Draft

Congestion Management Program **2011**

ALAMEDA COUNTY TRANSPORTATION COMMISSION

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Executive Summary

California law requires urban areas to develop and update a "congestion management program" or CMP—that is, a plan that describes the strategies to address congestion problems. In Alameda County, the Alameda County Transportation Commission (Alameda CTC) as the CMA for County is tasked with preparing the CMP. The Alameda CTC works cooperatively with the Metropolitan Transportation Commission (MTC), transit agencies, local governments, the California Department of Transportation (Caltrans) and the Bay Area Air Quality Management District (BAAQMD).

The CMP law places considerable authority with the CMAs. Appendix A contains the full text of the pertinent sections of state law. The agencies are required to oversee how local governments meet the requirements of the CMP, for example. The legislation also forges a new relationship between local government and Caltrans by requiring new highway projects in urban areas to be included in a CMP if they are going to be part of the State Transportation Improvement Program (STIP). This means that funding of highway projects is now, in part, controlled by local government in the form of the CMAs. With this authority comes the responsibility to recognize federal and state funding limitations and to work with Caltrans and MTC to formulate cost-effective projects.

The CMP is designed to meet the challenges of the law. Furthermore, the Alameda CTC has developed working relationships with all levels of government as well as the private sector. The Alameda CTC is prepared to demonstrate that local governmental agencies—working together—can solve regional problems.

As part of the 2011 Update to the CMP, the newly formed Alameda CTC Commission undertook a thorough and comprehensive review of the Congestion Management Program activities of the Alameda CTC and also compared the current program with the CMP activities of the other comparable CMAs (San Francisco County Transportation Authority (SFCTA), Contra Costa Transportation Authority (CCTA) and Santa Clara Valley Transportation Authority (SCVTA)) in the Bay Area. The review took into account the new legislative requirements (AB 32 and SB 375) for achieving greenhouse gas reductions through better integration of land use and transportation and the related regional and local efforts, including Alameda CTC's current update to the Countywide Transportation Plan, MTC's Regional Transportation Plan Update and ABAG's development of a Sustainable Communities Strategy. The outcome of the review is a number of actions and recommendations by the Commission as listed below. Details are included in the relevant chapters of the report.

- Expand the CMP Roadway network, based on newly adopted criteria, to create a Tier 2 Roadway network (Chapter 2, Designated Roadway System).
- Pending the results of a comparative analysis of the 1985, 2000 and 2010 Highway Capacity Manuals, transition to using the 2010 Highway Capacity Manual (HCM) by the 2013 CMP Update for LOS Monitoring (Chapter 3, LOS Standards Element).

- Integrate the goals and performance measures adopted for the 2012 CWTP and augment, where possible, data collection for the Performance Report to include the newly added or expanded measures (Chapter 4, Performance Measures Element)
- Expand the Travel Demand Management (TDM) program in Alameda County based on the suggested initial concepts from the TDM issue paper developed for the 2012 CMTP (Chapter 5, TDM Element)
- Transition to using 2010 HCM LOS standards for conducting project impact analysis in the Land Use Analysis program, including exploring the option for transitioning to multi-modal standards (Chapter 6, Land Use Analysis Program)
- Consider options for better integrating land use and transportation such as:
    1. Conducting a feasibility study to explore implementing an impact analysis measure that supports alternative modes, such as SFCTA's Automobile Trip Generated (ATG) measure;
    2. Investigating implementing a program that promotes integration of land use and transportation supported with financial incentives, similar to the SCVTA's Community Design Transportation (CDT) program in Alameda County
    3. Exploring options for tracking land use developments countywide, including identifying any costs to the agency and the jurisdictions; and
    4. Exploring the possibility of adopting the recommended short term and long term policies to promote infill developments in Alameda County as described in the issue paper on infill development areas found in Chapter six and Appendix G – CMP Legislation and Infill Development Areas
- Explore options for identifying and funding mitigation measures related to project impacts in long and cross county corridors (Chapter , Land Use Analysis Program)
- Add new funding sources, including the New Act and the Alameda County Vehicle Registration Fee(Chapter 7, Capital Improvement Program)
- Update the CIP projects lists (Chapter 7 Capital Improvement Program,)
- Update the STIP projects lists (Final list will be approved in October 2011) (Chapter 7, Capital Improvement Program)
- Update deficiency plan guidelines to incorporate guidelines for preparing Areawide Deficiency Plans (Chapter 8, Conformance, Monitoring and Deficiency Plans)
- Consider providing funding priority for projects that would improve the performance of the deficient segments (Chapter 8)
- Update the countywide travel demand model base year to 2010 consistent with the most recent census, update the demographics to be consistent with the 2010 census, and change the model forecast year to 2040.

Following the adoption of the 2011 CMP by Alameda CTC Commission, the CMP will be submitted to MTC. As the regional transportation planning agency in the San Francisco Bay Area, MTC is required to evaluate the CMP's consistency with MTC's RTP and with the CMPs of the other counties in the Bay Area. If the Alameda County CMP is found to be consistent with the RTP, MTC will incorporate the projects listed in the CMP's Capital Improvement Program into MTC's Regional Transportation Improvement Program.

THE TRANSPORTATION SYSTEM

The Alameda CTC must identify what is included in the system that is being monitored and improved (Chapter 2). For the purposes of the CMP, two different systems are used: the designated CMP roadway network (CMP-network); and the broader Metropolitan Transportation System (MTS). The CMP-network is a subset of the MTS. For purposes of the CMP, the former is used to monitor performance in relation to established level of service (LOS) standards. The latter is used in the Alameda CTC's Land Use Analysis Program.

CMP Network

The CMP-network was developed in 1991 and includes state highways and principal arterials that meet all minimum criteria (carry 30,000 vehicles per day; have four or more lanes; is a major cross-town connector; and connects at both ends to another CMP route or major activity center). The system of roadways carries at least 70 percent of the vehicle miles traveled countywide and contains 23 miles of roadways. Of this total, 134 miles (58 percent) are interstate freeways, 73 miles (31 percent) are state highways (conventional highways), and 27 miles (11 percent) are city/county arterials.

Recognizing the need to expand the CMP network to reflect the changes in land use patterns over the years, the Alameda CTC Commission adopted a two tier approach for the CMP network in Alameda County. The first tier (Tier 1) is the existing CMP network and the second tier (Tier 2) consists of roadways identified using a set of adopted Tier 2 criteria. This Tier 2 network forms a supplemental network that would be monitored for informational purposes only and would not be used in the conformity findings process. The identified Tier 2 network roadways have a total length of 92.4 miles. Details are included in Chapter2 Designated Roadway System.

In order to be found in conformance with the CMP, local jurisdictions must submit by June 30, 2013 a list of potential CMP-designated routes based on spring 2013 24-hour counts.

MTS System

The Metropolitan Transportation System (MTS) is a regionally designated system that includes the entire CMP-network, as well as major arterials, transit services, rail, maritime ports, airports and transfer hubs

that are critical to the region's movement of people and freight. MTS[1] roadways were originally developed in 1991 and included roadways recognized as 'regionally significant' and included all interstate highways, state routes, and portion of the street and road system operated and maintained by the local jurisdictions.

LOS MONITORING

To provide a method for measuring congestion, the Alameda CTC uses LOS standards as defined in the 1985 Highway Capacity Manual (HCM), nationally accepted guidelines published by the Transportation Research Board (Chapter 3). LOS definitions describe traffic conditions in terms of speed and travel time, volume and capacity, freedom to maneuver, traffic interruptions, comfort and convenience and safety. LOS is represented by letter designations, ranging from A to F. LOS A represents the best operating conditions and LOS F the worst.

The purpose of these standards is to provide a quantitative tool to analyze the effects of land use changes and to monitor one system performance measure (i.e., congestion). The Alameda CTC is required to determine how well local governments meet the standards in the CMP, including how well they meet LOS standards. The CMP legislation requires a LOS standard of E for all CMP roadways (Tier 1 for Alameda County).

In order to transition to using LOS standards based on a most recent HCM, a comparative analysis between the 1985 and 2000 HCMs to 2010 HCM will be prepared as part of the 2013 CMP Update.

The Alameda CTC conducts a LOS monitoring study every two years. The next study will be done in spring 2012. The agency also has completed studies on nine high-priority corridors.

At present, the Alameda CTC is monitoring the CMP network by contracting biennially with a consultant to collect speed data. The Alameda CTC analyzes the data and prepares the results. If a local government or Caltrans assumes responsibility for monitoring roadways in the CMP-network within its jurisdiction, it will be required to do the following: biennially monitor the LOS on the designated system and report to the Alameda CTC by June 15 of each year relative to conformance with the adopted standards.

[1] In 2005, MTC updated the MTS to include Rural Major Collector streets and higher based on the Federal Functional Classification System (FFCS). The updated MTS is used by MTC for the purposes of funding and programming as well as in estimating roadway maintenance needs. The updated MTS was reviewed by Alameda CTC during the 2009 CMP Update to determine its usefulness and applicability to the Land Use Analysis Program. Based on input from local jurisdictions and discussions with MTC, it was determined that the updated MTS was not appropriate for the Land Use Analysis Program because it was too detailed for planning purposes and the previous version of the MTS would continue to be used.

PERFORMANCE ELEMENT

The Alameda CTC developed performance measures to evaluate how highways and roads function, as well as the frequency, routing and coordination of transit services. Performance measures are intended to support the goals adopted for the 2012 CWTP (Chapter 4).

Combined with LOS standards, the Performance Element provides a basis for evaluating whether the transportation system is achieving the broad mobility goals in the CMP. These include developing the Capital Improvement Program, analyzing land use impacts and preparing deficiency plans to address problems. For the 2011 CMP, implementation of the Performance Element will help the Alameda CTC prioritize projects for funding and developing management and operations strategies.

Below is a list of performance measures used in the CMP, along with the RTP and CWTP goals they help evaluate. These include the goals and performance measures adopted for the 2012 CWTP.

Performance Measure	CWTP Goal
Trips by Alternative Modes*	Multimodal
Low Income Households near Activity Centers*	Accessible, Affordable and Equitable
Low Income Households near Transit*	Accessible, Affordable and Equitable
Average Highway Speeds	Connected Reliable and Efficient
Travel Time* Transit, Highways, HOV Lanes	Multimodal Connected Reliable and Efficient Integrated with land use Clean & Healthy Environment
Duration of Traffic Congestion	Reliable and Efficient Clean and Healthy Environment
Roadway Maintenance	Well Maintained Reliable and Efficient Safe
Roadway Collisions*	Safe Clean and Healthy Environment
CO2 Emissions*	Clean and Healthy Environment
Fine Particulate Emissions*	Clean and Healthy Environment

Performance Measure	CWTP Goal
Completion of Countywide Bike Plan	Multimodal Reliable and Efficient, Clean and Healthy Environment
Completion of Countywide Pedestrian Plan*	Multimodal Reliable and Efficient, Clean and Healthy Environment
Transit Routing	Multimodal Connectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Environment
Transit Frequency	Multimodal Connectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Environment
Coordination of Transit Service	Multimodal Connectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Environment
Transit Ridership	Multimodal Connectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Environment

Performance Measure	CWTP Goal
Transit Vehicle Maintenance	Cost-Effective Reliable and Efficient Connected Safe Clean and Health Environment
Transit Availability	Cost-Effective Reliable and Efficient Connected Integrated with land use Clean and Health Environment
Transit Capital Needs and Shortfall	Reliable and Efficient Connected Clean and Health Environment

Note - * denotes new or expanded existing performance measure resulting from integrating the measures from the 2012 CWTP. Extent of data collection for these measures depends on additional funds and or data being available.

Using these measures, the Alameda CTC prepares an annual transportation Performance Report for review by local agencies and transit operators prior to publication. To minimize cost, the Alameda CTC relies on established data collection processes and regularly published reports for data. A list of established data collection efforts, by agency, follows.

Cities and County

- Countywide Bicycle Plan (Cities and County Public Works Department and Alameda CTC)

Transit Agencies

- Service Schedules and On-Time Performance
- Transit Ridership Routing (percentage of major centers served within 1/4-mile of a transit stop)
- Frequency (number of lines operating at each frequency level)
- Service Coordination (number of transfer centers)
- Average Time Between Off-Loads (BART)
- Miles Between Mechanical Road Calls (AC Transit, LAVTA and Union City Transit)Mean Time Between Service Delays (BART and ACE)
- Transit service frequency during peak periods and population at all transit stations in County

- Transit capital needs & Shortfall for high priority (Score 16) projects

MTC

- Roadway Maintenance Needs
- Pavement Management System data for the MTS
- Freeway Speed Runs and Duration of Freeway Congestion (when performed by MTC)

Caltrans

- Freeway Speed Runs and Duration of Freeway Congestion (when performed by Caltrans)
- Accident Rates on State Freeways
- Highways in need of rehabilitation

Alameda CTC

- Roadway Speeds on CMP roads, except freeways
- Travel Times for Origin-Destination pairs

Local agencies are encouraged to provide data to MTC or to maintain their own database of maintenance needs on the MTS. However, there is no compliance requirement for local agencies or transit operators related to the Performance Element.

Based on the recommendations of the Alameda CTC, subject to availability of funding and existing data sources, efforts will be made to:

- Augment the data collection for the additional and expanded measures that resulted from integrating the adopted measures from the 2012 CWTP to better assess performance of Alameda County transportation system.

TRAVELDEMAND MANAGEMENT ELEMENT

While much of the CMP focuses on measurement and evaluation, an important part is the recommended use of TDM (Chapter 5). These are designed to reduce the need for new highway facilities over the long term and to make the most efficient use of existing facilities. The TDM Element also incorporates strategies to integrate air quality planning requirements with transportation planning and programming. Funding generally comes from the Transportation Fund for Clean Air (from fees on motor vehicle registration) and from the federal Surface Transportation Program and Congestion Mitigation and Air Quality Program. Taken together, the program represents a fiscally realistic program that would effectively complement the Alameda CTC's overall CMP.

A balanced program requires actions that local jurisdictions, the Alameda CTC, MTC, BAAQMD, Caltrans and local transit agencies would undertake. As required by state law, it promotes alternative transportation methods (carpools, vanpools, transit, bicycles, park-and-ride lots, etc.), promotes improvements in the jobs-housing balance and SMART Growth, considers parking cash-out programs (paying employees who do not use parking) and promotes other strategies such as flextime and telecommuting.

The TDM Element includes four programs:

- The **Required Program** requires local jurisdictions to adopt and implement guidelines for site design that enhance transit, pedestrian and bicycle access.
- The **Countywide Program** includes actions by the Alameda CTC to support efforts of local jurisdictions, such as the parking cash-out program, the Guaranteed Ride Home program and support of telecommuting.
- The **Regional Program** includes actions by MTC, BAAQMD and Caltrans to meet areawide needs. It focuses primarily on financial support for those activities that ensure coordinated transit, high-occupancy vehicle use, development and/or maintenance of park-and-ride lots, implementation of ramp metering and arterial, compliance with the American with Disabilities Act and bicycle and pedestrian improvements.
- Recognizing that the private sector also has a role in elements of the **Comprehensive Program** include those actions that employers may take to promote and encourage alternative modes of travel.

As part of the update to the Countywide Transportation Plan that is currently underway, an issue paper on TDM was developed. It explored the potential opportunities available for an effective TDM program in Alameda County. Chapter 5 TDM Element includes the recommendations from the issue paper and recommended that the five suggested initial TDM concepts for Alameda CTC to consider for expanding its TDM program.

To be found in conformance with this element of the CMP, local jurisdictions must adopt and implement the Required Program by September 1 of each year.

LAND USE ANALYSIS PROGRAM

The CMP includes a program to analyze the impacts of land use decisions made by local jurisdictions on the regional transportation systems (Chapter 6). The program estimates costs associated with mitigating those impacts, as well as providing credits for local public and private contributions to improving regional transportation systems. The intent of the Land Use Analysis Program is to:

- Better tie together local land use and regional transportation facility decisions;
- Better assess the impacts of development in one community on another community; and

- Promote information sharing between local governments when the decisions made by one jurisdiction will have an impact on another.

The Land Use Analysis Program is a process designed to improve decisions about land use developments and the investment of public funds on transportation infrastructure. To work best, the Alameda CTC is involved at the very early stages of the land development process. The purpose of the Alameda CTC's review is to assure that regional impacts are assessed, that appropriate mitigations are identified and that an overall program of mitigations can be implemented.

The Alameda CTC acts as a resource to local governments in analyzing the impacts of proposed land use changes on regional transportation systems. This includes making travel-demand models available to use in forecasting the impact of proposed general plan amendments (GPA) and other large-scale developments [if the local jurisdiction publishes a notice of preparation (NOP) for an environmental impact report (EIR)]). Alameda CTC staff could also be involved in discussing impact assessment approaches and impacts on the MTS.

Although land use remains the purview of local governments, the Alameda CTC can apply sanctions if local agencies do not comply with the requirements of the law. Local jurisdictions will have the following responsibilities regarding the analysis of transportation impacts of land use decisions.

- Modeling (using the most recent Alameda CTC-certified travel-demand model) all GPA and large-scale projects that require an EIR that meet the 100 p.m. peak-hour threshold. Results of the model shall be analyzed for impacts on the MTS and shall be incorporated in the environmental document.
- Forward to the Alameda CTC all NOP, draft EIR/statements, final EIR/statements and final disposition of the GPA/development requests.
- Work with the Alameda CTC mitigating development impacts on the MTS.
- Biennially provide an update (prepared by the jurisdiction's planning department) of projected land uses using the Association of Bay Area Government's (ABAG) most recent forecast for a near-term and far-term horizon year. This information will be provided in a format compatible with the countywide travel model.
- In terms of conformity, each local jurisdiction must demonstrate to the Alameda CTC that the Land Use Analysis Program is being carried out by September 1 of each year as part of the annual conformity process.

Additionally, in view of the current legislative requirements (SB 375 and AB 32), MTC, the CMAs and local jurisdictions are required to find ways to develop and implement more projects and programs that better integrate transportation and land use and reduce GHG emissions, primarily through reduction of vehicle miles traveled (VMT). The Alameda Countywide Transportation Plan, currently being updated, is attempting to meet the SB 375 requirements by placing increased level of emphasis on land use planning, transportation and sustainability. In this context, as part of the 2011 CMP Update, the Alameda CTC performed a comprehensive review of the existing Alameda CTC activities related to land use and

transportation and identified various areas where improvements in planning, evaluation and monitoring can be made, many of them under the Land Use Analysis program as follows:

- Explore implementing an Automobile Trip Generated (ATG) measure for land use impact analysis program;
- Investigate feasibility of a program that promotes integration of land use and transportation supported with financial incentives, similar to the SCVTA's Community Design Transportation (CDT) program;
- Improve ability to tracking land use developments countywide; and
- Explore the possibility of adopting the recommended short term and long term policies to promote infill developments in Alameda County as described in the issue paper on infill development areas on page G-1 of the Appendix G – CMP Legislation and Infill Development Areas

Other recommendations by Alameda CTC include actions related to the LOS standards used for project impact analysis and collecting fair share related to impact mitigation as described below:

- Transition to using 2010 HCM LOS standards for conducting project impact analysis in the Land Use Analysis program, including exploring the option for transitioning to multi-modal standards
- Because the CMP Land Use Analysis Program currently does not have a mechanism in place for establishing contribution of fair share payment of impact mitigation measure for projects that would impact long travel corridors that traverse several Alameda County jurisdictions or for cross county corridors, . explore options for identifying and funding mitigation measures related to project impacts in long and cross county corridors

CAPITAL IMPROVEMENT PROGRAM

The CIP reflects the Alameda CTC's effort to maintain or improve the performance of the multimodal transportation system for the movement of people and goods and to mitigate regional transportation impacts identified through the Land Use Analysis Program.

Per federal requirements, it considers methods to improve the existing system, such as traffic operations systems, arterial signal timing, parking management, transit transfer coordination and transit marketing programs. Projects selected for the CIP also are consistent with the assumptions, goals, policies, actions and projects identified in the regional transportation plan (*Transportation 2035*), MTC's basic statement of Bay Area transportation policy.

The 2011 CIP covers fiscal year 2011/12 to 2017/18 and is comprised of:

- Major capital projects and transit rehabilitation projects programmed in the 2012 STIP, the Safe, Accountable, Flexible and Efficient Transportation Equity Act (SAFETEA), The New Act, Proposition 1B, Alameda County Vehicle Registration Fee (VRF), Measure B and CMA TIP; and
- Other major highway, transit and local projects intended to maintain or improve the performance of the CMP-network.

The projects in the CIP are linked to the vision and projects presented in the 2008 *Countywide Transportation Plan*, either as a specific capital project or from funding set aside to cover categories of projects. Such projects can include maintaining and rehabilitating local streets and roads, transit capital replacement, bicycle and pedestrian improvements and operational improvements.

In order to be in conformance with the CMP, local jurisdictions and project sponsors must, by February 1 of each odd-numbered year, submit to the Alameda CTC a list of projects intended to maintain or improve the LOS on the CMP-network and to meet transit performance standards.

MONITORING, CONFORMANCE AND DEFICIENCY PLANS

The Alameda CTC is responsible for annually monitoring the implementation of four elements of the CMP. Local agencies are usually responsible for maintaining LOS standards, adopting travel-demand requirements, implementing land use analysis programs and implementing TDM measures. The Alameda CTC, however, ensures that they are in "conformance" with CMP requirements. To meet the requirements of the CMP, the following must occur.

- Local jurisdictions have two TDM requirements: adoption and implementation of site design guidelines to enhance transit/pedestrian/bicycle access; and implementation of capital improvements that contribute to congestion management and emissions reduction.
- The Alameda CTC is required to develop a program for implementation by local agencies. This program will analyze the impacts and determine mitigation costs of land use decisions on the regional system (Chapter 8). Local jurisdictions remain responsible for approving, disallowing, or altering projects and land use decisions. The program must be able to determine land development impacts on the MTS and formulate appropriate mitigation measures commensurate with the magnitude of the expected impacts.

The Alameda CTC is required to prepare and biennially update a CIP aimed at maintaining or improving transportation service levels. Each city, the county, transit operators and Caltrans will provide input to these biennial updates.

If LOS standards are not met, a deficiency plan must be developed to achieve the adopted LOS standards at the deficient segment or intersection, or to improve the LOS and contribute to significant air quality improvements.

To determine conformance, Alameda CTC compares the monitoring information provided by local governments to the CMP requirements. If a local jurisdiction is found to be in non-conformance, upon notification from the Alameda CTC, the local jurisdiction has 90 days to remedy the area(s) of non-conformance. Failure to address problems could adversely affect the jurisdiction's eligibility for future funds.

Responsibilities for Deficiency Plans

Local governments are responsible for preparing and adopting deficiency plans—proposed methods for bringing LOS standards up to par. However, they will need to consult with the Alameda CTC, Caltrans, local transit providers and BAAQMD. Local public-interest groups and members of the private sector may also have an interest in developing deficiency plans.

During the process of developing the plan, the local agency will need to consider whether it is possible to make physical improvements to the deficient segment. It may not be possible to do so for a number of reasons, including cost, availability of real estate, public opposition and air quality plan conflicts.

However, in developing the deficiency plan, both local and system alternatives must be considered and described. Local governments and the Alameda CTC should consider the impact of the proposed deficiency plan on the CMP system. An action plan to implement the chosen alternative must also be provided. The selection of either alternative is subject to approval by the Alameda CTC, which must find the action plan in the interest of the public's health, safety and welfare.

In order to provide support to local jurisdictions in terms of meeting any potential deficiency plan requirements, as part of the 2011 CMP Update, the Alameda CTC made the following recommendations:

- Consider providing funding priority for projects that would improve the performance of the deficient segments
- Update, deficiency plan guidelines to incorporate guidelines for preparing Areawide Deficiency Plans prior to the 2012 LOS Monitoring Study

DATABASE AND TRAVEL MODEL

The Alameda CTC has developed a uniform land use database for use in a countywide travel model (Chapter 9). The purpose of the database and travel model requirement is to bring to the congestion management decision-making process a uniform technical basis for analysis. This includes consideration of the benefits of transit service and TDM programs, as well as projects that improve congestion on the CMP-network. The modeling requirement is also intended to assist local agencies in assessing the impacts of new development on the transportation system.

The database developed for use with the countywide travel model is based on data summarized in ABAG's *Projections 2009* report. Projections of socioeconomic variables were made for the traffic analysis zones defined for Alameda County. By aggregating the projections made for each zone, the Alameda CTC produced projections of socioeconomic characteristics for unincorporated areas of the county, the 14 cities and for the four planning areas:

- Planning Area 1—cities of Albany, Berkeley, Emeryville, Oakland, Alameda and Piedmont;
- Planning Area 2—cities of San Leandro, Hayward, and the unincorporated areas of Castro Valley, Ashland and San Lorenzo;

- Planning Area 3—cities of Union City, Newark and Fremont; and
- Planning Area 4—cities of Pleasanton, Dublin, Livermore and the unincorporated areas of east County.

In June 2005, the Alameda Countywide Travel Demand Model was updated to use Cube platform and later updated in 2007 and 2009 to be consistent with the assumptions of the MTC's Regional Transportation Model. The most recent update to the model was completed in May 2011. It incorporated land use assumptions to ABAG's Projections 2009 and revised several features.

The countywide model will next be updated to incorporate 2010 census data along with updating the model base year from 2000 to 2010 to correspond with the 2010 census, and to change the long-term forecast year from 2035 to 2040.

CONCLUSIONS AND IMPLEMENTATION ISSUES

The CMP has several interrelated elements intended to foster better coordination among decisions about land development, transportation and air quality. Several conclusions can be reached about the CMP relative to the requirements of law and its purpose and intent (Chapter 10). Specifically, the CMP:

- Contributes to maintaining or improving transportation service levels.
- Conforms to MTC's criteria for consistency with *Transportation 2035*.
- Provides a travel model whose specifications and output are consistent with MTC's regional model.
- Is consistent with MTC's Transportation Control Measures Plan.
- Specifies a method for estimating roadway LOS which is consistent with state law.
- Identifies candidate projects for the STIP and federal Transportation Improvement Program.
- Has been developed in cooperation with the cities, the County of Alameda, transit operators, the BAAQMD, MTC, adjacent counties, Caltrans and other interested parties.
- Provides a forward-looking approach to dealing with the transportation impacts of local land use decisions.
- Considers the benefit of Green House Gas reductions in developing the CIP

During the development and update of the CMP for Alameda County, several issues have been uncovered which will need further action by the Alameda CTC.

