, and shall be limited to impacts not subject to exclusion.

(2) A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service otherwise required and the estimated costs of the improvements.

(3) A list of improvements, programs, or actions, and estimates of costs, that will (A) measurably improve multimodal performance, using measures defined in paragraphs (1) and (2) of subdivision (b) of

Section 65089, and (B) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, parking cash-out programs, and transportation control measures. The air quality management district or the air pollution control district shall establish and periodically revise a list of approved improvements, programs, and actions that meet the scope of this paragraph. If an improvement, program, or action on the approved list has not been fully implemented, it shall be deemed to contribute to significant improvements in air quality. If an improvement, program, or action is not on the approved list, it shall not be implemented unless approved by the local air quality management district or air pollution control district.

(4) An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000), that shall be implemented, consisting of improvements identified in paragraph (2), or improvements, programs, or actions identified in paragraph (3), that are found by the agency to be in the interest of the public health, safety, and welfare. The action plan shall include a specific implementation schedule. The action plan shall include implementation strategies for those jurisdictions that have contributed to the cause of the deficiency in accordance with the agency's deficiency plan procedures. The action plan need not mitigate the impacts of any exclusions identified in subdivision (f). Action plan strategies shall identify the most effective implementation strategies for improving current and future system performance.

(d) A local jurisdiction shall forward its adopted deficiency plan to the agency within 12 months of the identification of a deficiency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following that hearing, the agency shall either accept or reject the deficiency plan in its entirety, but the agency may not modify the deficiency plan. If the agency rejects the plan, it shall notify the local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days addressing the agency's concerns. Failure of a local jurisdiction to comply with the schedule and requirements of this section shall be considered to be nonconformance for the purposes of Section 65089.5.

(e) The agency shall incorporate into its deficiency plan procedures, a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the agency.

(1) If, according to the agency's methodology, it is determined that more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in the development of a deficiency plan to be adopted by all participating local jurisdictions.

(2) The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other impacting local jurisdictions. If a local jurisdiction responsible for participating in a multi-jurisdictional deficiency plan does not adopt the deficiency plan in accordance with the schedule and requirements of paragraph (a) of this section, that jurisdiction shall be considered in nonconformance with the program for purposes of Section 65089.5.

(3) The agency shall establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities of this section.

(f) The analysis of the cause of the deficiency prepared pursuant to paragraph (1) of subdivision (c) shall exclude the following:

(1) Interregional travel.

(2) Construction, rehabilitation, or maintenance of facilities that impact the system.

(3) Freeway ramp metering.

(4) Traffic signal coordination by the state or multi-jurisdictional agencies.

(5) Traffic generated by the provision of low-income and very low income housing.

(6) (A) Traffic generated by high-density residential development located within one-fourth mile of a fixed rail passenger station, and (B) 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, as determined by the agency.

(g) For the purposes of this section, the following terms have the following meanings:

(1) "High density" means residential density 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 dwelling units per acre shall automatically be considered high density.

(2) "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.

65089.5.

(a) If, pursuant to the monitoring provided for in Section 65089.3, the agency determines, following a noticed public hearing, that a city or county is not conforming with the requirements of the congestion management program, the agency shall notify the city or county in writing of the specific areas of nonconformance. If, within 90 days of the receipt of the written notice of nonconformance, the city or county has not come into conformance with the congestion management program, the governing body of the agency shall make a finding of nonconformance and shall submit the finding to the commission and to the Controller.

(b) (1) Upon receiving notice from the agency of nonconformance, the Controller shall withhold apportionments of funds required to be apportioned to that nonconforming city or county by Section 2105 of the Streets and Highways **Code**.

(2) If, within the 12-month period following the receipt of a notice of nonconformance, the Controller is notified by the agency that the city or county is in conformance, the Controller shall allocate the apportionments withheld pursuant to this section to the city or county.

(3) If the Controller is not notified by the agency that the city or county is in conformance pursuant to paragraph (2), the Controller shall allocate the apportionments withheld pursuant to this section to the agency.

(c) The agency shall use funds apportioned under this section for projects of regional significance which are included in the capital improvement program required by paragraph (5) of subdivision (b) of Section 65089, or in a deficiency plan which has been adopted by the agency. The agency shall not use these funds for administration or planning purposes.

65089.6.

Failure to complete or implement a congestion management program shall not give rise to a cause of action against a city or county for failing to conform with its general plan, unless the city or county incorporates the congestion management program into the circulation element of its general plan.

65089.7.