- Lack of funding to support the CMP, including adequate capital resources and Alameda CTC/local government funding.
- Limited ability of the Alameda CTC to influence transportation investment when most transportation funding programs are beyond the purview of the CMP legislation.

- Identify responsible agency for monitoring and maintenance of LOS on the state highway system.
- Transportation revenue shortfalls.
- Continued improvement of the Land Use Analysis Program.
- Congestion pricing strategies
- CEQA Reform and need for multi-modal level of service.
- Implementation of SB 375 – Redesigning Communities to Reduce Greenhouse Gases
- Parking Standards and Policies
- Infill development areas
- Mitigating impacts on cross county corridors and long corridors traversing several Alameda County jurisdictions
- Level of Service Standards and Highway Capacity Manual (HCM)
- Funding Priority for Deficient Segments

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CHAPTER ONE

Introduction

ALAMEDA COUNTY TRANSPORTATION COMMISSION

The Alameda County Transportation Commission (Alameda CTC), a Joint Powers Authority, is a newly-formed countywide transportation agency, resulting from the July 2010 merger of the Alameda County Congestion Management Agency (ACCMA) and the Alameda County Transportation Improvement Authority (ACTIA). For over two decades, ACTIA and ACCMA spearheaded transportation programs and projects, separately and often collaboratively.

The Merger

Subsequent to the adoption of the 2009 CMP, the Boards of ACCMA and the Alameda County Transportation Improvement Authority began the process of merging the two separate entities into a newly created joint powers agency, the Alameda CTC. The major purposes of the merger are to reduce administrative expenditures and thereby save Alameda County taxpayers' money, and to offer improved strategic planning and on-going transportation project and program implementation. Although all three agencies continue to exist at the present time, the Alameda CTC Board has assumed responsibility for all activities of ACCMA and ACTIA, and the Alameda CTC Board also serves as the governing board of ACCMA and ACTIA. It is anticipated that ACTIA and ACCMA will be formally dissolved during the current fiscal year, and Alameda CTC will be explicitly designated as the successor agency to both entities.

In assuming the duties of ACCMA, the Alameda CTC will be the congestion management agency for Alameda County and continue to perform congestion management activities and coordinate countywide transportation planning and attract federal, state and local funding for project and program implementation (see Appendix A for full CMP legislation).

As successor to ACTIA, the Alameda CTC will continue to deliver the Expenditure Plan for Measure B. Measure B is the half-cent sales tax approved by almost 82 percent of county voters in 2000 through a variety of highway, transit, local roadway projects, as wells as special transportation services for seniors and disabled individuals.

Mission

Alameda CTC's mission is to plan, fund and deliver a broad spectrum of transportation projects and programs to enhance mobility and improve air quality throughout Alameda County by:

- Providing streamlined methods to deliver services;
- Strengthening local jurisdictions ability to compete for transportation funds;
- Giving Alameda County a stronger voice in state and regional transportation decisions;

- Coordinating planning and development across jurisdictional lines; and
- Generating and supporting legislation to coordinate local and regional policies on transportation investment.

Key Outcomes

Embracing the successes of ACTIA and ACCMA, the merger will eliminate redundancies and create efficiencies that are expected to have numerous positive outcomes. To help guide and improve Alameda County's transportation system, Alameda CTC's activities can be viewed in three parts:

- Developing **planning** documents that guide transportation development and funding decisions;
- **Programming** the funds to agencies for transportation improvements; and
- **Delivering** the projects, programs, legislative actions and policy efforts set forth in the planning and programming documents.

Governance

Under a Joint Powers Agreement, elected officials from throughout Alameda County—representing each city in the county, the County of Alameda, AC Transit and BART (Bay Area Rapid Transit)—govern the Alameda CTC. The 22-member Commission held its first Board meeting on July 22, 2010.

Members, reflecting the interests of their local constituents, help to include all areas of the county in guiding how the Alameda CTC plans, funds and delivers projects and programs throughout Alameda County. As the Commission transforms into its identity as a newly-formed agency, it is the leadership from throughout the county that ensures all residents are represented.

Advisory Committees

Consistent with ACCMA and ACTIA former participation processes, Alameda CTC relies on the guidance and direction of a number of advisory committees, including (see Appendix B for detail):

- Alameda County Transportation Advisory Committee (ACTAC)
- Citizens Advisory Committee (CAC)
- Bicycle and Pedestrian Advisory Committee (BPAC)
- Citizens Watchdog Committee (CWC)
- Paratransit Advisory and Planning Committee (PAPCO)

CONTEXT OF THE CONGESTION MANAGEMENT PROGRAM

Countywide Transportation Plan

One of Alameda CTC's primary responsibilities is the Countywide Transportation Plan (CWTP) which is currently being updated, with adoption expected in summer 2012. The plan is a long-range policy document that guides decisions and articulates the vision for the county's transportation system over a 25-year planning horizon. Through its funding allocation program, the CWTP seeks to ensure that transportation investments—over the 25-year planning period—are efficient and productive, and that maintenance and management of the system remain high priorities.

Specifically, the CWTP will:

- Document existing and future transportation conditions;
- Document a vision for land use that houses the region's population across all income levels in accordance with the requirements of Senate Bill 375 (SB 375);
- Coordinate countywide input to MTC guidelines for county transportation plans pursuant to Government Code Section 66531;
- Coordinate countywide input to MTC's Regional Transportation Plan;
- Address all modes of transportation from goods movement to bicycle and pedestrian priorities to senior and disabled transportation needs;
- Provide a strategy to guide transportation improvements to address changes in the regulatory and financial environment;
- Lay the groundwork for an investment program tailored to the diverse needs of the county's residents, visitors and workers; and
- Identify projects and programs for implementation over the next 25 or more years.

Transportation Expenditure Plan

The sales tax expenditure plan (currently Measure B) is a key source of funding for transportation projects and programs, such as operations and maintenance, in Alameda County. The current measure was approved by the voters in 2000 and a previous measure was approved in 1986. Of the total collected funds under the current measure, 60 percent are dedicated to programs such as local streets and roads repair, bicycle and pedestrian safety, transit and paratransit operators, and 40 percent of collected funds are dedicated to capital projects including transit and highway improvements.

Concurrently with the CWTP update, the Alameda CTC is also developing a new Transportation Expenditure Plan (TEP). The TEP will be derived from the CWTP, and therefore will serve as a mechanism to fund a portion of select projects and programs identified in the CWTP. The TEP lays out

the spending for a new sales tax measure, and it is slated to be placed on the ballot in 2012. Reauthorization of the TEP is being considered for the following reasons:

- The majority of current Measure B capital projects have either been built or are fully funded. To proactively prepare for our future transportation needs, we need a new plan and source of funds for capital projects. These take several years to plan, design, fully fund and build.
- The economic downturn has reduced funding for many programs supported by Measure B.

Because it is funded through a transportation sales tax, the TEP is a financially constrained document. The existing 1/2 cent sales tax will continue to be collected until 2022.

Purpose of Congestion Management Program

California law requires urban areas to develop and update a "congestion management program" (CMP). In Alameda County, Alameda CTC, as the congestion management agency, is tasked with developing and updating the CMP. Updated bi-annually, the primary purpose of the CMP is to set forth fundamental congestion management strategies for implementing the long-range CWTP. The CMP deals with day-to-day problems congestion causes, including:

- Setting level of service standards for roadways;
- Identifying performance measures to evaluate the performance of the transportation system;
- Analyzing the impact of land development on transportation;
- Exploring ways to manage travel demand;
- Developing a seven-year Capital Improvement Program (CIP); and
- Develop and maintain a travel demand model to assess impact of land development on transportation system.

As the ACCMA, the Alameda CTC also has the following functions and responsibilities:

- Coordinate transportation planning and funding programs within Alameda County and with contiguous counties.
- Coordinate countywide input to the:
  - California Clean Air Act and Transportation Control Measures of the Metropolitan Transportation Commission (MTC);
  - Bay Area Air Quality Management District (BAAQMD);
  - MTC's Regional Transportation Improvement Program (RTIP);and
  - California Transportation Commission's (CTC) State Transportation Improvement Program (STIP).

- Prepare, adopt, update and administer the federal funding programs for Alameda County including the Surface Transportation Program (STP) and the Congestion Mitigation and Air Quality (CMAQ) Program.
- Levy and collect fees and charges, including administrative and operating costs.
- Recommend projects for funding from the Alameda County share of the STIP, as specified in Senate Bill 45 (SB 45). In addition to recommending projects for funding, the Commission oversees project implementation to ensure that projects meet "timely use of funds" requirements and that no programmed funds are lost to Alameda County.

The Alameda CTC also acts as the program manager for the Transportation Fund for Clean Air (TFCA) in Alameda County. The TFCA program, which aims to reduce pollution by reducing the use of single-occupant vehicles, is funded through a $4 per-vehicle registration fee and is managed by the BAAQMD. The law requires the Air District to allocate 40 percent of the revenue to each county. Other functions could be added by amendments to the JPA or by actions of the state or federal government.

Following this Introduction, the CMP is organized into nine chapters:

- Designated Roadway System
- Level of Service Standards
- Performance Element
- Travel Demand Management Element
- Land Use Analysis Program
- Capital Improvement Program
- Conformance, Monitoring and Deficiency Plans
- Database and Travel Model
- Conclusions and Implementation Issues

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CHAPTER TWO

Designated Roadway System

BACKGROUND

To manage the transportation system, the Alameda CTC must first identify what is included in the system. California law requires that, at a minimum, the designated roadway system include all state highways and principal arterials.[1] Highways or roadways designated as part of the system shall not be removed from the system.

The statutes also refer to regional transportation systems as part of the required Land Use Analysis Program.[2] In the 1991 CMP, it was presumed that the roadway system designated in the CMP was the highway/street component of this regional transportation system. This changed with the passage of the federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ISTEA required MTC to develop a Metropolitan Transportation System (MTS) that included both transit and highways. When the MTS was developed in 1991, it included roadways recognized as 'regionally significant' and included all interstate highways, state routes, and portions of the street and road system operated and maintained by the local jurisdictions.

MTC contracted with the CMAs in the Bay Area to help develop the MTS and to use the CMPs to link land use decisions to the MTS. The 1993 Alameda County CMP made a distinction between the CMP-network and the MTS:

- The CMP-network is used to monitor conformance with the level of service (LOS) standards; and
- The MTS[3] is used for the Land Use Analysis Program.

The CMP-network is considered to be the core transportation network for the County. The primary objective of designating a CMP roadway system is to monitor performance in relation to established level-of-service standards. If adopted standards are not being maintained on a specific roadway in the designated system, actions must be taken to address problems on that facility or plans must be developed to improve the overall LOS of the system and improve air quality.

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[1] California Government Code Section 65089(b)(1)(A)

[2] California Government Code Section 65089(b)(4)

[3] In 2005, MTC updated the MTS to include Rural Major Collector streets and higher based on the Federal Functional Classification System. The updated MTS is used by MTC for the purposes of funding and programming as well as in estimating roadway maintenance needs. The updated MTS was reviewed by the Commission during the 2009 CMP Update to determine its usefulness and applicability to the Land Use Analysis Program. Based on this input and discussions with MTC, it was determined that the updated MTS was not appropriate for the Land Use Analysis Program because it was too detailed for planning purposes and the previous version of the MTS would continue to be used.

The roadway system must be detailed enough to identify significant impacts, yet be manageable for administration. The advantage of designating a relatively detailed CMP roadway system is that it may be easier to establish a link between proposed development projects and their impact on the CMP system. However, too large a CMP system could become difficult and expensive to monitor. The criteria established below attempt to strike this balance. The effectiveness of the system and the criteria that established it will be periodically reviewed to determine if changes are warranted.

RELATIONSHIP TO REGIONAL TRANSPORTATION PLAN

Given the statutory requirement that MTC must find the CMP consistent with the *Regional Transportation Plan* (RTP), the designated CMP system should be a subset of the MTS. This should help to ensure regional consistency among the various CMP-designated systems, particularly for facilities that cross county borders. The Alameda CTC's long-range CWTP is the primary vehicle for coordination with the MTS. Continued coordination will be necessary to ensure consistency between Alameda County's CMP system and the MTS.

DESIGNATED CMP SYSTEM

The Alameda County CMP network was initially adopted by the ACCMA Board in 1991 based on the CMP legislation. Since the adoption of CMP network in 1991, there have been significant changes to the land use and transportation patterns across the county; however, the CMP network has not been expanded to reflect these changes with the exception of adding Hegenberger Road between I-880 and Doolittle Drive near Oakland Airport in 2007. Recognizing the need to expand the CMP network to reflect land use changes, the Alameda CTC Board discussed various options in 2011 and adopted a two tier CMP network. The first tier (Tier 1) is the originally adopted CMP network and the second tier (Tier 2) consists of roadways identified using the process described below. This second tier network forms a supplemental network that is monitored for informational purposes only and is not used in the conformity findings process.

Criteria

Tier 1 Network

While the statutes require existing state highways be designated as part of the CMP system, they provide no guidance for which principal arterials should be included. After evaluating several possible methods, the 1991 CMP adopted an approach that provided for the systematic selection of principal arterials to include in the CMP-network.

The selected approach, which met MTC's expectations for a "reasonable" CMP network designation method, relies on a concept that is central to the CMP legislation—identifying a system that carries a majority of the vehicle trips countywide. Using the countywide travel model, an average daily traffic volume was identified that would produce a system of roadways carrying at least 70 percent of the vehicle miles traveled (VMT) countywide. This approach yielded an average daily traffic of roughly 30,000

vehicles per day as a minimum threshold. Additional criteria were included to refine the definition as described below.

All State Highways

- If a route is relocated or removed from the State Highway System, it will be evaluated according to the principal arterial criteria to determine whether it should remain in the CMP system.

Inclusion of Principal Arterials (Note: All four criteria must be met)

- Must carry 30,000 vehicles per day (average daily traffic) for at least one mile;
- Must be a roadway with four or more lanes;
- Must be a major cross-town connector, traversing from one side of town to the opposite side; and
- Must connect at both ends to another CMP route, unless the route terminates at a major activity center.

Tier 2 Network

In 2011, the Commission added 92.4 miles of roadways (arterials and major collectors) to the CMP network as Tier 2 roadways based on a set of qualitative criteria adopted by the Commission.
The following are the criteria approved by the Commission for developing the Tier 2 CMP roadway network. Roadways must meet at least two of the three criteria to be added to the Tier 2 network.

- Major thoroughfares, not on the existing CMP network, whose primary function is to link districts within an Alameda County jurisdiction and to distribute traffic from and to the freeways;
- Routes of jurisdiction-wide significance that are not on the existing CMP network; and
- Streets that experience significant conflicts between auto traffic and transit and other modes.

Criteria Review

In the 1991 CMP, the Countywide Travel Demand Model (TDM) was used to identify an average daily traffic volume that would produce a system of roadways carrying at least 70 percentage of the VMT countywide. This approach yielded the criteria used for the Tier 1 network today. During the 2011 update, applying the above qualitative criteria resulted in the Tier 2 network. The Commission recommended that the criteria for adding roadways to the CMP network be reviewed periodically. Accordingly, the criteria for adding roadways to Tiers 1 and 2 will be reviewed during every other CMP Update year. The next review will be in 2015.

Adding Potential Roadways

For identifying potential roadways to be added to the Tier 1 or Tier 2 networks, the jurisdictions will review their roadway systems for roadways that may meet the criteria for Tiers 1 and 2 networks. Regarding criteria for Tier 1network, only the Criteria for Inclusion of Principal Arterials will be applied for this purpose as any changes or addition to the state highways or freeways will be by default added to the Designated Roadway System as Tier 1 network, as mandated by State law.

For potential roadways to be added to the Tier 1 network, each jurisdiction will conduct 24-hour traffic counts for a period including a Tuesday through Thursday of a typical week. Traffic counts should be taken around the first week in April 2013. Each jurisdiction must submit potential CMP-designated routes to the Alameda CTC by end of June 2013.

For potential roadways to be added to the Tier 2 network, interested jurisdiction or transit operators could propose a roadway if it meets the Tier 2 criteria. While the collected traffic counts will be used as one of the criteria for identifying Tier 1 network, it will be used only as supplemental information for Tier 2 network.

Alameda CTC staff will perform a review of the proposed roadway with reference to the adopted criteria for both Tiers 1 and 2 and will submit to the Committees with a recommendation for final approval of the Commission. In reviewing the proposed addition of new roadways that may meet the Tier 1 or Tier 2 criteria, the previously mentioned general approach to the CMP system will also be considered. The roadway system must be detailed enough to identify significant impacts, yet be manageable for administration as too large a network will be difficult to manage and expensive to monitor.

The CMP System

Table 1 shows the schedule for review and update of designated routes on the CMP system. Table 2 lists the designated Tier 1 CMP system, including all state highways and principal arterials that satisfy the Tier 11 criteria. Table 3 lists the designated Tier 2 roadways identified using the adopted qualitative criteria. The entire CMP-designated system is illustrated in Figure 1 and detailed maps for each area within the county are shown in Figures 2 through 5.

Characteristics of the Tier 1 CMP designated system are as follows:

- It carried 72 percent of the countywide VMT; and
- It contains 232 miles of roadways, of which: 134 miles (58 percent) are interstate freeways, 71 miles (31 percent) are state highways and 27 miles (11 percent) are city/county arterials.

Characteristics of the Tier 2 CMP designated system are as follows:

- It contains 92.4 miles of roadways, and
- All of them are city/county arterials.

The MTS[4] designated by MTC is shown in Figure 2 through Figure 5 *(to be updated).* The MTS transit corridors are shown in Figure 6 and Figure 7 *(to be updated)*. The system includes the entire CMP-designated roadway system together with major arterials, transit services, rail, maritime ports, airports and transfer hubs that are critical to the region's movement of people and freight.

[4] MTS prior to 2005.

Changes to the CMP Network since 1991

The following changes were made to the CMP network after its initial adoption in 1991.

Tier 1 Network

- In 2003, Caltrans realigned State Route 84 (SR 84) in Livermore from 1st Street to Isabel Avenue-Airway Boulevard. Consequently, the new alignment was added to the CMP-network in 2005. The former SR 84 alignment along 1st Street in Livermore was evaluated to see whether it meets the Principal Arterial criteria to be retained on the CMP network. Based on the results of the analysis, the 2.2 miles segment between Inman Street and I-580 was retained on the CMP-network.
- In 2007, the City of Oakland conducted 24-hour traffic counts on Hegenberger Road between I-880 and Doolittle Drive. The traffic counts collected and other characteristics of the roadway met all the Principal Arterial criteria for inclusion in the CMP-network. Accordingly, a 1.7 mile segment of Hegenberger Road between I-880 and Doolittle Drive was added to the network.

Tier 2 Network

Based on the new criteria approved by the Commission for Tier 2 CMP network, 92.4 miles of roadways were added during the 2011 CMP Update. The Tier 2 network will be monitored only for informational purposes and will not be subject to Conformity.

Local Government Responsibilities

To be in conformance with the CMP, local jurisdictions must submit a list of potential CMP-designated routes based on 24-hour counts by spring 2013, shown in Tables 1-3.

Table 1—Schedule for Updating CMP-Designated System

Task	Who	When
Identify Potential Routes	Jurisdictions	January 2013
Review Routes	ACTAC/Board	February 2013
Collect Traffic Data	Jurisdictions	March/April 2013
Review Data	ACTAC/Commission	May 2013
Select CMP Designated Routes	ACTAC/Commission	June 2013
Incorporate Routes in 2013 CMP	ACTAC/Commission	June 2013
Re-evaluate Criteria for Adding Roadways	ACTAC/Commission	June 2015

Note: Criteria for adding roadways will be reviewed in one CMP update and the adopted criteria will be applied to identify potential routes in the subsequent CMP update.

Table 2—CMP-Designated System, Tier 1 Roadway List

CITIES OF ALBANY AND BERKELEY

Route	From	To	Criteria [5] [6]
SR-123 (San Pablo)	Contra Costa County line	Emeryville city limit	State Route
University Ave.	I-80	Milvia St.	Satisfies criteria
University Ave.	Milvia St.	Shattuck Ave.	Connectivity[7]
Shattuck Ave.	University Ave.	Haste St.	Connectivity
Shattuck Ave.	Haste St.	Derby St.	Satisfies criteria
Adeline St.	Derby St.	MLK Jr. Way	Satisfies criteria
MLK Jr. Way	Adeline St.	Oakland city limit	Satisfies criteria
SR-13 (Ashby Ave)	I-80	Tunnel Rd.	State Route
SR-13 (Tunnel Rd)	Ashby Ave.	Oakland city limit	State Route
I-80/I-580	University Ave.	Central	State Route

5 Principal Arteiral criteria Applied: a) must carry 30,000 average daily traffic for at least one mile; b) must be a 4- or more lane roadway; c) must be a major cross-town arterial, traversing from one side of town to the opposite side; and d) must connect to another CMP route or major activity center.

6 State highways and interstate freeways are included in their entirety within each jurisdiction and include all mileage within Alameda County.

7 "Connectivity" indicates that the segment has been included in the designated system to provide continuity and avoid stub ends.

CITY OF ALAMEDA

Route	From	To	Criteria
SR-61 (Doolittle Dr.)	Oakland city limit	Fernside Blvd.	State Route
SR-61 (Otis Dr.)	Fernside Blvd.	SR-61 (Broadway)	State Route
SR-61 (Broadway)	Otis Dr.	SR-61 (Encinal Ave.)	State Route
SR-61 (Encinal Ave.)	SR-61 (Broadway)	Sherman St.	State Route
SR-61 (Central Ave.)	Sherman St.	SR-260 (Webster St.)	State Route
SR-260 (Webster St.)	SR-61 (Central Ave.)	Posey/Webster tubes	State Route
SR-260 (Posey/ Webster tubes)	SR-260 (Webster St.)	Oakland city limit	State Route
Atlantic Ave.	SR-260 (Webster St.)	Poggi St.	Satisfies criteria
Atlantic Ave.	Poggi St.	Main St.	Connectivity
Park St.	Oakland city limit	Central Ave.	Satisfies criteria
Park St.	Central Ave.	SR-61 (Encinal Ave.)	Connectivity

CITY OF HAYWARD

Route	From	To	Criteria
SR-185 (Mission Blvd.	Ashland (unincorporated)	SR-92 (Jackson St.)	State Route
SR-92 (Jackson St.)	I-880	SR-185 (Mission Blvd.)	State Route
SR-238 (Foothill Blvd.)	Ashland (unincorporated)	SR-185 (Mission Blvd.)	State Route
SR-238 (Mission Blvd.)	SR-92 (Jackson St.)	Union City city limit	State Route
A Street	I-880	SR-238 (Foothill Blvd.)	Satisfies criteria
Hesperian Blvd.	San Lorenzo (unincorporated)	Tennyson Rd.	Satisfies criteria
Tennyson Rd.	Hesperian Blvd.	SR-238 (Mission Blvd.)	Satisfies criteria
SR-92	San Mateo County line	I-880	State Route
I-880[8]	A Street	Alvarado-Niles	State Route

[8] A portion of this route to the Hayward border includes the city of Union City.

CITIES OF EMERYVILLE, OAKLAND AND PIEDMONT

Route	From	To	Criteria
MLK Jr. Way	Berkeley city limit	SR-24	Satisfies criteria
SR-123 (San Pablo)	Berkeley city limit	35th St.	State Route
SR-13 (Tunnel Rd.)	Berkeley city limit	SR-24	State Route
SR-260 (Posey/ Webster tubes)	Alameda city limit	I-880	Satisfies criteria
23rd/29th Ave.	Alameda city limit	I-880	Satisfies criteria
SR-77 (42nd Ave.)	I-880	SR-185 (E. 14th St.)	State Route
SR-185 (E. 14th St.)	SR-77 (42nd Ave.)	San Leandro city limit	State Route
Hegenberger Rd.	I-880	Doolittle Dr.	Satisfies Criteria[9]
Hegenberger Rd.	I-880	Hawley St.	Connectivity
Hegenberger Rd.	Hawley St.	SR-185 (E. 14th St.)	Satisfies criteria
SR-61 (Doolittle Dr.)	Alameda city limit	San Leandro city limit	State Route
SR-13	SR-24	I-580	State Route
SR-24	I-980	Contra Costa County line	State Route
I-80 [10]	SF County Line	University Ave.	State Route
I-580	I-80	MacArthur Blvd.	State Route
I-880	I-980	Hegenberger Rd.	State Route
I-980	I-880	SR-24	State Route

[9] Found to meet Principal Arterial criteria in 2007.

[10] A portion of this route to the Emeryville border includes the city of Berkeley.

CITY OF SAN LEANDRO

Route	From	To	Criteria
SR-61 (Doolittle Dr.)	Oakland city limit	SR-61/112 (Davis St.)	State Route
SR-61/112 (Davis St.)	SR-61 (Doolittle Dr.)	SR-185 (E. 14th St.)	State Route
SR-185 (E. 14th St.)	Oakland city limit	Ashland (unincorp.)	State Route
150th Ave.	Hesperian Blvd.	I-580	Satisfies criteria
Hesperian Blvd.	SR-185 (E. 14th St.)	San Lorenzo (unincorp.)	Satisfies criteria
I-880[11]	Hegenberger Ave.	I-238	State Route
I-580[12]	MacArthur Blvd.	I-238	State Route

SAN LORENZO, CASTRO VALLEY, ASHLAND (unincorporated areas)

Route	From	To	Criteria
SR-185 (Mission Blvd.)	San Leandro city limit	Hayward city limit	State Route
Hesperian Blvd.	San Leandro city limit	Hayward city limit	Satisfies criteria
SR-238 (Foothill Blvd.)	I-238	Hayward city limit	State Route
I-880[13]	I-238	A Street	State Route
I-238[14]	I-880	I-580	State Route
I-580[15]	I-238	I-680	State Route

[11] A portion of this route to the San Leandro border includes the city of Oakland.

[12] A portion of this route to the San Leandro border includes the cities of Hayward and Oakland.

[13] A portion of this route in the county includes the city of Hayward.

[14] A portion of this route in the county includes the city of San Leandro.

[15] A portion of this route in the county includes the city of Pleasanton.

CITIES OF UNION CITY, FREMONT AND NEWARK

Route	From	To	Criteria
SR-238 (Mission Blvd.)	Hayward city limit	I-680	State Route
Decoto Rd.	I-880	SR-238 (Mission Blvd.)	Satisfies criteria
Mowry Ave.	I-880	SR-84 (Peralta Blvd.)	Satisfies criteria
SR-262 (Mission Blvd.)	I-880	I-680	State Route
SR-84 (Thornton Ave.)	I-880	Fremont Blvd.	State Route
SR-84 (Fremont Blvd.)	SR-84 (Thornton Ave)	SR-84 (Peralta Blvd.)	State Route
SR-84 (Peralta Blvd.)	SR-84 (Fremont Blvd.)	SR-84 (Mowry Ave.)	State Route
SR-84 (Mowry Ave.)	SR-84 (Peralta Blvd.)	SR-238 (Mission Blvd.)	State Route
SR-84 (Niles Canyon)	SR-238 (Mission Blvd.)	I-680	State Route
SR-84	San Mateo County line	I-880	State Route
I-880	Alvarado-Niles	Dixon Landing	State Route
I-680	Scott Creek	SR-238	State Route

CITIES OF PLEASANTON, DUBLIN, LIVERMORE AND UNINCORPORATED AREAS

Route	From	To	Criteria
SR-84 (Vallecitos)[16]	I-680	SR-84 (Isabel Ave..)	State Route
SR-84 (Isabel Ave.)[17]	SR-84 (Vallecitos Rd.)	SR-84 (Kitty Hawk Rd.)	State Route
SR-84 (Kitty Hawk Rd.)[18]	SR-84 (Isabel Ave.)	SR-84 (Airway Blvd.)	State Route
SR-84 (Airway Blvd.)[19]	SR-84 (Kitty Hawk Rd.)	I-580	State Route
1st Street	Inman St.	I-580	Satisfies criteria
I-580	I-680	I-205	State Route
I-680	SR-238	Alcosta Blvd.	State Route

[16] New alignment of SR-84 by Caltrans in 2003.

[17] A portion of old SR-84 alignment found to meet the Principal Arterial criteria.

[18] A portion of old SR-84 alignment found to meet the Principal Arterial criteria.

[19] A portion of old SR-84 alignment found to meet the Principal Arterial criteria.

Table 3—CMP-Designated System, Tier 2 Roadway List

Route	From	To	Jurisdiction	Criteria**	Distance (miles)
Planning Area 1					
W.Grand Avenue to Grand Avenue	I-80	I-580	Oakland	1,2	2.7
12th Street - Lakeshore Avenue	I-980	I-580	Oakland	1,2,3	2.5
Telegraph Avenue*	51st Street	Bancroft Way	Oakland, Berkeley	2,3	1.9
Broadway	I-880	College Avenue	Oakland	2,3	2.9
College Avenue	Broadway	Bancroft Way	Oakland, Berkeley	1,2,3	2.4
51st Street	Broadway	SR 24	Oakland	1,2	0.8
Shattuck Avenue	Adeline Street	51st Street	Oakland, Berkeley	1,2,3	2.2
Bancroft	College Ave.	Shattuck	Berkeley	2,3	0.7
Powell Street-Stanford Avenue	I-80	MLK Jr. Way/ Adeline Street	Emeryville, Berkeley	1,2	1.5
40th Street-Shellmound Avenue	San Pablo Avenue	Powel Street	Emeryville	1,2,3	1.4
International Boulevard	1st Avenue	42nd Avenue	Oakland	1,2,3	3.0
Foothill Boulevard	1st Avenue	73rd Avenue	Oakland	2,3	5.3
E. 15th Street	1st Avenue	14th Avenue	Oakland	2,3	0.9
73d Avenue	International Boulevard	Foothill Boulevard	Oakland	1,2	1.2
High Street	Otis Drive	I-580	Alameda, Oakland	1,2	3.4
Planning Area 2					
Crow Canyon Road	I-580	County Line	Alameda County	1,2	7.0
Winton Avenue - D Street	Hesperian Blvd.	Foothill Boulevard	Hayward	1,2	2.2
A Street	Foothill Blvd.	I-580	Hayward	1,2	1.3
Grove Road	A Street/ Redwood Road	I-580	Alameda County	1,2	1.0

Route	From	To	Jurisdiction	Criteria**	Distance (miles)
Hesperian Boulevard-Union City Blvd.*	Tennyson Road	Alverado Blvd.	Hayward, Union City	1,2	2.8
Planning Area 3					
Alvarado Blvd.	Union City Blvd.	I-880	Union City	1,2	3.1
Fremont Boulevard	I-880 @ Alvarado Blvd/ Fremont Blvd.	I-880 interchange south of Automall Parkway	Fremont	1,2	8.7
Automall Parkway	I-880	I-680	Fremont	1,2	1.9
Planning Area 4					
Vasco Road	I-580	County Line	Livermore	1,2	5.7
Dublin Blvd.	San Ramon Road	Tassajara	Dublin	1,2	4.0
San Ramon Road	I-580	County Line	Dublin	1,2	2.2
Dougherty Road	I-580	County Line	Dublin	1,2	1.7
Tassajara Road	I-580	County Line	Dublin	1,2	4.5
E.Stanley Blvd - Railroad Avenue-1st Street	Isabel Ave.	Inman Street (connecting I-580)	Livermore	1,2,3	4.2
Stoneridge Drive	I-680	Santa Rita Road	Pleasanton	1,2	2.4
Santa Rita Road	Stoneridge Dr	I-580	Pleasanton	1,2	1.2
Sunol Blvd.- 1st Street- Stanley Blvd.	I-680	Isabel Ave.	Pleasanton	1,2	5.7
				Total	**92.4**

*Denotes that roadway traverses more than one jurisdiction

**Criteria Applied:
1. Major thoroughfares, not on the existing CMP network, whose primary function is to link districts within an Alameda County jurisdiction and to distribute traffic from and to the freeways.
2. Routes of county-wide significance that are not on the existing CMP network.
3. Streets that experience significant conflicts between auto traffic, transit service and bikes and pedestrian.

Figure 1— Designated Countywide System Map

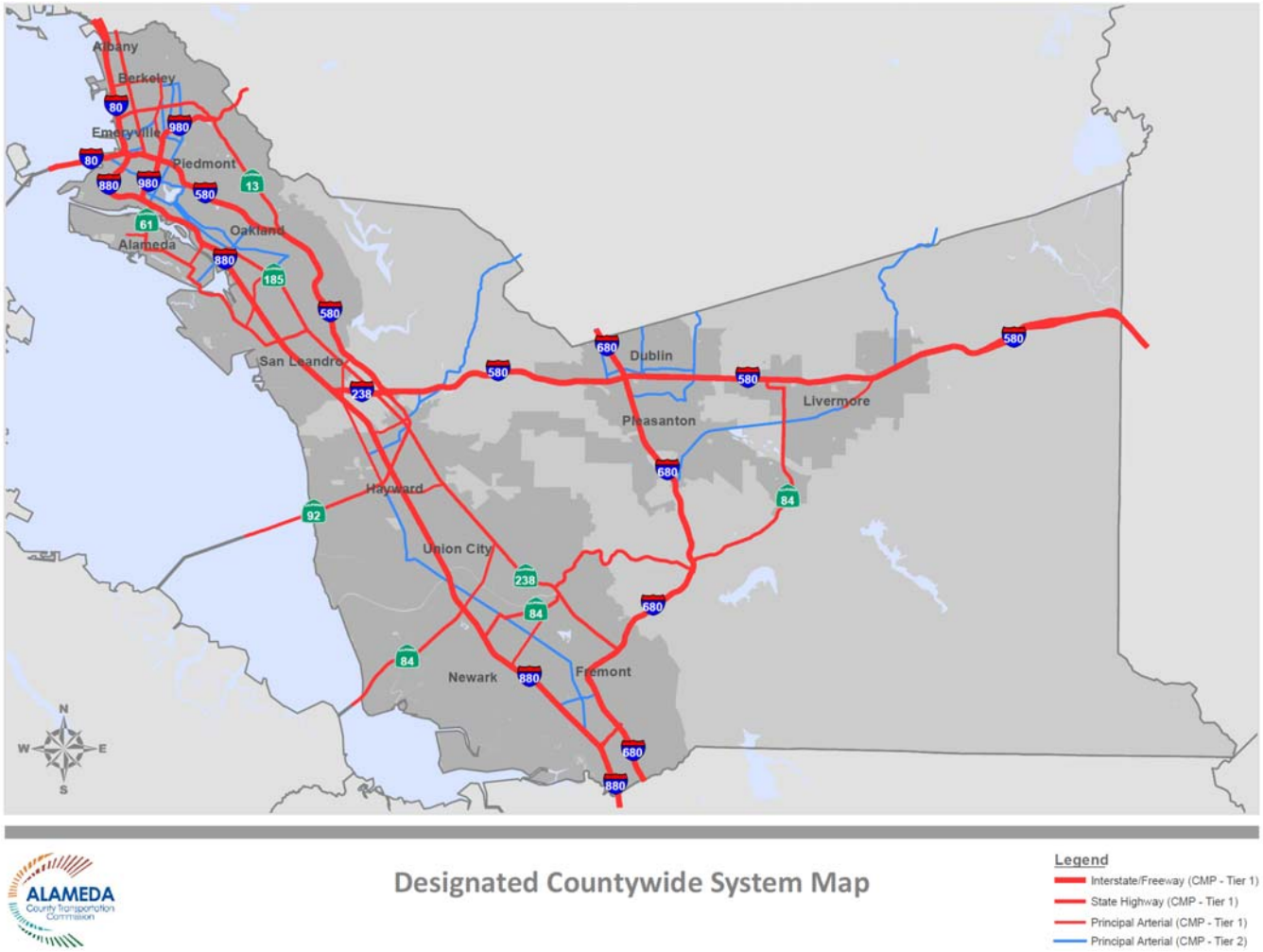


Figure 2—Designated System Map for Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont

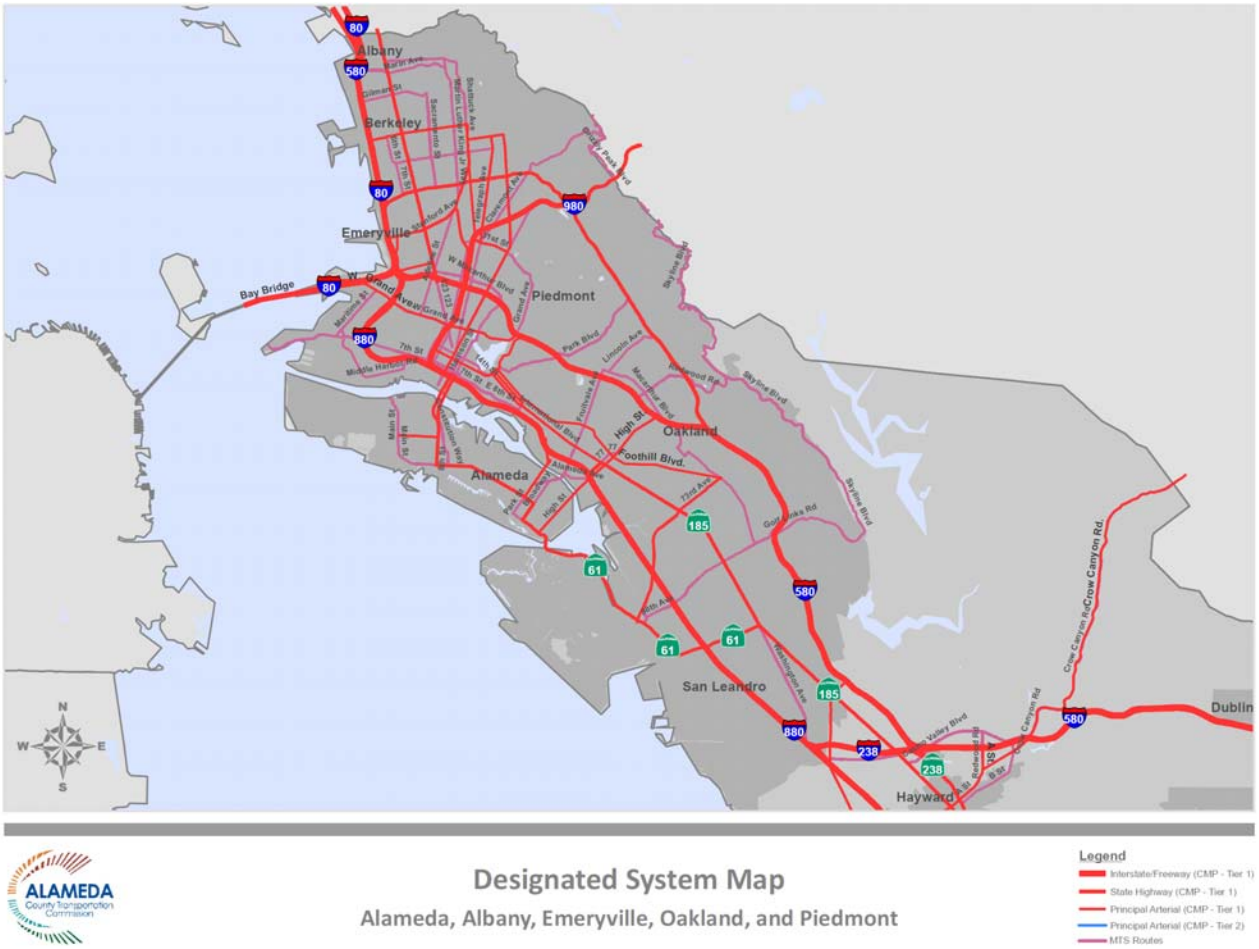


Figure 3—Designated System Map for Castro Valley, Hayward, San Leandro and San Lorenzo

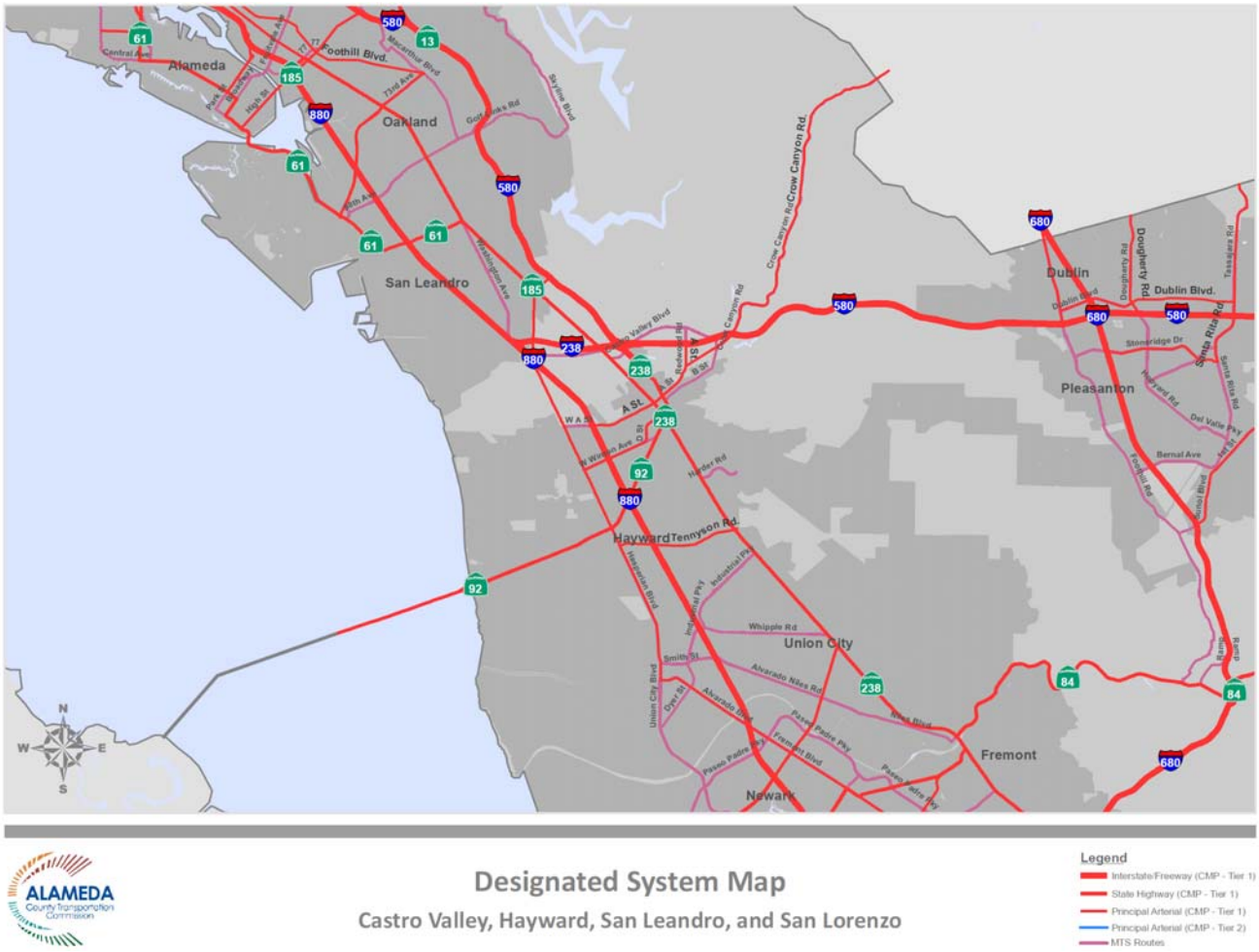


Figure 4—Designated System Map for Fremont, Newark and Union City

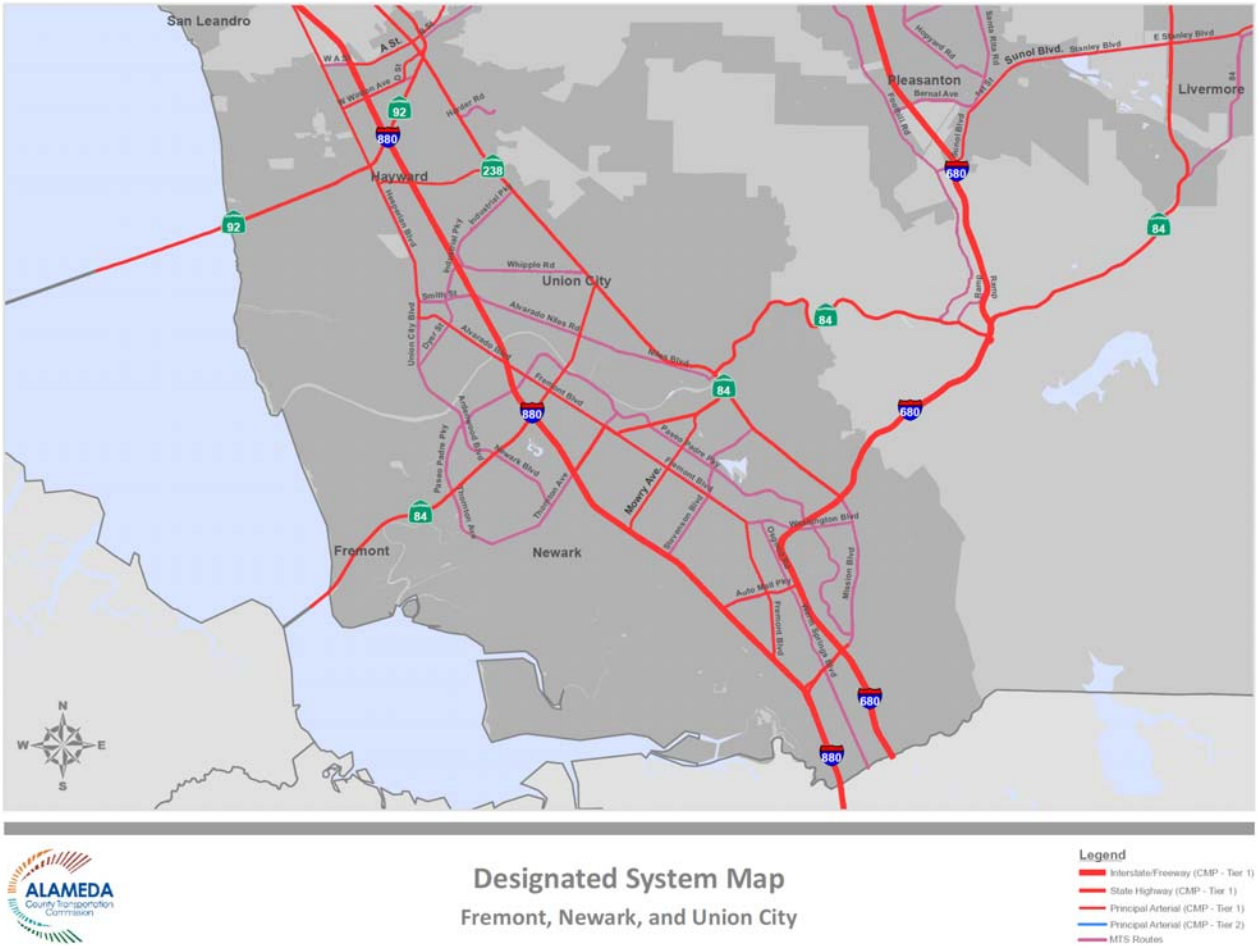


Figure 5 — Designated System Map for Dublin, Livermore and Pleasanton

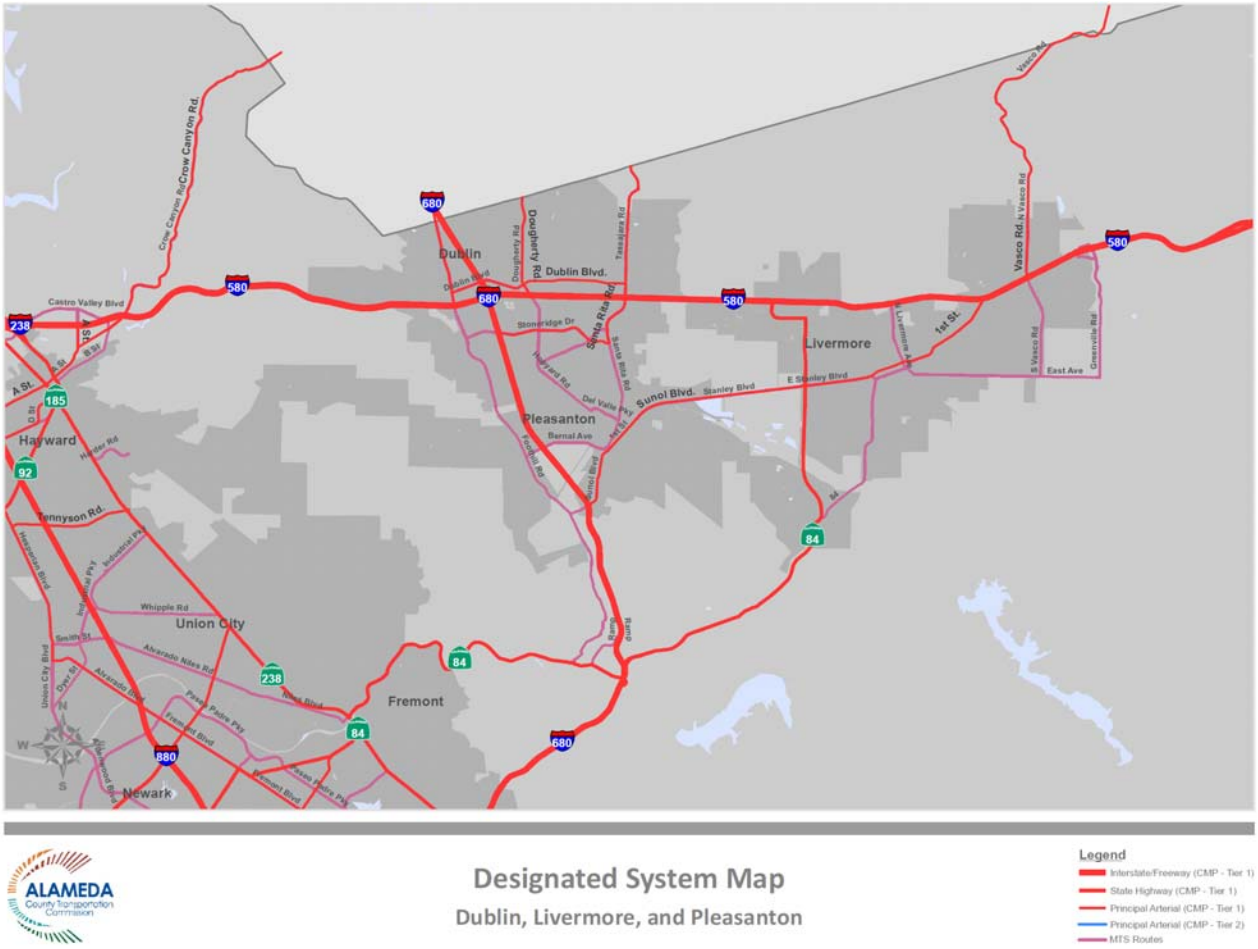
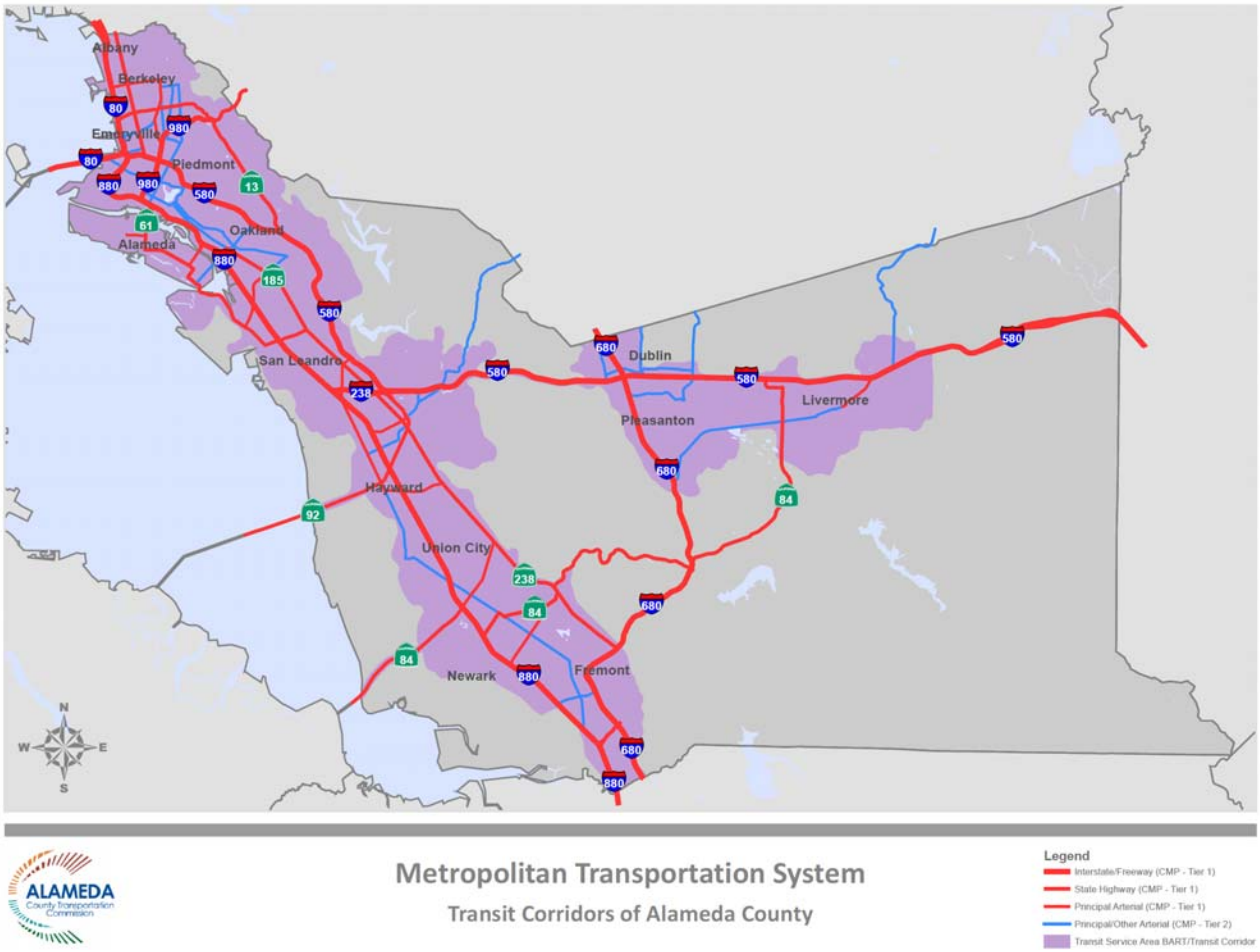