A proposed development specified in a development agreement entered into prior to July 10, 1989, shall not be subject to any action taken to comply with this chapter, except actions required to be taken with respect to the trip reduction and travel demand element of a congestion management program pursuant to paragraph (3) of subdivision (b) of Section 65089.

65089.9.

The study steering committee established pursuant to Section 6 of Chapter 444 of the Statutes of 1992 may designate at least two congestion management agencies to participate in a demonstration study comparing multimodal performance standards to highway level of service standards. The department shall make available, from existing resources, fifty thousand dollars ($50,000) from the Transportation Planning and Development Account in the State Transportation Fund to fund each of the demonstration projects. The designated agencies shall submit a report to the Legislature not later than June 30, 1997, regarding the findings of each demonstration project.

65089.10.

Any congestion management agency that is located in the Bay Area Air Quality Management District and receives funds pursuant to Section 44241 of the Health and Safety **Code** for the purpose of implementing paragraph (3) of subdivision (b) of Section 65089 shall ensure that those funds are expended as part of an overall program for improving air quality and for the purposes of this chapter.

APPENDIX 2

RECOMMENDED HCM-BASED LEVEL OF SERVICE PROGRAM DEFAULTS

	CHARACTERISTICS																	
	TRAFFIC						ROADWAY						SIGNALIZATION					
FACILITY TYPE	Number of Through Lanes (Both Directions)	Planning Analysis Hour Factor (K100)	Directional Distribution Factor (D)	Peak Hour Factor (PHF)	Adjusted Saturation Flow Rate	% Turns from Exclusive Lanes	Urban, Transitioning, or Rural Area Type	Arterial Class	Free Flow Speed (MPH)	Base Length of Arterial	Medians (Y/N)	Left Turn Bays (Y/N)	Signalized Intersections	Arterial Type (1,2,3,4,5,6)	Signal Type (P=Pretimed, A=Actuated, S=Semi-Actuated	System Cycle Length	Weighted Through Movement (g/c)
URBAN																		
Freeways																		
Group 1	4	0.088	0.568	0.950	2,150				60									
	6	0.088	0.568	0.950	2,150				60									
	8-10	0.088	0.568	0.950	2,150				60									
	12	0.088	0.568	0.950	2,150				60									
Group 2	4	0.092	0.568	0.950	2,050				65									
	6	0.092	0.568	0.950	2,100				65									
	8-10	0.092	0.568	0.950	2,150				65									
	12	0.092	0.568	0.950	2,100				65									
State Arterials																		
Uninterrupted	2	0.091	0.568	0.925	1,850		U		50		N	Y						
	4-6	0.091	0.568	0.925	2,000		U		50		Y	Y						
Class I	2	0.093	0.568	0.925	1,850	12	U	1	50	1	N	Y	1	3	A	120	0.44	
	4-6	0.093	0.568	0.925	1,850	12	U	1	50	1	Y	Y	1	3	A	120	0.44	
	8	0.093	0.568	0.925	1,700	12	U	1	50	1	Y	Y	1	3	A	120	0.44	
Class II	2	0.093	0.568	0.925	1,850	12	U	2	45	1	N	Y	3	4	S	120	0.44	
	4-6	0.093	0.568	0.925	1,850	12	U	2	45	1	Y	Y	3	4	S	120	0.44	
	8	0.093	0.568	0.925	1,700	12	U	2	45	1	Y	Y	3	4	S	120	0.44	
Class III	2	0.092	0.568	0.925	1,850	12	U	3	35	1	N	Y	5	4	S	120	0.44	
	4-6	0.092	0.568	0.925	1,850	12	U	3	35	1	Y	Y	5	4	S	120	0.44	
	8	0.092	0.568	0.925	1,700	12	U	3	35	1	Y	Y	5	4	S	120	0.44	
Class IV	2	0.092	0.568	0.925	1,800	12	U	4	30	1	N	Y	8	4	S	120	0.44	
	4-6	0.092	0.568	0.925	1,800	12	U	4	30	1	Y	Y	8	4	S	120	0.44	
	8	0.092	0.568	0.925	1,650	12	U	4	30	1	Y	Y	8	4	S	120	0.44	
Non-State Roadways																		
Major City/County	2	0.091	0.568	0.925	1,850	14	U	2	40	1	N	Y	2.5	4	S	120	0.41	
	4-6	0.091	0.568	0.925	1,850	14	U	2	40	1	Y	Y	2.5	4	S	120	0.41	
Other Signalized	2	0.091	0.568	0.925	1,800	16	U				N	Y		3	S	120	0.31	
	4-6	0.091	0.568	0.925	1,800	16	U				Y	Y		3	S	120	0.31	
TRANSITIONING																		
Freeways																		
	4	0.097	0.568	0.950	2,000				70									
	6	0.097	0.568	0.950	2,050				70									
	8-10	0.097	0.568	0.950	2,100				70									
State Arterials																		
Uninterrupted	2	0.093	0.568	0.910	1,800		T		55		N	Y						
	4-6	0.093	0.568	0.910	1,925		T		55		Y	Y						
Class I	2	0.094	0.568	0.910	1,750	12	T	1	50	1	N	Y	1	3	A	120	0.44	
	4-6	0.094	0.568	0.910	1,750	12	T	1	50	1	Y	Y	1	3	A	120	0.44	
Class II	2	0.094	0.568	0.910	1,750	12	T	2	45	1	N	Y	3	4	S	120	0.44	
	4-6	0.094	0.568	0.910	1,750	12	T	2	45	1	Y	Y	3	4	S	120	0.44	
Class III	2	0.092	0.568	0.910	1,750	12	T	3	35	1	N	Y	5	4	S	120	0.44	
	4-6	0.092	0.568	0.910	1,750	12	T	3	35	1	Y	Y	5	4	S	120	0.44	
Non-State Roadways																		
Major City/County	2	0.093	0.568	0.925	1,750	14	T	2	40	1	N	Y	2.5	4	S	120	0.41	
	4-6	0.093	0.568	0.925	1,750	14	T	2	40	1	Y	Y	2.5	4	S	120	0.41	
Other Signalized	2	0.091	0.568	0.925	1,700	16	T				N	Y		3	S	120	0.31	
	4-6	0.091	0.568	0.925	1,700	16	T				Y	Y		3	S	120	0.31	
RURAL UNDEVELOPED																		
Freeways																		
	2-6	0.101	0.568	0.950	2,000				70		Y							
Highways																		
Level Terrain	2	0.100	0.568	0.880	2,600				55		N	Y						
	2	0.100	0.568	0.880	2,500				45		N	Y						
	4-6	0.100	0.568	0.880	1,850				60		-	Y						
Mountainous Terrain	2	0.100	0.568	0.880	2,200				40		N	-						
	2	0.100	0.568	0.880	2,000				35		N	-						
	2	0.100	0.568	0.880	1,800				35		N	-						
	4-6	0.100	0.568	0.880	1,700				45		-	-						