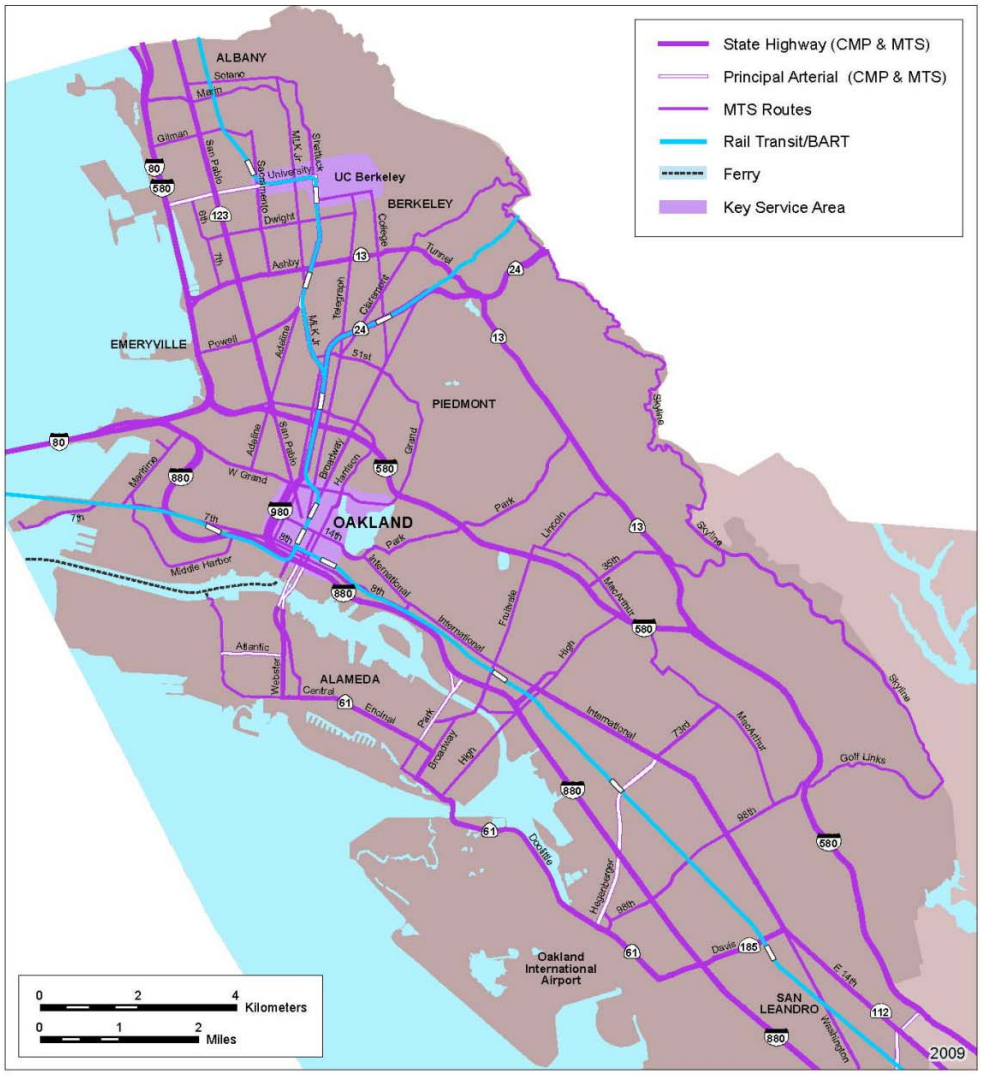
Figure 6 — Metropolitan Transportation System - Transit Corridors of Alameda County



The following operators provide transit services in Alameda County:

- AC Transit
- Bay Area Rapid Transit (BART)
- LAVTA
- Union City Transit
- ACE Commuter Rail
- Capital Corridor
- Alameda-Oakland Ferry Service
- Harbor Bay Ferry Service

Figure 7 — Metropolitan Transportation System - Transit Corridors of Northern Alameda County Detail



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CHAPTER THREE

Level of Service Standards Element

BACKGROUND

State law requires that level of service (LOS) standards be established to monitor the level of service of the CMP roadway network as part of the CMP process.[20] LOS must be measured by methods described in one of the following documents: Transportation Research Board Circular 212, the latest version of the Transportation Research Board's *Highway Capacity Manual* (HCM), or a uniform methodology adopted by the CMA that is consistent with the HCM. The legislation leaves the choice of LOS measurement methodology to the CMAs.

LOS definitions generally describe traffic conditions in terms of speed and travel time, volume and capacity, freedom to maneuver, traffic interruptions, comfort and convenience and safety. LOS is represented by letter designations, ranging from A to F, with LOS A representing the best operating conditions and LOS F the worst. (see Appendix **C** for graphic representation of LOS).

The purpose of setting LOS standards for the CMP system is to provide a quantitative tool to analyze the effects of land use changes on the transportation system's performance (i.e., congestion). If the actual system performance falls below the standard (i.e., congestion worsens to LOS F), actions must be taken to improve LOS. Each year, the Alameda CTC is required to determine how well local governments meet CMP standards, including how well they meet the LOS standards.

Each year since 1991, the Alameda CTC [21]has contracted with a consultant to perform the necessary LOS monitoring for the CMP-network. In 1998, a policy was adopted that the LOS monitoring will be done every two years instead of annually. Based on this, the next monitoring study will be done in spring 2012. This has proven to be the most cost-effective approach and is anticipated to continue.

Alternatively, if Caltrans assumes responsibility for monitoring the freeway system as required or if local jurisdictions assume responsibility for monitoring local roads, evaluations will be structured to allow a self-certification process using Caltrans or local reports of LOS. The Alameda CTC will determine how well areas meet LOS standards based on these reports at the time of the annual conformance findings. The Alameda CTC will ensure that the adopted standards are monitored in a consistent manner by all local jurisdictions and/or Caltrans.

To provide a basis for more definitive strategies for maintaining LOS standards in subareas of Alameda County, the Alameda CTC has completed a program of corridor studies in the following high-priority corridors. Future corridor studies are being identified through the CMP and the CWTP process:

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[20] California Government Code Section 65089(b)(1)(A)

[21] Please see footnote 1 in Chapter 1- Introduction

- I-80
- San Pablo Avenue
- I-880
- I-238
- I-580/Altamont Pass
- I-680
- I-580 Corridor BART to Livermore
- I-680 Value Pricing
- North I-880 Safety and Operations Study
- San Pablo and I-880 SMART Corridor programs
- Tri-Valley Triangle Study
- Central County Freeway Study (SR 238 Local Area TIP)
- SR 84 Local Area Transportation Improvement Program

ESTABLISHING LOS STANDARDS FOR MONITORING

LOS is an indication of traffic growth trends using vehicular volumes, capacity, and measurement of average speed and delay. The goal is to develop a consistent approach for monitoring LOS that is easy to use, non-duplicative and compatible with local government data and travel-demand models. Table 4 describes the approach for monitoring LOS in Alameda County and defines the facility classifications.

Table 4—Approach to LOS Monitoring

ELEMENT	APPROACH
Level of Service	As defined in statute, the LOS standard is E, except where F was the LOS when originally measured, in which case the standard shall be F. The method of analysis is documented in "*Establishing the Existing Level of Service for the Alameda County CMP-Designated Roadway System*". The methods employed constitute a uniform methodology adopted that is consistent with the 1985 HCM and have been approved by MTC. Methods described in Chapter 8 (Two-Lane Highways) and Chapter 11 (Urban and Suburban Arterials) of the HCM were the basis for establishing the level of service on the CMP system. LOS is assessed based on the average speed observed along a roadway segment (link speeds), or total volumes approaching an intersection (link volumes). These methods are not designed to replace the more detailed procedures that local agencies are likely to use for non-CMP purposes (such as local impact studies). Such procedures typically focus on an intersection's ability to handle individual turning movements rather than average speed on a roadway segment.
Facility Classifications	

The HCM provides methods for determining LOS on several types of facilities. These facilities are grouped into "interrupted-flow" and "uninterrupted-flow" facilities. Interrupted-flow facilities include city streets and surface highways (like State Route 123/San Pablo Avenue) that are part of the state highway system. Freeways are uninterrupted-flow facilities. For purposes of LOS monitoring, the CMP-network can be classified into three functional types of facilities: freeways; two-lane roadways; and urban/suburban arterials.

Freeways

Freeways are uninterrupted-flow facilities, since traffic never stops (except during the most congested periods or when incidents occur). The 1991 CMP, in coordination with local jurisdictions, defined appropriate segments and performed the necessary floating car runs on the freeways to obtain travel speed data. This allowed the establishment of a baseline LOS for the system, including identification of segments operating at LOS F. It is anticipated that Caltrans may eventually monitor freeway system, as required by statute (Katz, Statutes of 1995).

Two-Lane Roadways

Two-lane roadways are uninterrupted-flow facilities. The criteria for including principal arterials in the CMP-network specify a minimum of four lanes; therefore, two-lane roadways are not included as principal arterials. However, two-lane state highways are included, since all state highways must be in the system. These two-lane roads constitute a fairly small portion of the CMP-network mileage, but a method for establishing LOS standards is suggested here. For two-lane roads without interruptions (signals or stop signs), Chapter 8 of the HCM is used, based on average travel speed.

Urban and Suburban Arterials

Urban and suburban arterials are multi-lane streets that have traffic signals spaced no more than two miles apart on average. Urban and suburban arterials are characterized by platoon flows. Operational quality is controlled primarily by the efficiency of signal coordination and is affected by how individual signalized intersections operate along the arterial. LOS is primarily a function of travel speed along segments, and is calculated from field data. Because the CMP legislation emphasizes systems-level planning, Chapter 11 of the HCM is used to estimate arterial LOS. Advantages include the need for relatively little input data, simple applied calculations and the results of explicitly determined LOS (A, B, C, etc.).

Monitoring

The Alameda CTC will conduct LOS monitoring, although the cities, county or Caltrans may eventually assume responsibility for monitoring segments in their

	respective jurisdictions. State statute[22] requires Caltrans to monitor LOS on the freeway system, unless the Alameda CTC designates that responsibility to another entity. Monitoring will be conducted biennially, recognizing that other surveys could be done for development impact studies (e.g., intersection turning movement counts). The method of data collection is the floating car technique of recording travel times between checkpoints based on actual travel time during the peak period. Data from several runs in all non-high-occupancy vehicle (HOV) lanes are averaged for each roadway segment.
Interregional Trips	As defined by statute, "interregional travel means any trip that originates outside" Alameda County. A 'trip' means a one-direction vehicle movement. The origin of any trip is the starting point of that trip. In accordance with MTC guidelines, trips with no trip end in Alameda County (through trips) were not subtracted for monitoring reports.

Highway Capacity Manual and LOS Standards

The Congestion Management legislation requires that the LOS monitoring on CMP roadways be measured by the most recent version of the HCM or by a uniform methodology adopted by the Alameda CTC, consistent with the HCM. For LOS Monitoring and Deficiency Plan purposes, Alameda CTC uses methods outlined in the 1985 HCM to determine LOS for various county roadways, as shown in Table 5, (adopted in 1991 and updated in 2004).

In 2005, an attempt was made to transition to using the most recent (2000) HCM for the purposes of LOS Monitoring and Land use Analysis Program. For the LOS Monitoring program, comparative analysis was performed between 1985 and 2000 HCMs for all CMP roadway types.

For arterials, the major change in HCM 2000 was the addition of one new classification as Class I with higher free flow speeds, hence moving the previous three classifications in the 1985 HCM accordingly, to one level down.

For freeways, the differences between the 1985 HCM and 2000 HCM methodologies were significant. Specifically, since minimum speed threshold for a given LOS changed in the HCM 2000, the following implications were identified in transitioning to HCM 2000:

- Potential for a large number of freeway segments performing at LOS F, therefore triggering the need for deficiency plans; and
- Inability to track the trend or compare the historic data collected since 1991.

Therefore, continuing use of the 1985 HCM for the CMP LOS Monitoring purposes until the next HCM update and transition to the HCM 2000 for the CMP Land Use Analysis Program purposes was approved.

[22] California Government Code Section 65089(b)(1)(A), Amended 1995.

During the 2011 CMP Update, the possibility of transitioning to the 2010 HCM was reviewed. Since the 2010 HCM was released during the middle of the 2011 CMP Update, a comparative analysis of the 1985 HCM and 2010 HCM will be deferred until 2013 CMP update.

Table 5—Relationship between Average Travel Speed and LOS

Arterials

Arterial Class	**I**	**II**	**III**
Range of Free Flow Speeds (mph)	35 to 45	30 to 35	25 to 35
Typical Free Flow Speed (mph)	40	33	27
Level of Service	**Average Travel Speed (mph)**		
A	≥ 35	≥ 30	≥ 25
B	≥ 28	≥ 24	≥ 19
C	≥ 22	≥ 18	≥ 13
D	≥ 17	≥ 14	≥ 9
E	≥ 13	≥ 10	≥ 7
F	< 13	< 10	< 7

Freeways

LOS	**Average Travel Speed** (mph)	**Volume-To-Capacity Ratio**	**Maximum Traffic Volume** (vehicles / hour / lane)
A	≥ 60	0.35	700
B	≥ 55	0.58	1,000
C	≥ 49	0.75	1,500
D	≥ 41	0.90	1,800
E	≥ 30	1.00	2,000
F	< 30	Variable	-

Source: *Highway Capacity Manual*, Transportation Research Board, 1985.

Range for LOS F for Freeway Sections:

- F30–Average Travel Speed < 30 mph
- F20–Average Travel Speed < 20 mph
- F10–Average Travel Speed < 10 mph

TRAFFIC MONITORING PROGRAM

The Alameda CTC currently conducts LOS monitoring on CMP system roadways. If the cities, county or Caltrans assume responsibility, monitoring could be accomplished through a self-certification process involving the local jurisdictions and/or Caltrans and the Alameda CTC.

Self-Certification Process

By June 15 of each year, a set of travel time runs are to be submitted to the Alameda CTC for the CMP-network. A city or the county, if it assumes responsibility, would submit the information, except for the freeways, within its jurisdictional limits. If Caltrans assumes responsibility for the freeways, it would similarly submit summary data to the Alameda CTC by June 15. Local jurisdictions or Caltrans will also be responsible for calculating LOS according to Table 5, which is based on Chapter 11 of the 1985 HCM. Local agencies or Caltrans will keep raw field data available for the Alameda CTC to examine for at least three years. Travel time runs will be completed by mid-May each year. ACTAC will provide technical guidance and assistance in reviewing methodology and interpreting LOS monitoring results.

Data Requirements

In addition to the basic geometric, signal timing, and other such "physical" information, the traffic monitoring program requires information about average travel speed, which is the basis for measuring level-of-service on all facility types (i.e., freeways, two-lane highways (uninterrupted) and urban/suburban arterials).For a given roadway segment, monitoring must be performed and reported separately for each travel direction. Travel speed studies normally are conducted using "floating" cars that drive at the posted speed, or if constrained by traffic conditions, at the average speed of traffic. Starting in 2008, the Global Positioning System is used to record travel data in "floating car" method.

Until 2004, LOS monitoring was conducted for all the CMP segments during the p.m. peak hours (4:00 p.m. to 6:00 p.m.) and for selected freeway CMP segments during the a.m. peak hours (7:00 a.m. to 9:00 a.m.). Starting with the 2006 LOS Monitoring period, all CMP roadway segments are monitored during both peak periods. The a.m. peak monitoring will be for informational purposes only. Similar to a.m. peak monitoring, the Tier 2 roadway network described in Chapter 2, Designated Roadway System, is also monitored in both a.m. and p.m. peak periods for informational purposes only.

Data Collection Methodology

A suggested approach to ensure acceptable monitoring is described in *Establishing the Existing Level of Service for the Alameda County CMP-designated Roadway System* (CMA, 1991). This document is based on the Institute of Transportation Engineer's *Manual of Traffic Engineering Studies* (Chapter 7, Test Car Method). A test car is driven six times in each direction on all CMP-network. This frequency may be adjusted later for roadway segments found to consistently operate at LOS A or B. More than six test car runs are performed on roadway segments operating at LOS E or F because a greater range or fluctuation in data typically occurs. Test car runs will be repeated biennially.

The following guidelines will be used to determine acceptability of data for use in the CMP:

- Test car runs must be made on a Tuesday, Wednesday and/or Thursday, because these days are most indicative of average weekday conditions;
- Test car runs on a particular segment must span a range of days and time of day. This means that test car runs should not be bunched on the same day of the week or taken on separate days at the same time;
- Runs near holidays, when school is not in session or when roadway construction is under way, must be avoided;
- Consistent monitoring periods must be observed for each roadway segment. For example, a comparison between April 2010 and April 2011, is likely to be more valid than a comparison between January 2010 and August 2011; and
- If special generators are located within a few miles of the monitoring location, it must be determined whether unusual or unwanted activity levels are occurring at the special generator. A call to a shopping center management company, for example, could be made to ascertain that the test days was reasonably close to average, and that no retailers were holding major sales.

Definition of Roadway Segments

For surface highways, route segments were determined for travel time analysis, with input from ACTAC and appropriate departments (traffic engineer, planning department, etc.) at the local jurisdiction. This determination used the following guidelines:

- Segments should be at least one mile and not more than five miles in length; and
- Logical segment break-points include: jurisdictional boundaries; points where the basic number of travel lanes change; locations where land use changes occur (e.g., commercial area versus residential), points where the posted speed limit changes or where the number of adjacent driveways is significantly different.

Since the adoption of the CMP roadway segments in 1991, the intensity and location of congestion throughout the county changed. Therefore, in 2007, the CMP roadway segment lengths and the criteria for designating the CMP roadway segments to develop new segments that better reflect existing land use and travel patterns. It was found that from a field and operating perspective, the CMP roadway segmentation criteria were still appropriate and therefore it was recommended that no changes be made. However, many long segments were found to be showing better levels of service by averaging speed over the length of the segments.

Splitting these segments using the approved criteria revealed congestion hot spots. To more accurately identify congested segments, the longer segments were split into shorter segments. Because the original check points were retained, all new segments nest within the pre-2007 roadway segments. This is important so that trends can be evaluated over time. Many new segments were located on I-580 in the Tri-valley area. There were only four arterials that are further segmented. For the 2009 CMP Update, SR 84 in East County was segmented into shorter segments.

To date the Alameda CTC has performed all data collection (floating car runs) on the CMP-designated system of arterials and freeways. However, the Alameda CTC continues to work to ensure that the California Department of Transportation, Caltrans, will eventually assume responsibility for collecting all data necessary for determining levels of service on freeways. According to statute (Katz, Statutes of 1995), Caltrans "is responsible for data collection and analysis on state highways, unless the congestion management agency designates that responsibility to another entity. The congestion management 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."

Identification of LOS F Roadway Segments

Between July and October, 1991, travel time studies were completed to establish existing LOS on all segments of the CMP-network during the p.m. peak period. Travel time studies were conducted during the p.m. peak period on Tuesdays, Wednesdays, and Thursdays. Information gathered consisted of travel time runs on all CMP routes. A range of four to 10 travel time runs in each direction were done to estimate average travel speeds, in accordance with CMP requirements and Institute of Transportation Engineers recommendations, as specified in their *Manual of Traffic Engineering Studies*.

Travel time checkpoints for principal arterials were generally chosen at signalized intersections; for freeways, interchange ramp junctions were used. Further detail about segment LOS monitoring methodology and results are available by contacting the Alameda CTC.

During the 1992 monitoring cycle it was determined that freeway-to-freeway connectors had not been monitored as part of the 1991 baseline LOS determination. Monitoring of these segments was performed, together with the rest of the network, between August and September, 1992. Five freeway connector segments were operating at LOS F, and they were grandfathered as permitted by the statutes. The LOS freeway-to-freeway connections are shown in Table 6.

Tables 6 and 7 and Figure 8 identify the system segments (on freeways and principal arterials) found to operate at LOS F in 1991. According to the study results, a total of 15 freeway segments (excluding freeway to freeway connectors) and 15 arterial segments were operating at LOS F during the p.m. peak period in 1991. These segments, which operated at LOS F during 1991 (the first year of the CMP), are grandfathered from CMP requirements for preparing a deficiency plan.

Grandfathered Segments

Shown in Tables 6 and 7 and Figure 8, 30 segments (15 freeway and 15 arterial) grandfathered by statute in 1991 are not exempt from analysis and mitigation for purpose of satisfying the Land Use Analysis Program (Chapter 6), the California Environmental Quality Act (CEQA) and the federal National Environmental Protection Act (NEPA). The CMP focuses on existing congestion, therefore strategies and/or improvements to address grandfathered segments should be considered in corridor studies, investments in the CWTP and the CMP Capital Improvement Program.

Table 6—LOS F Freeways for Alameda County CMP-Designated Roadway System

	Roadway		Limits	Jurisdiction	Average Speed (mph)
1	I-80	WB	From: University To: I-80/580 Split	Berkeley/Emeryville	16.6
2	I-80	WB	From: I-80/580 Split To: Bay Bridge Toll Plaza	Oakland	29.7
3	I-80	EB	From: I-580/80 Split To: University	Emeryville/Berkeley	25.8
4	I-80	EB	From: University To: Central	Berkeley/Albany	25.8
5	SR-24	EB	From: I-580 To:Fish Ranch Road	Oakland	28.5
6	I-580	SB	From: I-80/580 To: I-980/Hwy 24	Oakland	25.6
7	I-980	EB	From: I-880 To:SR-24/I-580	Oakland	28.5
8	I-238	EB	From: I-880 To: I-580	County/San Leandro	29.8
9	I-880	SB	From: Hegenberger To: Washington	San Leandro/Oakland	29.2
10	I-880	SB	From: Washington To: A Street	County/Hayward	24.3
11	I-880	NB	From: Tennyson To: SR-92 (Jackson)	Hayward	18.2
12	I-880	NB	From: SR-92 To: Lewelling	Hayward	23.2
13	I-880	NB	From: Dixon Landing To: SR-262/Mission	Fremont	29.3
14	SR-92	WB	From: Clawiter To: Toll Gate	Hayward/County	27.1
15	SR-92	EB	From: Toll Gate To: I-880	Hayward/County	27.5

Note: Data is based on surveys taken during the afternoon peak period in September/October, 1992.

Freeway-to-Freeway Connectors	Jurisdiction	Length (miles)	Average Speed	Free Flow Speed
I-80 SB to I-580 EB*	Oakland	0.30	18.7	45.0
I-580 WB to I-80 NB*	Oakland	0.21	16.0	45.0
I-680 SB to I-580 EB	Pleasanton	0.67	16.3	35.0
SR-13 NB to SR-24 EB	Oakland	0.35	14.4	45.0
I-580 WB; SR-24 WB to I-80 NB	Oakland	0.69	22.1	45.0

Note: Data is based on surveys taken during the afternoon peak period in September/October, 1992.

* LOS condition was first reported during the 1991 surveys.

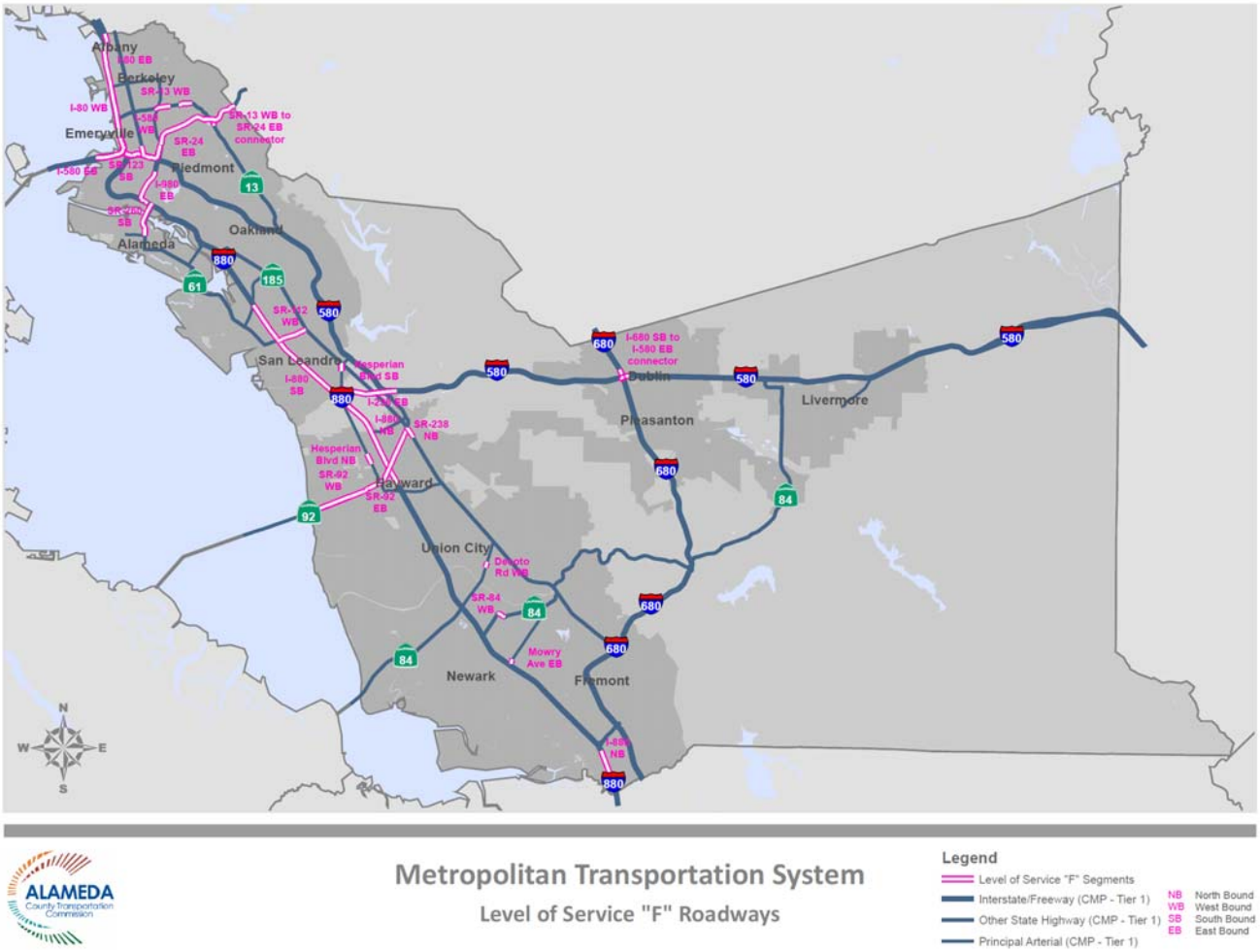
Table 7—LOS F Arterial Segments, Alameda County CMP-Designated Roadway System

	Roadway		Limits	Juris.	Arterial Class	Avg. Speed (mph)
1	SR-13 (Ashby Ave.)	WB	From: Telegraph To: Shattuck	Berkeley	III	8.7
2	SR-13 (Ashby Ave.)	WB	From: Shattuck To: MLK, Jr. Way	Berkeley	III	9.3
3	SR-13 (Ashby Ave.)	EB	From: College To: Domingo	Berkeley	III	6.8
4	SR-123 (San Pablo Ave.)	SB	From: Park Avenue To: 35th Street	Emeryville/ Oakland	II	9.4
5	SR-260	SB	From: 7th/Webster To: Atlantic	Oakland/ Alameda	I	12.3
6	SR-238 (Mission Blvd.)	NB	From: Sycamore To: Jackson	Hayward	II	8.8
7	SR-92 (Jackson St.)	EB	From: I-880 To: Winton	Hayward	II	8.6
8	SR-92 (Jackson St.)	EB	From: Winton Ave. To: Mission	Hayward	II	4.5
9	Hesperian Blvd.	NB	From: La Playa To: Winton	Hayward	I	11.1
10	Hesperian Blvd.	SB	From: 14th St. To: Fairmont	San Leandro	II	9.9
11	Hesperian Blvd.	SB	From: Spring lake To: Lewelling	Unincorp.	II	9.6

	Roadway		Limits	Juris.	Arterial Class	Avg. Speed (mph)
12	SR-112 (Davis St.)	WB	From: I-880 To: San Leandro Blvd.	San Leandro	II	5.2
13	Decoto Road	WB	From: Union Square To: Alvarado-Niles	Union City	II	8.6
14	SR-84 (Fremont Blvd.)	WB	From: Peralta Blvd To: Thornton Ave.	Fremont	II	7.2
15	Mowry Avenue	EB	From: I-880 To: Farwell Dr.	Fremont	II	9.6

Note: Based on surveys during the afternoon peak period (4 to 6 p.m) in July-August and October, 1991.

Figure 8—LOS F Roadways



COMPARISON WITH PREVIOUS RESULTS

The results of several years of LOS monitoring, as presented in Table 8, show that overall traffic conditions for long-distance trips on the CMP freeway network have generally remained stable or slightly improved. Though not particularly strong, an overall trend or change can be interpreted from comparisons with the 1991 LOS data. There is some improvement in average traffic conditions (i.e., higher speeds) on these longer distance freeway trips over 1991 conditions. However, there are still congested points found along most of the routes.

Table 8—LOS Trends on the CMP-network (afternoon peak period)

				MILES PER HOUR											
Road		Limits	mi.	08/ 91	10/ 91	92	94	96	98	00	02	04	06	08	10
I-80	EB	Bay Bridge Toll Plaza to Contra Costa line	6		23	20	22	21	20	27	19	32	23	21	29
I-80	WB	Contra Costa line to Bay Bridge Toll Plaza	6	26	25	24	23	25	28	18	22	28	28	36	27
I-580	EB	I-238 to I-205	31	-	56	55	55	55	na	41	31	34	36	35	31
I-580	WB	I-205 to I-238	31	-	57	56	57	61	na	55	55	60	58	61	66
I-580	EB	I-80 to I-238	16	-	53	52	44	53	60	63	55	43	34	47	42
I-580	WB	I-238 to I-80	16	-	58	55	51	52	61	63	60	57	55	63	60
I-680	NB	Scott Creek Rd. to Alcosta Blvd.	21	-	58	57	57	52	51	58	51	42	53	43	40
I-680	SB	Alcosta Blvd. to Scott Creek Rd.	21	-	59	58	55	61	67	63	62	66	58	63	66
I-880	NB	Dixon Landing Rd. to I-980	30	42	45	44	43	46	38	48	38	49	45	43	42
I-880	SB	I-980 to Dixon Landing Rd.	30	47	43	40	38	46	50	49	41	37	37	48	46
SR-13	NB	Mountain Blvd to Hiller Dr.	6	51	54	50	49	48	53	51	50	35	39	51	41

Road		Limits	mi.	MILES PER HOUR 08/91	10/91	92	94	96	98	00	02	04	06	08	10
SR-13	SB	Hiller Dr. to Mountain Blvd	6	57	56	59	53	47	59	59	55	54	57	49	39
SR-24	EB	I-580 to Fish Ranch Rd.	5	29	30	29	30	24	39	33	21	40	25	24	18
SR-24	WB	Fish Ranch Rd. to I-580	5	53	54	58	54	50	60	57	61	59	59	58	67

INFILL OPPORTUNITY ZONES

SB 1636 (Figueroa), signed by the Governor in 2002, established "infill opportunity zones" to encourage transit supportive development. The statute exempted infill opportunity zones from the requirements to maintain the LOS E. None of the local jurisdictions within Alameda County established or adopted infill opportunity zones by the statute's sunset period of December 2009 (see Appendix F for details).

Although the legislative provision to support infill development no longer exists , given the current regional and state level efforts regarding the importance of linking transportation and land use to reduce the greenhouse gas emissions through infill land use developments, it is important that a policy supporting designation of infill development areas in the county be included in the CMP. This will be consistent with the Sustainable Community Strategy requirement in SB 375 and CEQA requirements, and could streamline and promote the development of Priority Development Areas. Therefore, the Alameda CTC Commission explored ways of harmonizing policies, guidelines and regulations (e.g. deficiency plan) so infill development could be easier to implement. The resulting strategy is found in Chapter 6, Land Use Analysis Program.

COMPLIANCE AND CONFORMANCE

Government Code Section 65089.3(a) requires the congestion management agency to biennially monitor conformance with the adopted CMP. Among the requirements, the Alameda CTC must find consistency with the LOS standards. If a roadway segment is not conforming to the LOS standards based on the biennial monitoring, the affected local jurisdiction will be notified, and may elect to remedy the LOS problem or prepare a deficiency plan (see Chapter 8). If after 90 days the local jurisdiction is still in non-conformance, the Alameda CTC is required to provide notice to the California Transportation Commission and the State Controller. The notice includes the reasons for the finding and evidence that the Alameda CTC correctly followed procedures for making the determination.

The State Controller would then withhold the non-conforming jurisdiction's increment of subventions from the fuel tax made available by Proposition 111, and the jurisdiction will not be eligible to receive funding for projects through the federal STP and CMAQ Program. If within the 12-month period following the receipt of a notice of non-conformance, the Alameda CTC determines that the city or county is in conformance, the withheld Proposition 111 funds will be released to the Alameda CTC for projects of regional significance included in the CMP or a deficiency plan.

LOCAL GOVERNMENT RESPONSIBILITIES

At present, the Alameda CTC is contracting with a consultant to monitor all segments of the CMP roadway system. If a local government or Caltrans assumes responsibility for monitoring roadways included in the portion of the CMP system under its jurisdiction, it must biennially monitor the LOS on the designated system and report to the CMA by June 15 of that year relative to conformance with the adopted standards.

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CHAPTER FOUR

Performance Element

BACKGROUND

CMAs must evaluate how well their transportation systems are doing in meeting their CMP objectives of reducing congestion and improving air quality.[23] Specifically, the CMP must contain performance measures that evaluate how highways and roads function, as well as the frequency, routing and coordination of transit services. The performance measures should support mobility, air quality, land use and economic objectives and be used in various facets of the CMP.

Combined with LOS standards, the Performance Element provides a basis for evaluating whether the transportation system is achieving the broad mobility goals in the CMP. These include developing the Capital Improvement Program, analyzing land use impacts and preparing deficiency plans to address problems. The legislation intends for the Performance Element to include new performance measures, in addition to roadway LOS and transit routing, frequency and service coordination. However, only the roadway LOS standards will be used to trigger the need for a deficiency plan.

The guiding principles used to develop the Performance Element for the Alameda County CMP are:

- Keep it simple and manageable;
- Be cost-effective, relying on available data and established monitoring processes;
- Use the Alameda CTC's long-range transportation goals and MTC's multimodal programming criteria as a philosophical framework;
- Use measures that can be presented in easy-to-understand and consumer-oriented terms;
- Consider an array of measures since one measure will not serve all needs; and
- Satisfy State AB 1963 and Federal Transportation Act requirements.

RELATIONSHIP TO THE COUNTYWIDE TRANSPORTATION PLAN

The philosophical framework envisioned for the Performance Element is to relate performance measures to the:

- Goals and management strategies adopted for the 2012 CWTP; and
- Policies set forth in the CMP.

Figure 9 (currently being updated) shows how the Performance Element relates to other responsibilities of Alameda CTC. Table 9 shows the relationship between performance measures and the long-range goals, adopted by Alameda CTC. Measures of the transportation system's performance will provide feedback on the effectiveness of management strategies and investment decisions.

[23] California Government Code Section 65089(b)(2)

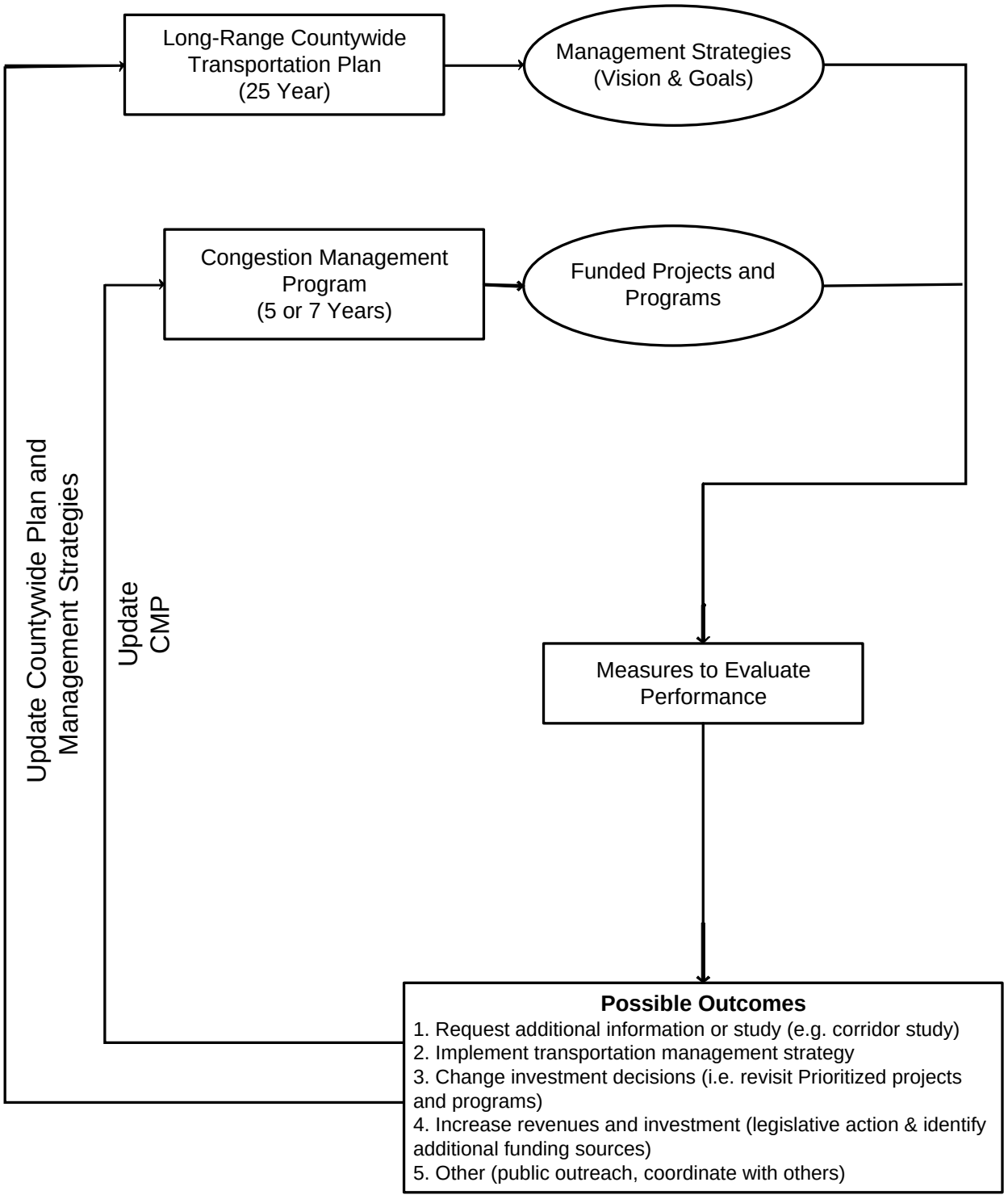
PERFORMANCE MEASURES

Performance measures are listed in Table 9, which also includes the performance measures adopted for the 2012 CWTP by the Alameda CTC that can be monitored with data collection or using the countywide model. The measures encompass all modes of transportation. Peak and off-peak travel periods are considered for typical weekdays. Measurements of current conditions rely primarily on available data and established data collection processes.

The recently updated countywide travel model can forecast the following additional performance measures:

- Person trips by mode
- Vehicle volume by roadway segment
- Vehicle miles traveled by facility type
- Volume-to-capacity (V/C) ratios by facility type
- Vehicle hours of travel by facility type
- Lane miles by v/c ratio
- Person miles traveled by mode
- Passenger boarding by operator or line
- Travel time by mode
- Travel speed by mode
- Vehicle hours of delay by facility type
- Duration of congestion by facility
- Time spent in congestion
- Transit accessibility

Figure 9- How Performance Measures are used in the CMP



Acceptability of Data

An adopted approach to ensure that data collection methods are acceptable to the Alameda CTC is described in "Establishing the Existing Level of Service for the Alameda County CMP-designated Roadway System" in Chapter 3, LOS Standards Element. This applies to speed and travel time data. An ongoing process will be necessary to review definitions and methods to ensure that the information is collected in a consistent manner prior to use in trend analyses.

System Definition

While the statutes clearly require designation of a CMP-network for purposes of LOS monitoring, they provide no guidance for selecting a system for the Performance Element. The Alameda CTC will use the Metropolitan Transportation System for the Performance Element. The Alameda CTC also recognizes the MTS[24] in the Land use Analysis Program as the focus of transportation analyses.

Description of Performance Measures

Trips by Alternative Modes

Measured in terms of percent of all trips made alternative modes (bicycling, walking, or transit) using the countywide travel demand model.

Low Income Households near Activity Centers

Measured in terms of ratio of share of households by income group within a given travel time to activity centers. It is measured as share of households (by income group) within 30-minute bus/rail transit ride an 20 minute auto ride of at least one major employment center and within walking distance of schools

Low Income Households near Transit

Measured in terms of ratio of share of households by income group near frequent bus/rail transit service. It is defined as being within one half mile of rail and one quarter mile of bus service operating at LOS B or better during peak hours.

Average Highway Speeds

As currently measured by the Alameda CTC using the countywide travel demand model or floating car data, this is the average travel speed of vehicles over specified segments measured in each lane during peak periods. This measurement is made a sufficient number of times to produce statistically significant results.

[24] MTS prior to 2005

Travel Time

Measured in four parts to cover all modes:

- Average per-trip travel time for automobile, truck, and bus/rail transit modes. This measure will also serve as a proxy for economic vitality;
- Ratio of peak to off-peak travel time for automobile, truck and transit modes;
- Average daily travel time for bicycle and pedestrian trips; and
- Average roadway travel time and transit time between these origins and destinations (O-D) pairs for up to 10 pairs using floating car data. These O-D pairs will reflect major corridors in Alameda County.

With the exception of the data for travel time between the O-D pairs all other measures will be estimated using the countywide travel demand model.

Duration of Traffic Congestion

As defined by Caltrans, this is the period of time during either the a.m. or p.m. peak that a segment of roadway is congested (average speed is less than 35 m.p.h. for 15 minutes or more). Data are collected by Caltrans, or most recently by MTC, from floating car runs conducted in April/May and September/October each year and reported annually. The Alameda CTC may be able to collect similar data on the remainder of the CMP-network by conducting floating car runs earlier or later, where necessary, to observe the beginning and ending of the congested period.

Roadway Maintenance

As defined by MTC, this is based on the roadway Pavement Condition Index (PCI) used in MTC's Pavement Management System. The PCI is a measure of surface deterioration on streets and roads.

Roadway Collisions

Measured in two parts to cover auto and bicycle and pedestrian modes as described below:

- The number of accidents per one million miles of vehicle travel; and
- Total injuries and fatalities from all pedestrian and bicyclists collisions on Alameda County roadways.

Caltrans collects the data as a part of the Statewide Integrated Traffic Record System/Traffic Accident Surveillance and Analysis System.

CO2 Emissions

Measured in terms of per-capita CO2 emissions from cars and light duty trucks

Fine Particulate Emissions

Measured in terms of fine particulate emissions from cars and light duty trucks

Percent of Countywide Bike Plan Completed

Measured in terms of the number of miles and the percentage completed of the countywide bicycle plan. Focus will be on the progress of the high priority projects and programs included in the bicycle plan. With the current update of the Countywide Bicycle Plan, additional performance measures are being considered to track progress on implementing the Countywide Bicycle Plan. Any new measures identified will be added when the final Countywide Bicycle Plan is adopted by the Alameda CTC.

Extent of Countywide Pedestrian Plan Completed

Measured in terms of how many local jurisdictions have adopted pedestrian master plans, with a goal of having all 15 jurisdictions have current, adopted pedestrian plans. With the current update of the Countywide Pedestrian Plan, additional performance measures are being considered to track progress on implementing the Countywide Pedestrian Plan. Any new measures identified will be added when the final Countywide Bicycle Plan is adopted by the Alameda CTC.

Transit Routing

This measure refers to both the pattern of the transit route network (e.g., radial, grid, etc.) and the service area covered (e.g., percent of total population served within one-quarter mile of a station/bus stop or percent of total county served, etc.). Measurement of routing performance may be applied at the corridor or screenline level to give operators flexibility in locating service routes.

Frequency of Transit Service

This refers to the headway, or the time between transit vehicles (e.g., one bus arrival every 15 minutes). Service should be frequent enough to encourage ridership, but must also consider the amount of transit ridership the corridor (or transit line) is likely to generate. It also considers the capacity of the existing transit service in that corridor.

Transit Service Coordination

This measure refers to coordination of transit service provided by different operators (e.g., timed transfers at transit centers, joint fare cards, etc.). Performance should be aimed at minimizing inconvenience to both the infrequent and frequent user. Information provided by transit agencies should address the questions: Is there coordination and how convenient is it?

Transit Ridership

Measured in two parts as follows:

- The number of average daily passengers boarding or de-boarding transit vehicles in Alameda County; and
- Transit ridership per revenue hour of service.

Transit Vehicle Maintenance

Measured in terms of “Miles between Mechanical Road Calls,” and defined as the removal of a bus from revenue service due to mechanical failure and applied to AC Transit, UC Transit and the Livermore-

Amador Valley Transit Authority (LAVTA). BART and Altamont Commuter Express (ACE) have a related term known as "Mean Time between Service Delays" where delays can be caused by personnel or by mechanical failures.

Transit Availability

Transit availability is measured by the frequency of transit service during the morning peak period within one-half mile of rail stations or bus and ferry stops and terminals. Population density at the same stations is also measured to track availability of transit to Alameda County residents. The transit frequency portion of this measure is monitored annually based on input from transit operators.

Transit Capital Needs and Shortfall

Transit capital needs and shortfall is measured every four years, coinciding with the update of RTP. This is tracked for High Priority (Score 16) transit projects for Alameda County transit operators.

Community Based Transportation Plans

Projects identified in Community Based Transportation Plans (CBTPs) and funded through the Lifeline Transportation Program are monitored annually. Monitoring shows the status and progress of these projects, which are meeting transportation needs in low income communities as identified in CBTPs. Progress of the implementation of these projects are included as a Performance Measure.

Table 9—Performance Measures (PM)

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Trips by Alternative Modes*	Clean Air; Climate Protection; Equitable Access; Livable Communities	Multimodal	Mobility Air Quality Land Use	Percent of all trips by alternative modes from countywide travel demand model	Analyzing and comparing alternatives or as an evaluation of the effectiveness of the CWTP.	Not actual data but forecasted data using a countywide model.
Low Income Households near Activity Centers*	Reliability; Efficient Freight Travel; Security & Emergency Management	Accessible, Affordable and Equitable	Land Use Economic	Share of households by income group within a given travel time (30-min by bus/rail and 20-min by auto) of at least one major employment center and within walking distance of schools	Analyzing and comparing alternatives or as an evaluation of the effectiveness of the CWTP.	Not actual data but forecasted data using a countywide model, which uses land use and socio-economic information from ABAG/MTC.

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Low Income Households near Transit*	Reliability; Efficient Freight Travel; Security & Emergency Management	Accessible, Affordable and Equitable	Land Use Economic Mobility	Share of households by income group near frequent bus/rail transit service	Analyzing and comparing alternatives or as an evaluation of the effectiveness of the CWTP.	Not actual data but forecasted data using a countywide model, which uses land use and socio-economic information from ABAG/MTC.
Average Highway Speeds	Reliability; Efficient Freight Travel; Security & Emergency Management	Connected Reliable and Efficient	Mobility Air Quality	Current Requirement Average speeds on CMP network	LOS determinations. Trigger Deficiency Plans. Evaluate direct effectiveness of projects in relieving congestion.	Adequate for determining CMP conformance. Caution in use as a measure of mobility.

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Travel Time* Transit, Highways, HOV Lanes	Reliability; Efficient Freight Travel; Security & Emergency Management	Multimodal Connected Reliable and Efficient Integrated with land use Clean & Healthy Env't	Mobility Air Quality Land Use	Average per-trip travel time for automobile, truck, and bus/rail transit modes. Ratio of peak to off-peak travel time for automobile, truck and transit modes. Average daily travel time for bicycle and pedestrian trips. Average travel time between selected O-D pairs. Obtain from biennial LOS monitoring data and transit schedules	Useful in analyzing trends for various modes, comparing alternatives or as an evaluation of the effectiveness of the CWTP. Problems can be spotted for targeted investment. Can compare travel times via roadway and transit along major corridors.	All data other than O-D pairs data are not actual data, but from the countywide model. Also, the model is not calibrated for bicycle and pedestrian trips. For O-D data, reliance on data collected on a few days each year which is not always representative of conditions throughout the year.
Duration of Traffic Congestion	Reliability; Efficient Freight Travel; Security & Emergency Management	Reliable and Efficient Clean and Healthy Env't	Economic Air Quality	Hours of Congestion at key locations	Could be used as trigger for certain traffic management strategies to contain congestion to normal peak periods to maintain smooth truck travel during mid-day.	Caution in a reliance on data collected on a few days each year which is not always representative of conditions throughout the year.

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Roadway Main-tenance	Maintenance & Safety; Efficient Freight Travel; Security & Emergency Management	Well Main-tained Reliable and Efficient Safe	Economic	MTC's Pavement Condition Index	$ amount of maintenance backlog for MTS roadways. Useful in guiding investment decisions for roadway maintenance needs.	Reliability dependent on subjective assumptions made by local agency staff. Assumptions can change annually depending on staff person conducting the estimate.
Roadway Collisions*	Maintenance & Safety; Efficient Freight Travel; Security & Emergency Management	Safe Clean and Healthy Env't	Mobility Air Quality	Number of accidents/one million miles Total injuries and fatalities from all pedestrian and bicyclists collisions in the County From SWITRA/ TASAS System	Identify safety issues. Useful in guiding investment decisions.	Data not available for local streets/roads. Accidents may not be caused by physical facilities.
CO2 Emissions*	Clean Air; Climate Protection; Livable Communities	Clean and Healthy Env't	Air Quality Economic	Per capita CO2 emissions from cars and light-duty trucks	Analyzing and comparing alternatives to address Climate Change	VMT data from the countywide model is used to input into an estimator that is based on a tool from California Air Resources Board

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Fine Particulate Emissions*	Clean Air; Climate Protection; Livable Communities	Clean and Healthy Env't	Air Quality Economic	Per capita fine particulate emissions from cars and light-duty trucks	Analyzing and comparing alternatives to address Air Quality	VMT data from the countywide model is used to input into an estimator that is based on a tool from California Air Resources Board
Completion of Countywide Bike Plan	Clean Air; Climate Protection; Equitable Access; Livable Communities	Multi-modal Reliable and Efficient, Clean and Healthy Env't	Mobility Air Quality	Miles and Percent Completion of Bikeway Plan	Progress toward a connective system of countywide bikeways	Does not reflect actual use of bicycle facilities.
Completion of Countywide Pedestrian Plan*	Clean Air; Climate Protection; Equitable Access; Livable Communities	Multi-modal Reliable and Efficient, Clean and Healthy Env't	Mobility Air Quality	Number of jurisdictions with adopted Pedestrian Plan	Progress toward a connective system of countywide pedestrian facilities	Does not reflect actual use of pedestrian facilities.
Transit Routing	Reliability; Clean Air; Climate Protection; Equitable Access; Livable Communities	Multi-modal Con-nectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Env't	Mobility Air Quality Land Use	Service Area Covered and Pattern of the transit route network	To determine area coverage and proximity of transit service to residential areas and job centers.	Proximity to transit stops or stations is an important indicator of accessibility; however, the data is difficult to collect.