APPENDIX 3

FEDERAL CONGESTION MANAGEMENT SYSTEM/TRAFFIC MANAGEMENT SYSTEM (CMS/TMS) REQUIREMENTS

Summation of FHWA/FTA Final Rule:
Management and Monitoring Systems

FINAL RULE IN GENERAL

The Final Rule is effective January 21, 1997, making Congestion Management Systems (CMS) in Transportation Management Areas (TMAs) and traffic monitoring systems (TMS) mandatory. The Final Rule requires the Secretary of Transportation (Federal Highway Administration and Federal Transit Administration) to issue regulations for state development, establishment, and implementation of:

- BMS (Bridge Management Systems);
- CMS (Congestion Management Systems);
- IMS (Intermodal Management Systems);
- PMS (Pavement Management Systems);
- PTMS (Public Transportation Management Systems); and
- SMS (Safety Management Systems).

All above management systems are optional [as of the 1995 National Highway Designation Act (NHS)], except for CMS and TMAs. In addition to the CMS, the development, establishment, and implementation of a TMS are required under the Final Rule.

TMAs are defined as:

> **"An urbanized area with a population over 200,000 (as determined by the latest decennial census) or other area when TMA designation is requested by the Governor and the MPO (or affected local officials), and officially designated by the Administrators of the FHWA and the FTA. The TMA designation applies to the entire metropolitan planning area(s)."**

Issues mentioned in the Final Rule concerning Federal Funds include:

- Federal funds may not be programmed in a carbon monoxide and/or ozone non-attainment TMA for any project that will result in a significant increase in SOV (single-occupant-vehicle) capacity unless the project is based on an approved CMS; and
- Amendments in the 1995 NHS Act allow a state to elect not to implement, in whole or in part, any one or more of the management systems (except for CMS in TMAs, and the TMS). In addition, the certification requirement was removed and the Secretary may not impose any sanction on or withhold any benefit from a state that elects to take this approach.

Congestion Management Systems (CMS)

In all TMAs, the CMS shall be developed, established, and implemented as part of the metropolitan planning process in accordance with 23 CFR 450.320© and shall include:

- Methods to:
  - Monitor and evaluate the performance of the multimodal transportation system;
  - Identify the causes of congestion;
  - Identify and evaluate alternative actions;
  - Provide information supporting the implementation of actions; and
  - Evaluate the efficiency and effectiveness of implemented actions.