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Transit Frequency	Reliability; Clean Air; Climate Protection; Equitable Access; Livable Communities	Multi-modal Con-nectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Env't	Mobility Air Quality Land Use	Number of lines operating at each frequency level	To determine convenience of transit service.	Cannot be used to plan a transit trip
Coordination of Transit Service	Reliability; Clean Air; Climate Protection; Equitable Access; Livable Communities	Multi-modal Con-nectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Env't	Mobility Air Quality	Coordination of service provided by different operators (e.g., timed transfers at transit centers, joint fare cards)	To determine reliability and convenience for travelers connecting between services.	Cannot be used to plan a transit trip or transfer

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Transit Ridership	Clean Air; Climate Protection; Equitable Access; Livable Communities	Multi-modal Con-nectivity Cost-Effective Reliable and Efficient Integrated with land use Clean and Health Env't	Economic Air Quality Land Use	Number of patrons	Trend analysis; comparison between operators	Cannot be exclusively used to estimate the need for increase or decrease in transit investment
Transit Vehicle Maintenance	Maintenance & Safety; Clean Air; Climate Protection	Cost-Effective Reliable and Efficient Connected Safe Clean and Health Env't	Air Quality	Mean time between Service Delays (BART) and Miles between Mechanical Road Calls (AC, LAVTA, Union City Transit)	Trend analysis; comparison between operators. Transit agencies have internal standards for comparison and investment allocation decisions.	

PM	RTP Goal	CWTP Goal	Obj. in Statute	Req'd Data	How Results can be Used	Notes on Data Use
Transit Avail-ability	Clean Air; Climate Protection; Equitable Access; Livable Communities	Cost-Effective Reliable and Efficient Connected Integrated with land use Clean and Health Env't	Mobility Air Quality Land Use	Transit service frequency during peak periods and population at all transit stations in County	Determine mobility options available to Alameda County residents over time. Track as means of measuring efforts towards meeting climate change legislation.	Even with available transit options, this does not include the percentage of residents and employees that use transit. Population is based on census tract information, which is an approximation, not an exact correlation within one-half mile radius of stations.
Transit Capital Needs and Shortfall	Maintenance and Safety; Clean Air; Climate Protection; Equitable Access	Reliable and Efficient Connected Clean and Health Env't	Mobility Air Quality	Transit capital needs and Shortfall for high priority (Score 16) projects	Use transit capital needs gap to determine funding needs and investment options.	Measured every four years with the Regional Transportation Plan

* Denotes new or expanded existing performance measure resulting from integrating the measures from the 2012 CWTP. Extent of data collection for these measures depends on additional funds being available.

DETAILS ON TRANSIT SERVICE PERFORMANCE MEASURES

The following transit service performance measures are derived from the service standards of the transit operators in the county as expressed in their short-range transit plans or other policy documents.

Frequency

Table 10 shows performance measures for bus and rail transit in Alameda County. These measures apply to both existing services and future year (proposed) services.

For ferry services from Alameda and Oakland to San Francisco, the frequency measure is one vessel per hour during the a.m. and p.m. peak periods.

Table 10—Performance Measures for Frequency of Transit Service (Time of Day)

Service Type	Peak	Midday	Night	Owl	Sat/Sun/Holiday
	(minutes between services)				
Bus					
Primary Trunk	15	15	30	60	15
Major Corridor	15	30	30		30
Local/Crosstown	30	30	60	30-60	60
Suburban Local/Crosstown	30-45	60			
Transbay Basic	15	30	60		60
Transbay Express	15-30				
Rail					
BART	3.75-15		up to 20 (off-peak)*		
Ferries	60	varies			varies

Note: Overlapping bus routes provide more frequent service on some corridors

*Starting September 2009, Saturday daytime service will be five routes with up to 15 minute headways and all other off-peak times (Week Night/Weekend Night/Sunday) will be three routes with 20 minute headways. The off-peak service will include service between San Francisco Airport and Millbrae.

Routing

Performance measures for routing and area coverage vary by transit operator.

AC Transit has guidelines for route spacing. In the densest areas, with population over 20,000 people per square mile, routes should be only ¼ mile apart. In medium density areas with 10,000-20,000 people per square mile, such as many of the grid sections of Oakland and Berkeley. In low density areas with 5,000-10,000 people per square mile, typical of sections in Castro Valley, Hayward, and Fremont—route spacing can be ½-3/4 mile. There is no standard for very low density areas with less than 5,000 people per square mile.

In making specific route decisions, AC Transit uses these guidelines, but also bases current and future year bus route spacing (the average distance between bus lines) on residential densities, the location of major activity centers, topography and street patterns. Route spacing in commercial areas is determined by location, level of activity and layout of the development, on a case-by-case basis.
LAVTA proposes the following performance measures for existing and future services:

- Expand routes and services to meet current and future demand for timely and reliable transit service
- Provide service with a time span that is sufficient to effectively serve the primary target markets for each route:

- 4:00 a.m. – 1:00 a.m. /day or 24-hours in backbone corridor(s);
- 5:00 a.m.-12:00 a.m. on primary feeder lines;
- 5:30 a.m.-9:00 a.m. and 3:00 p.m.-7:00 p.m. on secondary feeder lines and regional routes; and
- Bell time for tripper lines.
- Provide trip frequencies that are sufficient to effectively serve the primary target markets for each route.
- 10 to20 minutes in backbone corridor(s);
- 30 to45 minutes on primary feeder lines;
- 30 to 60 minutes on secondary feeder lines;
- 60 to 0 minutes on regional routes; and
- Two daily trips for tripper lines (peak/base).

Union City Transit proposes the following performance measures for existing and future service,:

- 90 percent of all land with three or more dwelling units per acre within one-quarter-mile of a transit route; and
- 90 percent of major activity centers within one-eighth-mile of a transit route.

For BART, passenger loads are measured at selected “screenlines”- imaginary lines between two stations. Generally, screenlines are chosen at the points where maximum loads in a given direction are sustained for a significant duration – often on the edge of a central business district. Slightly higher loads may be expected for short distances within urban cores, but train sizing and vehicle requirements are not based on those briefly more crowded conditions because lengthening or adding trains to alleviate the conditions would result in the operation of excessive empty car miles.

Based on its experience, BART has established the following average loading goals which it attempts to achieve whenever possible. Identical goals and standards are applied to all lines.

- Peak Hour: 90 passengers per car
- Shoulder Two Hours of Peak Period: 75 passengers per car
- Off-Peak Periods: 67 passengers per car

BART aims for a maximum peak hour average car load of 107 passengers per car at critical screenlines in the system such as through the Transbay Tube (West Oakland/Embarcadero). In future years, headways and train lengths will be adjusted in a manner which strives to equalize passenger loading levels across all of its lines, while staying under the 107 passengers per car standard.

Transit Service Coordination

A number of measures are in place to ensure coordination among transit operators, including SB 602 (Service/Fare Coordination, 1989), SB 1474 (Transit Coordiantion-1996), SB 916 (RM2, including Transit Connectivity-2003), MTC Resolution No. 3055 (Inter-operator Transit Coordination Implementation Plan) and others. All transit operators in Alameda County will continue to implement the coordination projects required under these guidelines. Annually, the projects are agreed upon among the operators and MTC. They relate to coordinating the following:

- Fare
- Schedule
- Service
- Public information
- Marketing
- Administration

Review Process

The Alameda CTC will prepare an annual transportation Performance Report for review by local agencies and transit operators prior to publication. The report will include the most current available data from various agencies. (The Alameda CTC will accept performance data that is up to two years old.)

The Performance Report includes estimates of population growth during the preceding year, available from the State Department of Finance (see Appendix D for the Performance Report Executive Summary, to be added prior to the September Commission meeting).

LOCAL GOVERNMENT AND TRANSIT AGENCY RESPONSIBILITIES

To minimize cost, the Alameda CTC will rely on established data collection processes and regularly published reports for data. A list of established data collection efforts, by agency, is listed below. In 2011, the Alameda CTC Commission recommended that in odd number years, depending on funding availability, efforts be made to augment the data collection for all modes, as needed, for improved analysis of performance of the countywide transportation system.

Cities and County

- Pavement Management System data for the MTS
- Countywide Bicycle and Pedestrian Plans (County and Cities Public Works Departments and Alameda CTC)

Transit Agencies

- Service Schedules(on-Time Performance)

- Transit Ridership Routing (percentage of major centers served within 1/4-mile of a transit stop)
- Frequency (number of lines operating at each frequency level)
- Service Coordination (number of transfer centers)
- Average Time between Off-Loads (BART)
- Miles Between Mechanical Road Calls (AC Transit, LAVTA and Union City Transit)
  Mean Time Between Service Delays (BART and ACE)
- Transit Availability (frequency of transit and population within one-half mile of rail station or bus and ferry stops and terminals)
- Transit Capital Needs & Shortfall (for High Priority – Score 16-transit projects for Alameda County transit operators)

MTC

- Roadway Maintenance Needs
- Freeway Congestion Monitoring data

Caltrans

- Freeway Speed Runs, Duration of Freeway Congestion (if developed by Caltrans)
- Accident Rates on State Freeways
- Roadway miles in need of rehabilitation

Alameda CTC

- Roadway Speeds on CMP (except freeways if developed by Caltrans)
- Travel Times for O-D pairs

COMPLIANCE AND CONFORMANCE

Local agencies are encouraged to provide maintenance data to MTC or maintain their own database of maintenance needs on the MTS. However, there is no compliance requirements for local agencies or transit operators related to the Performance Element.

NEXT STEPS

Every other year (in odd number years), depending on funding availability, efforts will be made to augment the data collection for all modes, as needed, for improved analysis of performance of the countywide transportation system.

Efforts will be made to collect data for the additional and expanded existing measures that resulted from integrating the adopted measures from the 2012 CWTP to better assess performance of Alameda County transportation system.

In the future, the Alameda CTC may consider using one or more performance measures in developing the following:

- Land Use Analysis Program: Tier 2 (review of cumulative effects of land developments)
- Environmental studies for transportation improvements
- Corridor studies
- The CMP Capital Improvement Program

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CHAPTER FIVE

Travel Demand Management Element

BACKGROUND

Continued economic and population growth in the Bay Area and Alameda County will place an increasing demand on the region's transportation system. Other chapters of the CMP focus on providing a sufficient supply of transportation facilities and services to meet projected demand. This chapter focuses on "demand-related" strategies designed to reduce the need for new highway facilities over the long-term and to make the most efficient possible use of existing facilities to integrate air quality planning requirements with transportation planning and programming.

Regionwide Travel Demand Management (TDM) programs continue to evolve. This element takes steps toward tailoring such programs to the needs of Alameda County. State law requires that the trip-reduction and TDM Element:

·Promote alternative transportation methods, including but not limited to carpools, vanpools, transit, bicycles and park-and-ride lots;

·Promote improvements in the balance between jobs and housing;

·Promote other strategies, including but not limited to flexible work hours, telecommuting and parking management programs; and

·Consider parking cash-out programs.

The Alameda CTC and BAAQMD are required to coordinate the development of trip-reduction responsibilities and avoid duplication of responsibilities between agencies. However, cities and other local jurisdictions can establish their own TDM programs that go beyond what the Alameda CTC and BAAQMD develop but they cannot require employers to implement an employee trip-reduction program unless the program is required by federal law. Regarding trip reduction programs by employers, a legislative effort is currently underway through Senate Bill 582 (Emmerson), Regional Commute Benefits Policy. If enacted, this bill would allow MTC and BAAQMD to jointly adopt a commute benefit ordinance requiring employers operating in the nine county Bay Area to offer their employers one of the three choices:

·A pre-tax option

·Employer-paid benefit

·Employer-provided transit

ALTERNATIVE TRANSPORTATION METHODS

Both the public and private sectors should encourage the use of alternatives to the single-occupant automobile. By reducing the number of vehicle trips during commute periods, congestion can be reduced and under congested conditions can be decreased, thereby improving air quality.

Switching to buses or trains, increasing the number of occupants in each vehicle (autos, vans or buses), or increasing the number of people walking or bicycling will improve the efficiency of the transportation system, particularly during the system's peak periods.

The CWTP, currently being updated, recognizes the importance of alternative modes. The goals adopted in the CWTP are:

·Multimodal

·Iintegrated with land use patterns and local decision making

·Rreliable and efficient

·Cost effective

The issue paper on TDM developed as part of the CWTP update explores potential opportunities available for effective TDMin Alameda County. It states that the CWTP is well positioned to support the efforts of municipalities to further innovate and use various strategies to achieve a shared vision for a sustainable and efficient transportation network. It outlines the following initial TDM concepts or options for Alameda CTC to consider:

·Provide dedicated funding to the Guaranteed Ride Home (GRH) program, the Alameda CTC's primary TDM program;

·Develop a comprehensive TDM program in which the Alameda County GRH program is expanded;

·Develop Countywide TDM and parking management guidelines;

·Create a robust technical assistance program to help jurisdictions implement TDM; and

·Initiate a TDM and/or parking certification program.

The following policies and programs—undertaken cooperatively by local government, the Alameda CTC, MTC, BAAQMD, Caltrans and the private sector—are intended to:

·Promote the use of transit, carpools, vanpools;

·Increase average vehicle occupancy;

·Encourage bicycling and walking as forms of transportation; and

·Encourage telecommuting to reduce commute travel demand.

INTEGRATING TDM AND CONGESTION MANAGEMENT

Historically, TDM has been isolated from the planning and programming mainstream. It has not been an integral aspect of plans for capital improvement or system management. Nor have individual TDM projects been appraised from a systems or corridor point of view.

Figure 10 shows how TDM activities can be conceptualized as an integral element of an overall strategy of congestion management. They overlap with transportation system management in coordinated implementation of HOV lanes and transit operating subsidies. They also overlap with capital improvements with investment in bicycle and pedestrian facilities, transit capital facilities and construction of HOV lanes, as well as operational improvements to freeways and roadways.

Integrating TDM and Congestion Management becomes even more important in the context of SB 375, which emphasizes better integration of transportation and land use connection. One of the key objectives of SB 375 is to reduce greenhouse gas emissions from the transportation sector through reduction of VMT. Managing travel demand through a comprehensive TDM program offers cost effective and proven approaches to reducing VMT by leveraging existing investments and can complement investments in transit systems and other alternatives to driving.

A Balanced TDM Program

A balanced program requires actions that would be undertaken by local jurisdictions, the Alameda CTC, MTC, BAAQMD, Caltrans and local transit agencies.

The basic principle of the program is that TDM activities be effectively integrated with the CMP so capital investment, system management and demand management can produce results that make a cumulative contribution to Alameda CTC's efforts to contain congestion, provide alternatives to solo driving and sustain progress toward clean air.

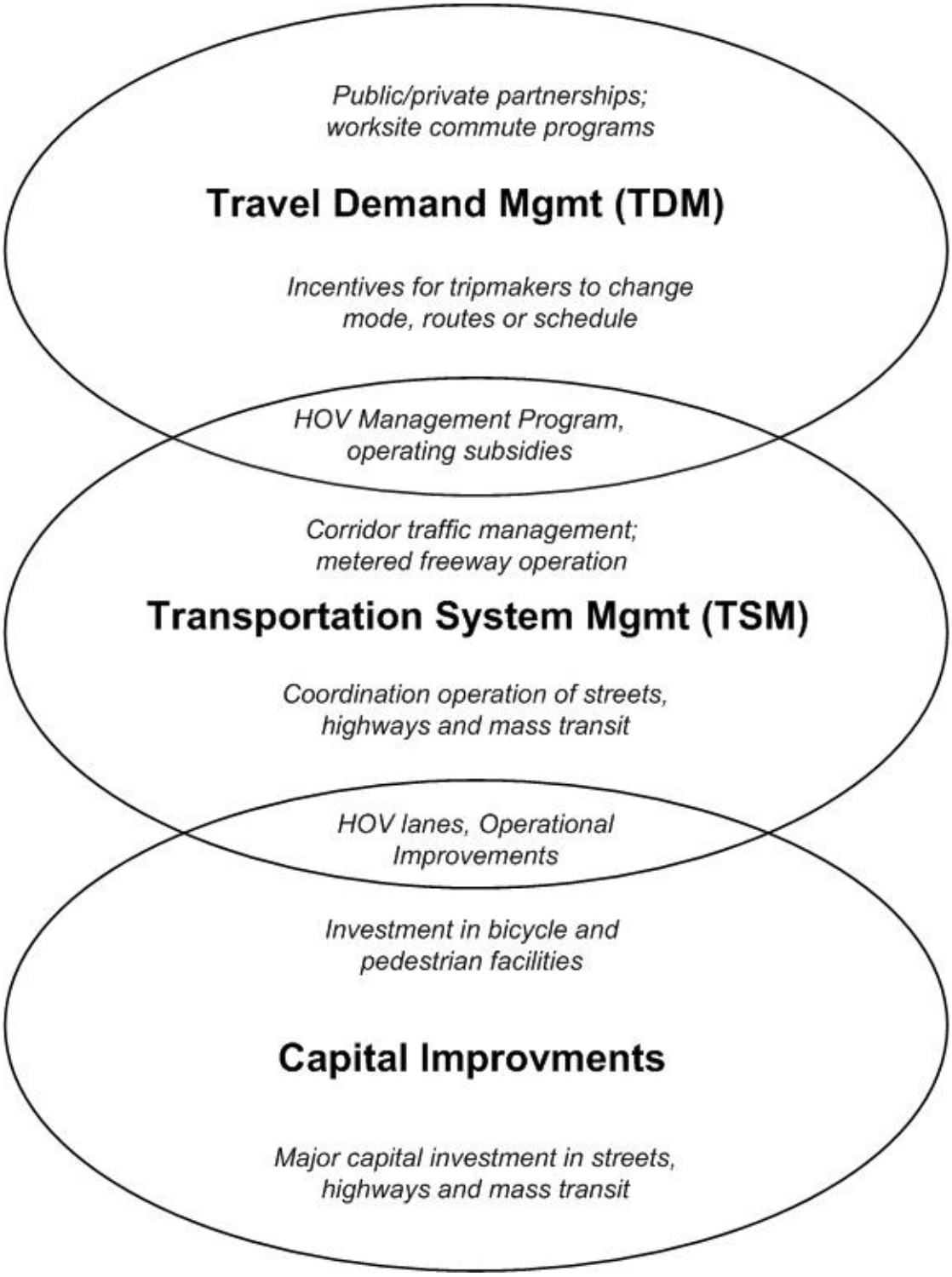
The updated CWTP, will also call for improvements, as stated above, that will affect the CMP TDM program. For this 2011 CMP update, no changes are made to the TDM program. However, pending adoption of the 2012 CWTP, appropriate revisions will be incorporated into the 2013 CMP.

The following policies represent a framework of realistic expectations for proposed actions that should be taken by the Alameda CTC and local governments, as well as complementary actions that should be taken by regional and state agencies.

Local Governments

Local governments should adopt site design guidelines that enhance transit and pedestrian and bicycle access. They should also work with transit agencies to establish bus shelters which display easily understood information about routes and schedules.

Figure 10- TDM Strategy for Congestion Management



Alameda CTC

The CMP should provide a framework for integrating TDM, system management and capital investment in an overall strategy for containing congestion, reducing vehicular emissions and greenhouse gases, providing attractive alternatives to solo driving, and sustaining progress toward clean air.

The Alameda CTC's funding policies should encourage multi-jurisdictional projects, such as SMART Corridors, to promote seamless operations across jurisdictional boundaries, a multimodal approach to system management and system efficiency and safety.

MTC, Alameda CTC and BAAQMD

The Alameda CTC should seek maximum flexibility for providing its share of ridesharing funding. Historically, the Alameda CTC and MTC have funded the regional rideshare program.

Transit Agencies

Transit operators should continue to work with each other to develop cooperative plans for coordinating line-haul and feeder services.

Transit agencies should work with Caltrans to develop cooperative plans for HOV lane express bus service. They should also work with local governments to establish bus shelters that include clear route and schedule information.

ALAMEDA COUNTY TDM PROGRAM

The TDM program, as shown in Table 11, includes four programs:

- A Required Program, which includes those actions local government must take in order to comply with the CMP;
- A Countywide Program, which includes those actions the Alameda CTC will take to support and supplement local efforts;
- A Regional Program, which includes those actions state and regional authorities should take to support travel-demand management programs areawide; and
- The Comprehensive Program includes all of the actions above, plus others that can be recommended for employers on an entirely voluntary basis.

Funding sources, lead agency and other partners are provided for each program. Taken together, they represent a fiscally realistic approach to effectively complement the Alameda CTC's overall CMP.

Required Program

The Required Program includes those actions local government *must* take in order to comply with the CMP. It requires local jurisdictions to adopt and implement guidelines for site design that enhance transit, pedestrian and bicycle access. Local jurisdictions can satisfy this requirement by:

- Adopting and implementing design strategies that encourage alternatives to automobile use through local development review prepared by ABAG and the BAAQMD;
- Adopting and implementing design guidelines that meet the individual needs of the local jurisdiction and maintain the intent of the TDM Element to reduce the dependence on single-occupant vehicles; and
- Demonstrating that existing policies meet the intent of the TDM Element to reduce the dependence on single-occupant vehicles.

In order to ensure consistency among all jurisdictions, a TDM Checklist was prepared identifying components that should be included in local design guidelines (Appendix E). The checklist was approved by the Alameda CTC. These guidelines may be revised pending the outcomes of the 2012 CWTP update. Local jurisdictions are also required to implement capital improvements that contribute to congestion management and emissions and greenhouse gas reduction. This requirement can be satisfied by participating in the state TFCA and the federal STP and CMAQ Program. The CIP incorporates numerous project types and programs that are identified in the Transportation Control Measures (TCM) Plan (see Appendix F).

Countywide Program

The Countywide Program includes actions the Alameda CTC will take to support the efforts of local jurisdictions. Actions may include the GRH Program, support of telecommuting and financial incentives such as the Parking Cash-out Program.

The GRH Program has been operated by Alameda CTC since April 1998. The objective of the program is to maximize modal shift from driving alone to commute The program provides a “guaranteed ride home” to any registered employee working for a participating employer in cases of emergency on days the employee has used an alternative mode of transportation to get to work. Alternative modes include: carpools, vanpools, bus, train, ferry, walking and bicycling. Regarding eligibility, all employers located in Alameda County are eligible. There is no requirement for the number of employees a company must have. Employers must pre-register before employees can register. All permanent full-time and permanent part-time employees living within 100 miles of their worksite. Participants do not have to live in Alameda County.

In February 2009, an evaluation of the GRH program was conducted. The recommendations, approved by the Alameda CTC, included expanding the GRH program into a comprehensive TDM program, pending new funding, and merging the Alameda County GRH program with other GRH programs in the Bay Area.

Expanding the TDM program would have the benefit of fulfilling the TDM requirement of the CMP and would provide alternatives to the single occupancy vehicles, reduce VMT, and help in reducing greenhouse gases. Merging the GRH program with other GRH programs in the Bay Area would provide economies of scale in marketing and allow the opportunity to provide commute alternatives. A comprehensive program is being considered in the 2012 CWTP update.

Regional Program

The Regional Program includes actions state and regional authorities should take to support TDM programs areawide. It also includes actions by MTC, BAAQMD and Caltrans to meet areawide needs. The regional program focuses primarily on financial support for those activities that ensure coordinated transit, HOV lane use, development and/or maintenance of park-and-ride lots, ramp metering and arterial improvements, Americans with Disabilities Act (ADA) and bicycle and pedestrian improvements.

Comprehensive Program

The Comprehensive Program includes all of the actions above. Recognizing that the private sector also has a role in TDM, the Comprehensive Program also includes actions that employers may take on a voluntary basis to promote and encourage alternative modes of travel.

Table 11—Alameda County TDM Program

Elements	Funding Sources	Lead Agency	Other Partners
Required Program			
Actions local government must take to comply with the CMP, namely, the implementation of:			
Site design guidelines that enhance transit/ pedestrian/bicycle access	n/a	Local	Planners and developers
Capital improvements that contribute to congestion relief and emissions reduction	TFCA, TSM, STP and FCR	Local, Alameda CTC	Neighboring cities, management and transit agency, cyclists
Countywide Program			
Actions the Alameda CTC will take to support and supplement the efforts of local government:			
GRH, including merging the GRH program with other GRH programs in the Bay Area and expanding the GRH program into a comprehensive TDM program to support PDA development	TFCA	Alameda CTC	Taxis, other providers
Financial incentives for ridesharing and transit use	TBD	Alameda CTC	Local, employers
Telecommuting program	TBD	Alameda CTC (ABAG)	Local, employers

Elements	Funding Sources	Lead Agency	Other Partners
Support a long-term, stable and reliable source of funding for transit investment and operations	TBD	MTC, transit operators, Alameda CTC	Local
Regional Program			
Actions state and regional authorities should take to meet areawide needs:			
Cooperative funding for regional ride-matching	TFCA, TDA Planning	Alameda CTC/ BAAQMD/ MTC	Employers
Regional ride home (to complement county program)	TFCA	MTC	Alameda CTC
Funding to implement transit coordination	STA, STP, TFCA	MTC	Transit operators
Funding for coordinated implementation of high-occupancy-vehicle lanes, express bus service and park-and-ride facilities	CR, TSM, STP, STA	Caltrans/MTC	Transit operators, Alameda CTC, local
Cooperative implementation of ramp metering and arterial improvements	TSM, STP	Caltrans	MTC, Alameda CTC
Comprehensive Program			
All of the actions above, plus the voluntary efforts of employers other than city/county:			
Support Employer Transportation Managers Network	TFCA	Local	Local, employers
Transportation information for new employees	Private	Employers	Voluntary
Preferential parking for carpools, bicycles	Private	Employers	Voluntary
Flexible working hours	Private	Employers	Voluntary
Implementation of shuttle services where needed	TFCA	Employers/ Local	Voluntary by cities, employers

FUNDING TRIP REDUCTION PROGRAMS

Transportation Fund for Clean Air

These laws permit the BAAQMD to collect a fee (up to $4 per vehicle per year) for reducing air pollution from motor vehicles and for related planning and programs. The bill specifies the types of programs the fees may be used for as described below.