- Definition of parameters for measuring the extent of congestion and for supporting the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods.

- Establishment of a program for data collection and system performance monitoring to:
  - Define the extent and duration of congestion;
  - Help determine the causes of congestion; and
  - Evaluate the efficiency and effectiveness of implemented actions.

- To the extent possible, existing data sources should be used, as well as appropriate application of the real-time system performance monitoring capabilities available through Intelligent Transportation System (ITS) technologies.

- Identification and evaluation of the anticipated performance and expected benefits of appropriate traditional and nontraditional congestion management strategies that will contribute to the more efficient use of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combination of strategies, should be appropriately considered for each area:
  - Transportation demand management (TDM) measures, including growth, management, and congestion pricing;
  - Traffic operational improvements;
  - Public transportation improvements;
  - ITS technologies; and
  - Additional system capacity (where necessary).

- Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation.

Section 500.102 – Policy (1}) of the Final Rule states: "Whether the systems are developing under the provisions of this part or under the State's own procedures, the following categories of FHWA administered funds may be used for development, establishment, and implementation of any of the

management systems and the traffic monitoring system; National highway system; surface transportation program; state planning and research and metropolitan planning funds (including the optional use of minimum allocation funds authorized under 23 U.S.C. 157© and restoration funds authorized under Sec. 202 (f) of the National Highway System Designation Act of 1995 (Pub.L. 104-59) for carrying out the provisions of 23 U.S.C. 307©(1) and 23 USC 134(a)): congestion mitigation and air quality improvement program funds for those management systems that can be shown to contribute to the attainment of national ambient air quality standard; and apportioned bridge funds for development and establishment of the bridge management system. The following categories of FTA administered funds may be used for the development, establishment, and implementation of the CMS, PTMS, IMS, and TMS: Metropolitan planning; state planning and research, and formula transit funds."

- Implementation of a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation shall be provided to decision makers to provide guidance on selection of effective strategies for future implementation.

- **In a TMA designated as non-attainment for carbon monoxide and/or ozone, the CMS shall provide an appropriate analysis of all reasonable (including multimodal) travel demand reduction and operational management strategies** for the corridor in which a project that will result in a significant increase in capacity for SOVs (adding general purpose lanes to an existing highway or constructing a new highway) is proposed. **If the analysis demonstrates that travel demand reduction and operational management strategies cannot fully satisfy the need for additional capacity in the corridor and additional SOV capacity is warranted, then the CMS shall identify all reasonable strategies to manage the SOV facility effectively (or to facilitate its management in the future).** Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself shall also be identified through the CMS. All identified reasonable travel demand reduction and operation management strategies shall be incorporated into the SOV project or committed to by the State and Metropolitan Planning Organization (MPO) for implementation.

- **Compliance with the requirement that the planning process in all TMAs include a CMS** will be addressed during metropolitan planning process certification reviews for all TMAs specified in 23 CFR 450.334. **If the metropolitan planning process in a TMA does not include a CMS that meets the requirements of this Section, deficiencies will be noted and corrections will need to be made in accordance with the schedule established in the certification review.**

- **Federal funds may not be programmed in a carbon monoxide and/or ozone non-attainment TMA for any project that will result in a significant increase of SOV (single occupant vehicle) capacity unless the project is based on an approved CMS.**

Traffic Monitoring Systems (TMS)

General Requirements

- Each state shall develop, establish, and implement, on a continuing basis, a TMS to be used for obtaining highway traffic data when the data are:
  - Supplied to the U.S. Department of Transportation (U.S. DOT);
  - Used in support of transportation management systems;
  - Used in support of studies or systems which are the responsibility of the U.S. DOT;
  - Supported by the use of Federal funds provided from programs of the U.S. DOT;
  - Used in the apportionments or allocation of Federal funds by the U.S. DOT;
  - Used in the design or construction of an FHWA funded project; or
  - Required as part of a federally mandated program of the U.S. DOT.

- **The TMS for highway traffic data should be based on the concepts described in the American Association of State Highway and Transportation Officials (AASHTO) Guidelines for Traffic Data Programs" and FHWA "Traffic Monitoring Guide (TMG)," and shall be consistent with the FHWA Highway Performance Monitoring System Field Manual.**

- **The TMS shall cover all public roads except those functionally classified as local or rural minor collector or those that are federally owned.** Coverage of federally owned public roads shall be determined cooperatively by the state, the FHWA, and the agencies that own the roads.

- The state's TMS shall apply to the activities of local governments and other public or private non-state government entities collecting highway traffic data within the state of the collected data are to be used for any of the purposes enumerated in Section A of this subpart.

- Procedures other than those referenced in this subpart may be used if the alternative procedures are documented by the state to furnish the precision levels as defined for the various purposes enumerated in Sec. A of this subpart and are found acceptable by the FHWA.
- Nothing in this subpart shall prohibit the collection of additional highway traffic data if such data are needed in the administration or management of a highway activity or are needed in the design of a highway project.

- **Transit traffic data shall be collected in cooperation with MPOs and transit operators.**

- **The TMS for highways and public transportation facilities and equipment shall be fully operational and in use by October 1, 1997.**

- Components for Highway Traffic Data. Each state's TMS, including those using alternative procedures, shall address the following components:
  - A state's TMS shall meet the **statistical precisions established by FHWA for the HPMS.**

- **Continuous counter operations.** Within each state, there shall be sufficient continuous counters of traffic volumes, vehicle classification, and vehicle weight to provide estimates of changes in highway travel patterns and to provide for the development of day-of-week, seasonal, axle correction, growth factors, or other comparable factors approved by the FHWA. As appropriate, sufficient continuous counts of vehicle classification and vehicle weight should be available to address traffic data program needs.

- **Count data** for traffic volumes collected in the field shall be **adjusted to reflect annual average conditions.**

- **Vehicle classification** activities on the National Highway System (NHS). On a cycle of no greater than three years, every major system segment (i.e., segments between interchanges or intersections of principal arterials of the NHS with other principal arterials of the NHS) will be monitored to provide information on the numbers of single-trailer combination trucks, multiple-trailer combination trucks, two-axle four-tire vehicles, buses and the total number of vehicles operating on an average day.

- **Vehicle occupancy monitoring.** Such vehicle occupancy data shall be reviewed at least every three years and updated as necessary. Acceptable data collection methods include roadside monitoring, traveler surveys, the use of administrative records (e.g., accident reports or reports developed in support of public transportation programs), or any other method mutually acceptable to the responsible organizations and the FHWA.

- **Field operations.** (1) Each state's TMS for highway traffic data shall include the testing of equipment used in the collection of the data. (2) **Documentation of field operations shall include the number of counts, the period of monitoring, the cycle of monitoring, and the spatial and temporal distribution of count sites.**
- Source **data retention.** For estimates of traffic or travel, the value or values collected during a monitoring session, as well as information on the date(s) and hour(s) of monitoring will remain available until the traffic or travel estimates based on the count session are updated.

- Office **factoring procedures.** (1) Factors to **adjust data** from short-term monitoring sessions to estimates of average daily conditions shall be used to adjust **for month, day of week, axle correction, and growth** or other comparable factors approved by FHWA. These factors will be reviewed annually and updated at least every three years. (2) The procedures used by a state to edit and adjust highway traffic data collected from short-term counts at field locations to estimates of average traffic volume shall be documented.

MONITORING REQUIREMENTS OF FEDERAL/STATE PROGRAMS

REQUIREMENTS	PROGRAMS			
	CMS	TMS	HPMS	CMP
Monitor/Evaluate the Multimodal Transportation System	X			X
Identify Parameters for Evaluating the Extent of Congestion	X			
Evaluate the Effectiveness of Implemented Actions	X			
Identify/Implement a Program for Data Collection	X	X	X	X
Cover all Public Roads		X		
Collect Transit/Traffic Data	X	X		X
Meet AASHTO and FHWA Standards		X	X	
Continuous Counter Operations (volumes, vehicle class, weights, and highway travel patterns)		X	X	
Short-term Traffic Monitoring Every Two Years				X
Short-term Traffic Monitoring Every Three Years (sample data)		X	X	
Vehicle Classification (single/multi-trailer truck, 2-axle, 4-axle vehicles, buses, totals) – Every Three Years, Every Major System Segment		X	X	
Vehicle Occupancy (reviewed every three years)		X		
Testing/Documentation of Field Operations		X	X	
Factoring Procedures (reviewed annually and updated every three years)		X	X	
Interstate and State Highway System (Caltrans responsibility)	X	X	X	X
Principal Arterials (CMA/local agency responsibility)	X[1]	X	X	X
Minor Arterials (local agency responsibility)	X[1]	X	X	
Collectors	X[1]	X	X	
Recreational Routes		X	X	

[1] All are eligible under CMS requirements depending on whether or not federal funds are to be allocated to the facilities.