·Implementation of ridesharing programs (carpooling, vanpooling or transit; other trip-reduction projects, consistent with the county's adopted CMP).

·Purchase or lease of clean-fuel buses for school districts and transit operators.

·Provision of local feeder bus or shuttle service to rail and ferry stations and to airports.

·Implementation and maintenance of local arterial traffic management, including but not limited to signal timing, transit signal preemption, bus-stop relocation and "smart streets."

·Implementation of rail-bus integration and regional transit information systems.

·Implementation of low-emission and zero-emission vehicle programs, demonstration projects in telecommuting (with some restrictions) and in congestion pricing of highways, bridges and public transit.

·Implementation of smoking-vehicles program.

·Implementation of bicycle facility improvement projects that are included in an adopted countywide bicycle plan or CMP.

·Design and construction by local public agencies of physical improvements that support development projects that achieve motor-vehicle emission reductions. The projects and the physical improvements shall be identified in an approved area-specific plan, redevelopment plan, general plan or other similar plan.

Air quality legislation references the trip-reduction requirement in the CMP legislation and states that congestion management agencies in the Bay Area that are designated as TFCA program managers "shall ensure that those funds are expended as part of an overall program for improving air quality and for the purposes of this chapter (the CMP Statute)." The BAAQMD has interpreted this language to allow a wide variety of transportation control measures—including expansion of eligible transit, rail and ferry projects—to be eligible for funding. The TFCA legislation requires the BAAQMD to allocate 40 percent of the revenue to an overall program manager(s) in each county. The Alameda CTC has been designated the overall program manager in Alameda County. The Alameda CTC developed a program that allocates the funds as follows:

·A maximum of five percent of the funds for program implementation and administration.

·70 percent of the remaining funds to cities/county based on population with a minimum of $10,000 to each jurisdiction; city/county population will be updated annually based on State Department of Finance estimates.

30 percent of the remaining funds allocated to transit related projects; all eligible applicants may apply for these funds for transit-related projects. A city or the county, with Alameda CTC Board approval, may choose to roll its annual 70 percent allocation into a future program year. Any 70 percent funds not used by a city/county will be added to the available funds for the current year discretionary program. With Alameda CTC Board approval, a local jurisdiction may request programming of a multi-year project using its current and projected future year share of the 70 percent funds.

Surface Transportation Program

MTC and the Alameda CTC both perform administrative functions for programming STP funds. For TDM purposes, the following projects could be eligible for STP funds: highway projects including HOV lanes, signalization, transit projects and bike and pedestrian projects.

Congestion Mitigation and Air Quality Program

MTC and the Alameda CTC both perform administrative functions for programming CMAQ funds. For TDM purposes, projects that are eligible include those types of transportation projects that improve air quality, such as ridesharing, bicycle and pedestrian projects.

FINANCIAL INCENTIVE PROGRAM

A parking cash-out program is defined as 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 cash-out programs apply to employers of 50 or more persons in air basins designated as “non-attainment” areas. Parking subsidy is the difference between the out-of-pocket amount paid by an employer on a regular basis in order to secure an employee parking space not owned by the employer and the price, if any, charged to an employee for use of that space.

Demonstration Program

A demonstration financial incentives program for public agencies was implemented in Alameda County in 1997 for one year. The purpose of the demonstration program was to provide an opportunity for employees to choose alternative ways to get to work other than driving alone, to study the effectiveness of the program and to find out whether increasing the incentives available made a difference in program participation. The ultimate goal was to reduce single-occupant vehicle use.

The results showed that there is potential for changing commute choices if continuous sources of revenues could be found. Based on the results of this demonstration programs and guidelines developed by the California Air Resources Board, policies will be developed to guide the Alameda CTC’s implementation of this component of the CMP. Although this section of the CMP describes programs funded by TFCA and the state Petroleum Violation Escrow Account, it should be noted that other jurisdictions in Alameda County provide transit subsidies or other types of financial incentives to their

employees (e.g., City of Alameda, City of Pleasanton, City of Hayward STRIDES Program). The report on the 1997 Parking Cash-out Program is available upon request from the Alameda CTC.

DYNAMIC RIDESHARING

Dynamic ridesharing provides an alternative to traditional ride-matching and carpool programs by maximizing flexibility and accommodating last minute requests for ride matches. Rather than commuters forming traditional daily carpools, dynamic ridesharing participants request ride matches only on days when they want to share a ride. The major benefits are that it requires minimal advance planning and accommodates changing travel times reducing the barriers to carpooling.

Pilot Project

In 2005 and 2006, the ACCMA in collaboration with EDF/RideNow!, Inc., implemented the dynamic ridesharing pilot project, known as RideNow[25], at the Dublin/Pleasanton BART station. It was funded by a grant from the Federal Highway Administration (FHWA) to implement, test and evaluate a dynamic ridesharing pilot project designed by RideNow, Inc.

RideNow is an automated system that enabled BART patrons to request carpool partners just minutes before they left home in the morning, or while on the BART train returning home in the evening. It provided both web and automated telephone ("Interactive Voice Response") access for users. RideNow matched riders within a short time frame providing 'instant matches."
The Pilot project goals were to:

- Establish if dynamic ridesharing can provide a viable new travel option;
- Test the effectiveness of the program from a technical, administrative, marketing, cost and operational perspective;
- Assess the level of interest and usage in the program and evaluate its benefits and limitations; and
- Determine the feasibility and applicability of expanding the program beyond the duration of the pilot project as well as to other locations within Alameda County or the San Francisco Bay region.

Based on feedback from participants and the participating agencies, the program did have value for people who desire to carpool, but have complex commutes that do not permit participation in more traditional carpool programs. However, more information is needed about how many people would be attracted to this type of flexible program compared to other ridesharing or TDM programs designed to get people out of their single occupant vehicles and if the program would be cost effective. Both agencies and program participants believe that if the program were continued it would need to be substantially simplified and that increased marketing activities to target audiences and more time to build volume would be needed.

Follow-Up Program

[25] The name RideNow is used by permission by RideNow! Inc.

A follow-up program was approved by MTC in 2010 for a total of $1.5 million for Solano County Transportation Authority, Contra Costa Transportation Authority and Transportation Authority of Marin. Funded by MTC's Climate Initiatives, this program explores opportunities for more carpooling through the use of smart-phone applications ("apps") that can enable spontaneous ridesharing.

CONGESTION PRICING STRATEGIES

In 2002, the Alameda CTC secured funding from MTC, Caltrans and the FHWA to conduct a feasibility study for a high-occupancy toll lane in the I-680 corridor (now known as Express Lane). The study evaluated a number of pricing options and analyzed key factors such as physical constraints, institutional opportunities and constraints, operational issues and revenue potential. The study concluded in April 2003, found that a Smart carpool lane would be operationally, physically and financially feasible.

Subsequently, AB 2032 (Dutra, 2004) authorized implementation of the I-680 Express lane. The project is completed and was opened to traffic in September 2010. The legislation also approved a second Express lane in the County. The Alameda CTC approved I-580 as a candidate corridor, and it is currently in design. As a first step, eastbound I-580 HOV lane was opened in November 2010. The I-580 HOT lanes are anticipated to be open to traffic in summer 2014.

The Alameda CTC will continue to investigate the following pricing concepts: off-peak transit fare discounts and parking ticket surcharges by Alameda County jurisdictions with revenues to be used for transit. Initially, Free Transit on Spare the Air Days, another pricing concept, was to be investigated for implementation; however, considering the regional nature of the issue, in 2006, MTC in partnership with BAAQMD and 24 transit operators across nine Bay Area counties launched "Spare the Air/Free Transit Program". In 2006 through 2008, transit fares were free during three to four non-holiday "Spare the Air" weekdays. Starting in 2009, the Spare the Air Day campaign will still be in effect, but because of lack of funding Free Transit Days will no longer be offered.

COMPLIANCE/CONFORMANCE

The Alameda CTC must annually monitor conformance of the TDM Element with the adopted CMP. Among other requirements, the Alameda CTC must determine if each city and the county has adopted and implemented a trip-reduction and travel-demand ordinance. In the early 1990s, a transportation control measure in the region's Clean Air Plan required employers with 100 or more employees to conduct activities to encourage an increase in the use of alternatives to driving alone. BAAQMD oversaw implementation of this program; however, later legislation prohibited mandatory employer-based trip-reduction programs. The CMA therefore cannot require such programs in determining whether cities or the county are in compliance with the CMP.

Local jurisdictions shall have until September 1 of each year to adopt and implement the Required Program, which focused on adoption and implementation of site-design guidelines and adoption and implementation of a CIP.

If the Alameda CTC finds that a local jurisdiction has not adopted and implemented the Required Program, it may find the local jurisdiction in "non-conformance." At the time of the finding, the Alameda CTC would provide recommendations for corrective actions. If after 90 days the local jurisdiction is still in non-conformance, the Alameda CTC is required to provide notice to the California Transportation Commission (CTC) and the State Controller. The notice includes the reasons for the finding and evidence that the Alameda CTC correctly followed procedures for making the determination.

The State Controller would then withhold the non-conforming jurisdiction's increment of subventions from the fuel tax made available by Proposition 111, and the jurisdiction will not be eligible to receive funding for projects through the federal STP and CMAQ Program.

If within the 12-month period following the receipt of a notice of non-conformance, the Alameda CTC determines that the city or county is in conformance, the withheld Proposition 111 funds will be released. If after the 12-month period the city or county has not conformed, the withheld Proposition 111 funds will be released to the Alameda CTC for projects of regional significance included in the CMP or a deficiency plan.

LOCAL GOVERNMENT RESPONSIBILITIES

In order to be found in conformance with the CMP, local jurisdictions must:

·By September 1 of each year, certify to the Alameda CTC that it has adopted and implemented site design guidelines that enhance transit/pedestrian access and implemented capital improvements that contribute to congestion management and emissions reduction.

·Local jurisdictions have until September 1 of each year to adopt and implement the Required Program.

NEXT STEPS

Pending adoption of the 2012 CWTP, as stated under section "Alternative Transportation Modes" in this chapter, the initial TDM concepts recommended by the Issue Paper developed for the CWTP will be explored for expanding the TDM strategies for Alameda County, and possibly developing a Comprehensive Countywide TDM Program that will include an enhanced GRH program.

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CHAPTER SIX

Land Use Analysis Program

BACKGROUND

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

The law does not change the role of local jurisdictions in making land use decisions or in determining the responsibilities of project proponents to mitigate possible negative effects of projects. However, the CMA has the ability to apply certain sanctions, as described in Chapter 8, if the local agency does not comply with the requirements of the law.

The intent of the Land Use Analysis Program is to:

- Better integrate local land use and regional transportation facility decisions;
- Better assess the impacts of development in one community on another community; and
- Promote information sharing between local governments when the decisions made by one jurisdiction will have an impact on another.

The Land Use Analysis Program is a process designed to improve upon decisions about land use developments and the investment of public funds on transportation infrastructure in Alameda County. To work best, the Alameda CTC is involved at the very early stages of the development process, maximizing intergovernmental contacts before major decisions are completed. The process is intended to work in a positive, cooperative fashion that supports the needs of local, county, regional and state governments.

In addition to the CMP legislative requirements related to land use and transportation connection, the passage of AB 32 and SB 375 placed a whole new focus and added requirements on the integration of land use planning and transportation investments to be done to reduce greenhouse gas emissions. The development of the Bay Area's first Sustainable Communities Strategy (SCS) required by SB 375 is underway and will be incorporated into the RTP that is currently in development and slated to be adopted in April 2013.

The Alameda CWTP, currently being updated, is attempting to meet SB 375 requirements by placing increased level of emphasis on land use planning, transportation and sustainability. Also, as part of the 2011 CMP Update, the Alameda CTC performed a comprehensive review of the existing activities related to land use and transportation and identified various areas where improvements in planning, evaluation and monitoring can be made such as options for funding project impact mitigation measures through implementation of an impact analysis measure that supports alternative modes (e.g. Automobile Trip Generated (ATG) measure), improving tracking of land use development through developing and

implementing a program supported by financial incentives that promotes better land use development integrated with transportation (e.g. Community Design and Transportation), an approach to support infill development areas, and expanding LOS standards to include multi-modal measures. These concepts are described in detail in the later pages of this chapter.

WHAT IS INCLUDED IN THE LAND USE ANALYSIS

With the passage of the federal ISTEA of 1991, MTC was required to develop a MTS that included both transit and highways. MTC contracted with the CMAs in the Bay Area to help implement the federal legislation and to use the CMPs to link land use decisions to the MTS. Therefore, a distinction is made between the CMP-network, which is used for monitoring conformance with the LOS standards, and the MTS [28], which is used for the Land Use Analysis Program.

By using the MTS for the Land Use Analysis Program, impacts on the CMP-network will continue to be identified, since it is a subset of the MTS. The broader definition of "regional transportation systems" will encourage early identification of impacts on a larger system of roadways and explicitly include transit system impacts. Proactive responses to potential impacts may occur during:

- Corridor or areawide studies;
- Preparation of local or regional CIP; or
- Environmental review of specific land developments and transportation improvements.

The Alameda CTC acts as resource to local governments in analyzing the impacts of proposed land use changes on regional transportation system. This includes providing the travel-demand model to produce forecasts for proposed General Plan Amendments (GPA) and other large-scale developments, if the local jurisdiction publishes a Notice of Preparation (NOP) for an Environmental Impact Report (EIR). Alameda CTC staff could be involved in discussing impact assessment approaches and impacts on the MTS. CEQA already provides a framework for such assessments. The CMP process maximizes use of the CEQA process, while also filling in some gaps that the Act may not address.

PROJECTS SUBJECT TO REVIEW

The purpose of the Alameda CTC review of land development projects is to assure that regional impacts are assessed, appropriate mitigations are identified, and that an overall program of mitigations can be implemented. The Alameda CTC will review transportation analyses of proposed land developments

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28 In 2005, MTC updated the MTS to include Rural Major Collector streets and higher based on the Federal Functional Classification System. The updated MTS is used by MTC for the purposes of funding and programming as well as in estimating roadway maintenance needs. The updated MTS was reviewed by ACTAC during the 2009 CMP Update to determine its usefulness and applicability to the Land Use Analysis Program. Based on ACTAC's input and discussions with MTC, it was determined that the updated MTS was not appropriate for the Land Use Analysis Program because it was too detailed for planning purposes and the previous version of the MTS would continue to be used.

when a GPA and/or an EIR are required. For EIRs, the Alameda CTC will review and comment appropriately on NOP, draft, supplemental and final documents. A description of each of these follows.

Projects Requiring General Plan Amendments (Tier 1a)

The CMP identifies GPAs as the most appropriate stage of review to consider because:

- GPAs are normally processed well before any construction takes place. This provides more time for transportation impacts to be analyzed and mitigated than would be available if the review took place closer to actual project construction.
- GPAs may only be considered by a city or county four times during any calendar year, by state law. This reduces the complexity and effort involved in CMA review.
- Most (but not all) GPAs are of a significant size.

Projects Consistent with Existing General Plans (Tier 1b)

In cases where development is consistent with existing general plan guidelines, GPAs are not the most relevant unit of impact analysis. In those cases, timing becomes the key factor. If decisions about transportation infrastructure investment occur at a slower pace than land development, the result can be deterioration in operations on the existing MTS. Large-scale projects that are consistent with existing general plans, but which may impact the regional transportation system, often require the preparation of an EIR.

The Alameda CTC follows the policy below adopted by Alameda CTC in 1995 for addressing large-scale development projects that are consistent with a general plan:

> *All notices of preparation of EIRs be forwarded to the Alameda CTC for comparison with the 100-trip threshold and, if exceeded, the Alameda CTC will review and comment including requests for consideration of transportation impacts and mitigation measures to MTS facilities in the same manner as the current policy for GPAs.*

Development Sponsored by Non-Local Jurisdictions

For purposes of the CMP, a local jurisdiction is defined as a city, county, or a city and county. However, other agencies such as colleges, universities, the Port of Oakland and federal facilities (Lawrence Livermore National Laboratory, for example) also have land use discretion which could affect the operation of the MTS.

Development sponsored by state or federal agencies does not require local permitting approval and thus the Alameda CTC may not be notified of pending development. In order to correct this, for projects that meet the threshold requirements and require an EIR/environmental impact study, Alameda CTC requests these agencies submit environmental documents for Alameda CTC review and comment.[29]

[29] For purposes of compliance with the Land Use Analysis Program, the Port of Oakland is considered a governmental subdivision of the city of Oakland. Thus, the Port shall be required to submit environmental documents to the Alameda CTC for review and comment subject to meeting the threshold criteria and preparation of an EIR/environmental impact study.

DEVELOPMENT REVIEW PROCESS

The tiered land use analysis process described below applies to projects requiring GPAs (Tier 1[a]) and NOPs for EIRs for projects consistent with an adopted general plan (Tier 1[b]). A summary of the Tier 1 requirements is presented in Table 12 and the development review process for Tier 1 is shown in Figure 11. The method of analysis is further detailed in Appendix I. For analysis of transportation impacts on the MTS roadways, 2000 HCM will be used.

Threshold for CMP Analysis

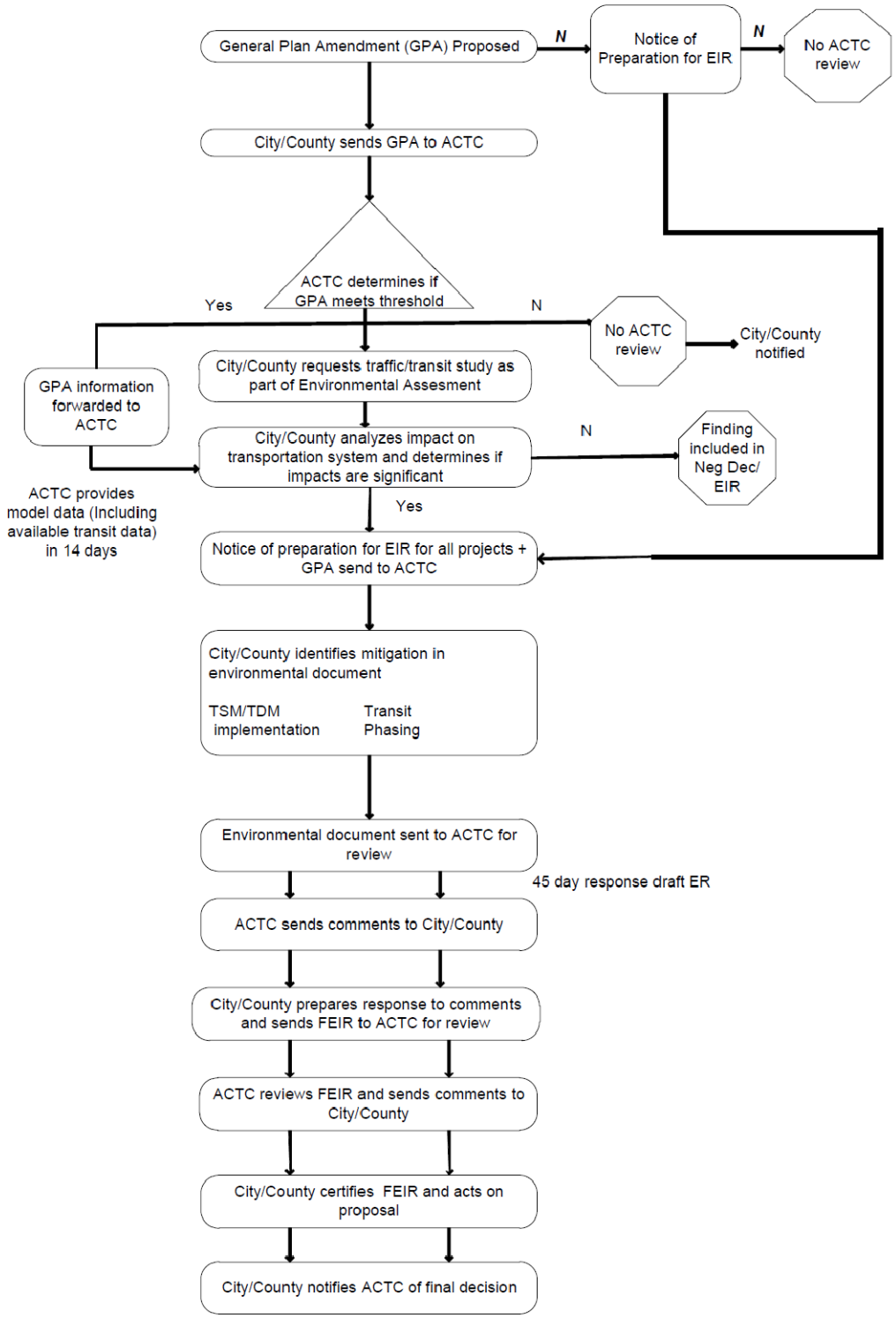
The Alameda CTC will be responsible for determining whether a project meets the 100 p.m. peak-hour trip-generation threshold criteria. The p.m. peak hour was chosen because in most Alameda County cities, traffic is worse in the p.m. peak hour than in the morning or weekend peak periods. The 100-trip threshold was chosen because it is the level at which most cities ordinarily require a traffic impact study to be prepared. Examples of projects that can generate 100 or more p.m. peak hour trips are: 100 or more single-family homes, 165 apartment units or 135 hotel rooms or more than 45,000 gross square feet of office space. It must be noted that such projects, when part of a proposed GPA, would only qualify for review if they generated 100 or *more* p.m. peak-hour trips than the existing General Plan land use designation.

As part of the 2011 CMP update, the Alameda CTC explored moving toward a standard of multi-modal level of service to supplement existing service level methodologies. Since the 2010 HCM was released during the middle of the 2011 CMP Update, it was recommended that a comparative analysis of the 1985 and 2000 HCMs to the 2010 HCM be deferred until 2013 CMP update.

Table 12—Tier 1 Requirements

Action	GPA	NOP
Submit to Alameda CTC	Mandatory	Mandatory
Timeframe for submittals	Ongoing	Ongoing
Alameda CTC comments	Yes, if project generates at least 100 p.m. peak period trips more than the adopted general plan land use designation	Yes, if project generates 100 p.m. peak period trips (or more) above and beyond expected trips based on existing land use designation

Figure 11 – Assessing Impacts of Local Land Development Decisions on the Transportation System



Tier 1 (a)—General Plan Amendments

The Alameda CTC reviews GPAs concurrent with the city's or county's approval process. The Alameda CTC will review impacts of the proposed GPAs on the MTS through existing environmental review processes conducted by the local agencies. Upon receiving the initial GPA application, the local agency will forward the GPA proposal to the Alameda CTC consistent with the Technical and Policy Guidelines (Appendix I). The local agency will analyze the data and identify any necessary mitigations as part of the environmental process.

Analysis at the GPA stage—rather than at the project stage—allows cities to proactively plan development, taking into account regional transportation impacts and providing ways to finance transportation costs in advance of development proposals at the tentative map stage or later.

Local jurisdictions are responsible for modeling the proposed general plan amendment using the most recent Alameda CTC-certified travel-demand model. The local agency will then send the environmental document to the Alameda CTC for a 30- to 45-day review and comment period. The local agency will send a copy of both the draft and final decision/notice of determination to the Alameda CTC so that the data may be incorporated into the countywide travel model's land use database, thus keeping it current.

General plan categories can encompass a fairly wide range of trip generators. For example, a parcel may be zoned for "Medium-High Density Residential, 16-30 units per acre." There is a variation of almost 100 percent between the low and high ends of the allowable density. A variety of land uses with a wide range of trip generation may be allowed within a single zoning designation. In both cases, market conditions at the time of construction will dictate the actual uses. Until then, reasonable assumptions will have to be made regarding the specific trip generation characteristics input to the model.

Tier 1(b)—Large-Scale Projects Consistent with General Plan: Notices of Preparation

This tier involves an Alameda CTC review of NOPs of EIRs, concurrently with the jurisdiction's approval process. Every NOP and draft and final environmental document will be forwarded to the Alameda CTC for review. The Alameda CTC will be responsible for determining whether an application meets the threshold criteria for Alameda CTC review and comment. The same review and modeling process described under Tier 1(a) applies to Tier 1(b).

Tier 2

Alameda CTC staff will evaluate Tier 2 projects based on ABAG's latest land use projections (typically published in even-numbered years). This evaluation will include local input on the distribution of ABAG projections within each jurisdiction. Local jurisdictions will have 60 days to provide input on how their respective ABAG projections will be distributed by traffic analysis zones.

ABAG-consistent data (at the countywide level and for each jurisdiction) will always be used for CMP purposes other than the Land Use Analysis Program. With the anticipated adoption of the Preferred SCS

required by SB 375, beginning in 2013, land use projections may be updated every four years consistent with the RTP rather than two.

Analysis of Impacts

Once the Alameda CTC determines that a project meets the 100 p.m. peak hour trip generation threshold criteria, the request for analysis of impacts is done through the environmental review process. The Alameda CTC's response to a GPA or a Notice of Preparation for an environmental document requests that a traffic impact study be done and that mitigations be identified. The traffic study components to be addressed in the environmental document by the jurisdiction under the CMP Land Use Analysis Program requirements are summarized below and a sample letter is found in Appendix J.

Modeling Requirements

Local jurisdictions are responsible for conducting the model runs using the Countywide Travel Demand Model. Modeling requirements are described under "Responsibility for Modeling" and "Local Government Responsibilities" sections of this chapter. More information on the Countywide Travel Demand Model can be found in Chapter 9, Database and Travel Model.

Impacts on the Metropolitan Transportation System

Potential impacts of the project on the roadway and transit MTS need to be addressed. Details on the MTS can be found in Chapter 2, Designated Roadway System. Specific MTS routes in various parts of the county are shown in Figures 2 through 7 of Chapter 2.

Adequacy of Mitigation Measures

Mitigation measures must be adequate to sustain CMP service standards for roadways and transit and must be fully funded. The section on Relationship to CEQA of this chapter describes the background and the requirements of project impact mitigation measures.

Impacts on Transit

Impacts of the project on CMP transit LOS must be analyzed. Details on how to address the potential impacts on transit levels of service can be found under the section entitled 'Relationship to Transit' in this chapter. Additional information related to transit performance measures can be found in Chapter 4, Performance Measures Element.

Travel Demand Management Strategies

The Alameda CTC encourages using various TDM strategies to reduce auto trips and congestion thereby reducing the need for new roadway facilities and making the most efficient use of existing facilities. More details on the TDM strategies can be found in Chapter 5, Travel Demand Management Element.

Bicycle and Pedestrian Improvements

Opportunities to promote bicycle and pedestrian improvements identified in the Alameda Countywide Bicycle Plan and Alameda Countywide Pedestrian Plan adopted by the Alameda CTC should be considered.

Noise Impacts

For projects adjacent to state roadway facilities, noise impacts of the projects should be analyzed.

Land Use Connection

As part of the environmental documentation for a land use development projects, jurisdictions are encouraged to analyze a comprehensive TOD program, which includes environmentally clearing all access improvements necessary to support the development. More details on this can be found under TOD section of this chapter.

In 2011, Alameda CTC recommended that for projects that may impact long travel corridors and traverse multiple jurisdictions within the County, the environmental review should consider establishing a means for the project to contribute its fair share of required mitigation measures throughout the corridor.

RESPONSIBILITY FOR MODELING

The current countywide model is updated to reflect ABAG's forecasts in *Projections 200*9 for horizon years 2000, 2005, 2020 and 2035. The recently updated countywide model is based on MTC's regional model. The Alameda CTC amended the CMP requirements on March 26, 1998 so that local jurisdictions are responsible for travel-demand modeling. A countywide model agreement between the jurisdiction/agency and the Alameda CTC is required before the model information can be released to the jurisdiction/agency or its consultant.

AREAWIDE TRAFFIC IMPACT MITIGATION FEES

An areawide traffic impact fee and/or revenue measure such as one establishing an assessment district could generate funds necessary to plan and implement transportation mitigation measures related to land development. The fee could be collected and expended in specified zones within the county. Traffic impact fees are in the CMP law as a proactive method of addressing transportation needs arising from land development. Such fees or measures could be negotiated as part of the corridor/area management planning process described later in this chapter.

The Alameda CTC conducted two feasibility studies (1997 and 2007) for a countywide or areawide traffic mitigation fee to address the impacts of land development on the regional transportation system. The studies evaluated advantages, disadvantages, opportunities and constraints of implementing traffic impact mitigation fees on a multi-jurisdictional basis.

Both studies recommended that the Alameda CTC not proceed with an areawide traffic impact fees. Among other things, there was not enough strength in the local economy to support higher fee levels. Also, there was concern that a new fee would constrain growth, particularly in urban areas where redevelopment projects already face higher costs than in suburban areas.

The studies also recommended that the Alameda CTC adopt the following policies:

- Support agreement among local jurisdictions to adopt an areawide fee within a planning area;
- Identify projects of countywide significance; and
- Consider integrating adoption of a countywide fee with a campaign for a sales tax extension or gas tax increase so the development community and the voters each see a benefit in sharing costs with the other.

The Tri-Valley Transportation Council has adopted an areawide traffic fee. The fee is applied to regional transportation improvements in the Tri-Valley Transportation Expenditure Plan. The City of Livermore also adopted a traffic-mitigation fee in 2001 to fund transportation projects in Livermore. If such an areawide traffic- and/or transit-impact fee is adopted in the future at a countywide level, it will include a system of credits, so that developments that have paid once for a regional traffic (and/or transit) improvement will not be unfairly "double billed" for contributions to the same improvement. Credits for some local impact improvements may also be considered.

As part of the 2011 CMP Update, the Alameda CTC considered exploring the pursuit of an areawide traffic fee, similar to the Tri-Valley Transportation Council Fee, for the other three planning areas in the county. It was concluded that given the weak local and national economies, an areawide impact fee could adversely affect the local developments at this time. It was suggested that instead of an areawide fee, the Alameda CTC could explore the feasibility of implementing an ATG measure as part of the CMP Land Use Analysis program.

In this regard, information about the San Francisco County Transportation Authority (SFCTA) on their efforts to transition to an ATG measure for the CMP Land Use Analysis program was reviewed. The SFCTA is proposing to replace the current auto focused LOS measure with a "net new ATG measure" for the purposes of the Land Use Analysis Program. If implemented, projects that generate automobile trips would pay a new Auto Trip Mitigation Fee that would fund projects or mitigation measures designed to address environmental impacts caused by the projects. SFCTA considers this approach to be a better indicator of environmental effects than LOS and that it is consistent with the City of San Francisco's Transit First policy. A nexus study for this measure is underway.

The Alameda CTC recommended that pending the availability of funding, a feasibility study for implementing a similar ATG measure in Alameda County be conducted and the results be presented prior to the 2013 CMP Update. Depending on the outcome of the feasibility study, and also the economy, an ATG or areawide impact fee could be reconsidered during future CMP updates.

CORRIDOR/AREA MANAGEMENT TRANSPORTATION PLANNING PROCESS

In 1994, the Alameda CTC adopted a corridor/areawide transportation management planning process, which is described in the CWTP. The process is based on cooperative planning and coordinated action by local governments, Caltrans, transit agencies, the CMA and MTC. The Alameda CTC uses the corridor/areawide management planning process to identify needed mitigation measures and for linking its funding decisions to needed mitigations.

In a corridor/area management planning effort, participants address how to:

- Reconcile the competing demands that local and long-distance traffic make on the capacity of the freeway system;
- Reconcile continuing population and employment growth with the finite capacity of the freeway system;
- Reconcile the movement of people and goods;
- Prevent pass-through traffic from using local streets;
- Reconcile HOV and Express lanes with plans to meter freeway ramps;
- Pair ramp metering with geometric metering at gateways to the metropolitan area; and
- Coordinate the operation of freeways and parallel arterials and when and where to rely on transit as a corridor's primary strategy of traffic management.

As part of the 2011 CMP Update, Alameda CTC reviewed additional options for improving mobility and identifying and funding mitigation measures along travel corridors, specifically ones that cross county boundaries. The following approaches were recommended as next steps.

- For congested cross county corridors, explore developing partnerships for sharing the costs for implementing mitigation measures in the corridor.
- For long term corridor improvements, explore establishing cross county partnerships to develop mutually agreeable strategies for developing and implementing improvements. As a first step in this direction, a county line development study in partnership with either San Joaquin or Santa Clara counties could be considered.

As defined in the Alameda CWTP, the underlying principles for the planning process are based on the following.

- The Alameda CTC should support, where appropriate, local plans to enhance the productivity of transit investment through such measures as supportive zoning, urban design/planning and development approvals.
- The Alameda CTC should give investment priority to those highway and transit operational improvements and major capital projects that are identified in the corridor/areawide management planning process.
- The Alameda CTC recognizes that land use planning is solely the purview of local governments.

Examples of corridor/areawide management planning efforts include the San Pablo Avenue Corridor, I-880 Corridor, Central County Freeway Study, SR 84 Historic Parkway Local Alternatives Transportation Improvement Program and the Triangle Study.

PLANNING IN A NEW CONTEXT, BETTER INTEGRATION OF LAND USE AND TRANSPORTATION

The Alameda CTC has been involved in various collaborative efforts with regional partners and local jurisdictions and transit agencies to better integrate the land use and transportation in the context of new legislative requirements (AB 32 and SB 375) enacted to address climate change. These efforts as well as recommendations of programs to better integrate transportation and land use are described below.

SB 375 and the Sustainable Communities Strategy

Climate change awareness and the urgency to reduce greenhouse gases (mainly carbon dioxide) has become a driving force in the transportation realm. Adopted in 2008, Senate Bill 375, Redesigning Communities to Reduce Greenhouse Gases, mandates an integrated regional land-use and transportation planning approach to achieve targets for reducing greenhouse gas emissions from automobile/light trucks. The purpose of the SB 375 is to define more concrete implementation requirements for the emissions reductions expected from the land use sector in AB 32. The focus of SB 375 is on reducing VMT and reducing GHG emissions seven percent by 2020 and fifteen percent by 2035.

In the Bay Area, MTC is required to update the RTP every four years. With SB 375, MTC is required to develop a SCS as part of its current RTP update for 2013. The SCS is being developed by ABAG and MTC. Among other things, the SCS is to:

- Lay out how development patterns and the transportation network can be integrated to help reduce greenhouse gas emissions;
- Identify how the region's housing needs will be met;
- Improve modeling of land use and transportation; and
- Be congruent with local general plans, specific plans and zoning.

If the SCS is unable to achieve the reduction targets, MTC and ABAG would have to develop an Alternative Planning Strategy, decoupled from the RTP, in order to achieve the reduction targets.

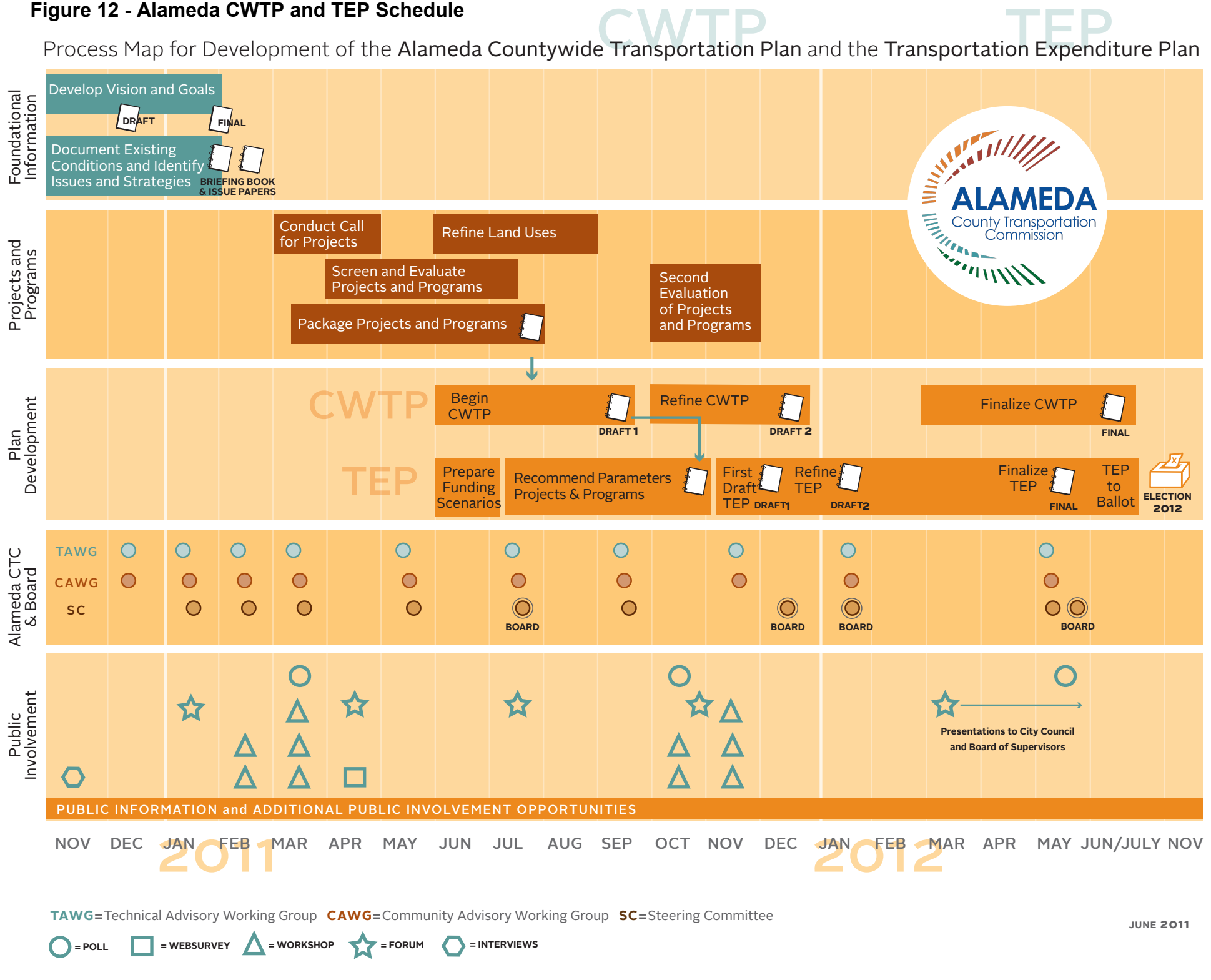
In this context, MTC and ABAG have unveiled a new name for their collaborative long-range planning efforts: Plan Bay Area. This joint, long-range planning effort will culminate in the adoption of a 28-year plan in spring 2013. Also participating in this exercise are the BAAQMD and the Bay Conservation and Development Commission (BCDC). The Plan Bay Area name builds on the One Bay Area brand launched in April 2010 to address climate change on a regional scale in the Bay Area. Plan Bay Area is the successor to Transportation 2035, the long-range plan adopted by MTC in 2009. Plan Bay Area will address new requirements flowing from California's 2008 Senate Bill 375 (Steinberg).

The mechanism for achieving these reductions will be a SCS that promotes compact, mixed-use commercial and residential development that is walkable and bikable and close to mass transit, jobs, schools, shopping, parks, recreation and other amenities. If successful, Plan Bay Area will give people more transportation choices, create more livable communities and reduce the pollution that causes climate change. In March 2011, MTC and ABAG took the first step in crafting the SCS when they introduced

their Initial Vision Scenario showing where and how the region might grow so as to be able to sustainably accommodate two million more residents by 2035. As of July 2011, MTC and ABAG are working on developing the detailed Scenarios which will be used to later develop a Preferred Scenario which will become the land use component of the SCS for the region and is anticipated to be adopted by winter 2012.

As part of the 2012 CWTP Update, Alameda CTC has launched a major comprehensive planning effort to achieve its share of county targets for GHG emission reductions and integrate land use with transportation in the countywide transportation plan for the first time. The land use development for Alameda County is coordinated with the Planning Directors of local jurisdictions in the County. It is a parallel process to MTC/ABAG's SCS development process, but precedes their effort so that it informs the development of the regional SCS for Alameda County. The CWTP Update process is shown in Figure 12.

Figure 12 - Alameda CWTP and TEP Schedule



Priority Development Areas

To promote compact, livable development near transit and conservation of the Bay Area's natural resources, ABAG has established the FOCUS program in partnership with MTC, the Bay Area Air Quality Management District, the Bay Area Conservation and Development Commission (BCDC), local governments, CMAs and transit operators. The primary goal of FOCUS is to encourage future growth near transit and in the existing communities that surround the San Francisco Bay, enhancing existing neighborhoods and providing housing and transportation choices for all residents.

Priority Development Areas (PDAs) are defined by ABAG as locally-identified, infill development opportunity areas within existing communities. They are generally areas of at least 100 acres where there is local commitment to developing more housing along with amenities and services to meet the day-to-day needs of residents in a pedestrian-friendly environment served by transit. To be eligible to become a PDA, jurisdictions submit applications to ABAG for areas that are within an existing community, near existing or planned fixed transit or served by comparable bus service, and planned for more housing. 34 planned and potential PDAs and 14 Growth Opportunity Areas (GOA) in Alameda County are shown on Table 13 and Figure 13. Planned PDAs have completed the community planning process while potential PDAs while potential PDAs do not yet have a completed plan. Growth Opportunity Areas have been added by ABAG as part of the on-going development of a Preferred SCS by One Bay Area. ABAG intends to re-open the PDA application process so that Growth Opportunity Areas can be included in future FOCUS programs.

Prior to FOCUS program, the Alameda CTC monitored TOD. Now the TOD program is being expanded to include PDAs, GOAs and TOD. Examples of completed TOD projects in Alameda County are the Fruitvale BART Transit Village in Oakland, the downtown Redevelopment Program and the Cannery Area in Hayward and the Ashby/Ed Roberts Campus in Berkeley.

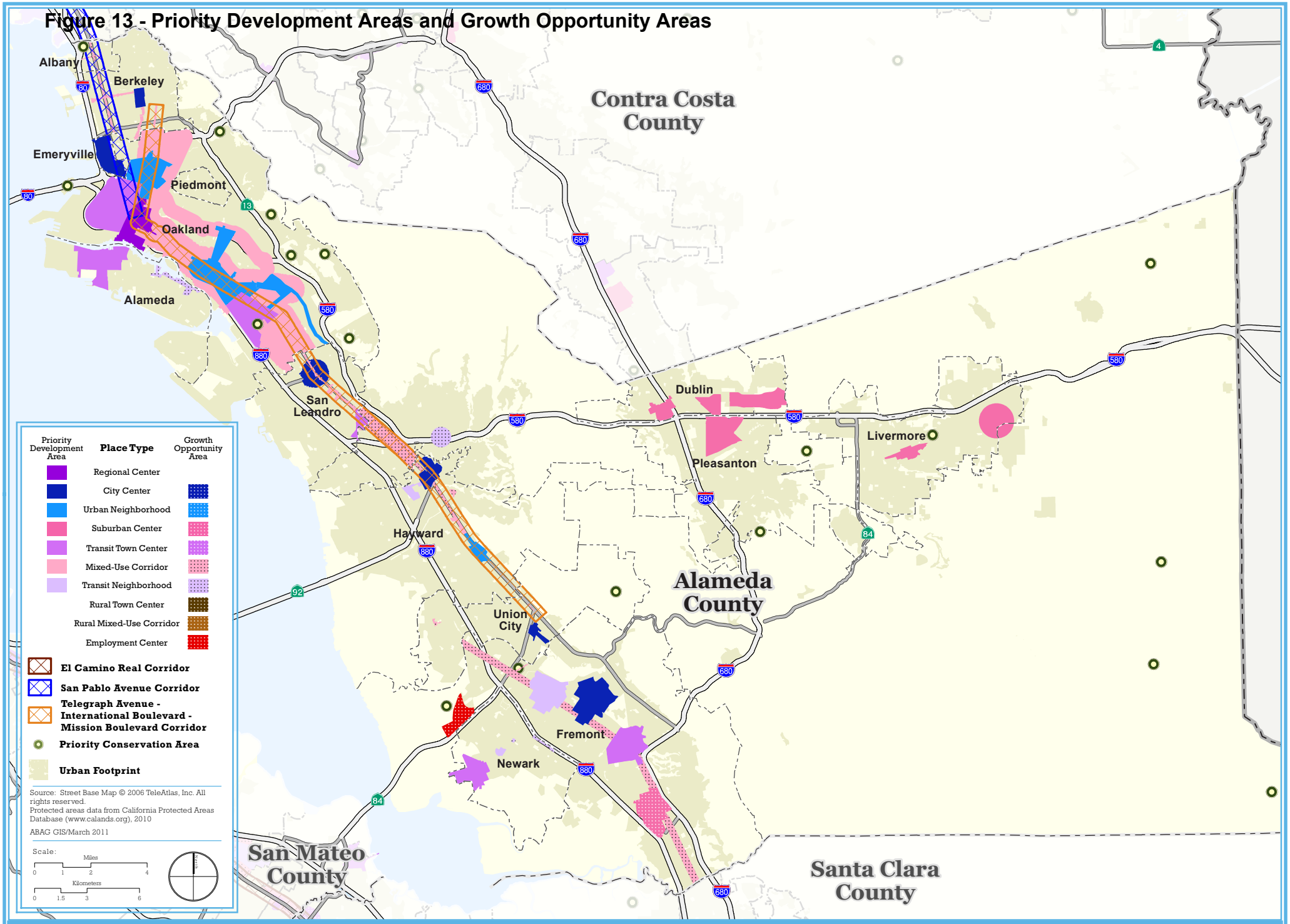
ABAG's FOCUS program provides financial incentives to support areas designated as priority development areas and priority conservation areas (PDAs and PCAs). In the past, financial incentives have included funding through the Transportation for Livable Communities Program. MTC is considering expanding their emphasis on funding incentives for PDAs in the current update of the Regional Transportation Plan. The CMA has established a Transit Oriented Technical Assistance Program (TOD-TAP) and a TOD Fund Monitoring Program to further assist project sponsors in advancing their projects. Furthermore, Alameda CTC is developing a PDA Program to support the planning and development of PDAs in Alameda County – whether planned or potential or GOA.

Table 13 — Priority Development Areas and Growth Opportunity Areas

Jurisdiction/Area Name	Status
Alameda	
Naval Air Station	Planned/Potential
Northern Waterfront	*Growth Opportunity Area*
Albany	*Growth Opportunity Area*
San Pablo Avenue & Solano Avenue	
Berkeley	Potential
Adeline Street	Planned
Downtown	Planned
San Pablo Avenue	Planned
South Shattuck	Potential
Telegraph Avenue	Planned
University Avenue	
Dublin	Planned
Downtown Specific Plan Area	Planned
Town Center	Planned
Transit Center	
Emeryville	Planned
Mixed-Use Core	
Fremont	
Centerville	Planned
City Center	Planned
Irvington District	Planned
Ardenwood Business Park	*Growth Opportunity Area*
Fremont Boulevard & Warm Springs Boulevard Corridor	*Growth Opportunity Area*
Fremont Boulevard Decoto Road Crossing	*Growth Opportunity Area*
South Fremont/Warm Springs	*Growth Opportunity Area*
Hayward	
Downtown	Planned
South Hayward BART	Planned
South Hayward BART	Planned
The Cannery	Planned
Carlos Bee Quarry	*Growth Opportunity Area*
Mission Corridor	*Growth Opportunity Area*
Livermore	
Downtown	Planned
Vasco Road Station Planning Area	Potential
Newark	
Dumbarton Transit Oriented Development	Potential
Old Town Mixed Use Area	Potential
Cedar Boulevard Transit	*Growth Opportunity Area*
Civic Center Re-Use Transit	

Jurisdiction/Area Name	Status
Oakland	
Coliseum BART Station Area	
Downtown & Jack London Square	Planned
Eastmont Town Center	Planned
Fruitvale & Diamond Areas	Planned
MacArthur Transit Village	Planned
Transit Oriented Development Corridors	Planned
West Oakland	Potential
	Planned
Pleasanton	
Hacienda	
	Potential
San Leandro	
Bay Fair BART Transit Village	
Downtown Transit Oriented Development	Potential
East 14th Street	Planned
	Planned
Union City	
Intermodal Station District	
Mission Boulevard	
Old Alvarado	Planned
	Growth Opportunity Area
County Unincorporated	*Growth Opportunity Area*
Castro Valley BART	
East 14th Street and Mission Boulevard Mixed Use Corridor	
	Growth Opportunity Area
	Growth Opportunity Area

Figure 13 - Priority Development Areas and Growth Opportunity Areas



PlanBayArea

Place Type for Priority Development Areas and Growth Opportunity Areas in Alameda County

METROPOLITAN TRANSPORTATION COMMISSION

ABAG

Priority Conservation Areas

PCAs, or areas identified to be protected, are part of a multi-agency, regional planning initiative led by ABAG and MTC in coordination with the BAQMD and BCDC. As part of a regionwide strategy to support protection of important natural resources in the San Francisco Bay Area, in 2008, ABAG adopted 98 Priority Conservation Areas, including 17 in Alameda County. PCAs are natural lands that provide important agricultural, natural resource, historical, scenic, cultural, recreational, and/or ecological values and ecosystem functions throughout the San Francisco Bay Area. Their designation as PCAs focuses their protection within the short-term through purchase or conservation easements, mainly through the funding incentives from the FOCUS program. PCAs were selected based on over 100 nominations from local governments, public agencies, and nonprofit organizations based on the following criteria:

- Regionally signification conservation values;
- Demonstrate community support; and
- Have an urgent need for protection.

The list of PCAs identified in Alameda County are shown in Table 14 and Figure 14.

Table 14 — Priority Conservation Areas

	PCA Sponsor	Name of PCA	City	Comments
1	Butters Land Trust	Butters Canyon/Headwaters of Peralta Creek	East Oakland	Headwaters of the Peralta Creek - hills of East Oakland above Highway 13.
2	City of Albany	Albany Hill	Albany	Northwestern corner of the City of Albany - above interstate I-80 adjacent to Cities of Richmond and El Cerrito
3	City of Fremont	Site 1 – Coyote Hills	Fremont	Coyote Hills - tidal marsh, grassland, and wetland.
4	City of Livermore	North Livermore, South Livermore Valley	Livermore	Provides wildlife habitat and corridors, buffers waterways and regional parks and protected areas, provides an open space separation between the Cities of Livermore and Pleasanton.
5	City of Oakland	East Bay Greenway	Oakland, San Leandro, unincorporated County, Hayward	Bike/pedestrian paths extend from Oakland to Hayward under the elevated BART tracks. 13-mile greenway through 4 jurisdictions and connects 5 BART stations. Will follow major transportation corridors that link homes, job centers and schools in East Bay.
6	City of Oakland	Leona Canyon Creek Tributaries	Oakland	Oakland Hills just south of Skyline Boulevard and adjacent to Leona Canyon Regional Open Space Preserve.

7	City of Oakland	Ridgemont West	Oakland	Located in the hills of City of Oakland, on the southern edge of Leona Heights Park and adjacent to Merritt College. Also headwaters within Lion Creek Watershed, covers 2,677 acres.
8	City of Oakland	South Hills, San Leandro Creek	San Leandro	San Leandro Creek PCA is adjacent to the 143-acre Dunsmuir Ridge Open Space and is connected through the Lake Chabot Municipal Golf Course to Anthony Chabot Regional Park
9	City of Oakland	Temescal Creek/North Oakland	Oakland	Located in the hills of City of Oakland, along the ridge above the Caldecott Tunnel. Critical linkage between open spaces to the north and south of Highway 24.
10	City of Union City	Union City Hillside Area	Union City	Hillside is adjacent to the Dry Creek Pioneer Park and hillside areas in neighboring Fremont, and is an important link in the preferred alignment of the Bay Area Ridge Trail segment between the Vargas Plateau and Garin/Dry Creek Pioneer Regional Parks
11	East Bay Regional Park District	Bethany Reservoir Area	Alameda County	Northeastern corner of Alameda County - vital for soil and water quality, plant and animal diversity - link in the California Aqueduct and feeds the South Bay Aqueduct.
12	East Bay Regional Park District	Cedar Mountain Area	Alameda County	Eastern edge of Alameda County east of Del Valle Regional Park - privately owned land - includes threatened species, Alameda Whipsnake
13	East Bay Regional Park District	Chain of Lakes Area	Pleasanton and Livermore	In addition to environmental and outdoor recreation significance, it is important for protecting water quality in the reservoirs.
14	East Bay Regional Park District	Duarte Canyon Area	Alameda County	Southeastern corner of Alameda County
15	East Bay Regional Park District	Potential Oakland Gateway Area	Oakland	Waterfront along the Oakland Estuary - Regional Shoreline
16	East Bay Regional Park District	Potential Tesla Area	Alameda County	Eastern Alameda County surrounding Carnegie State Vehicular Recreation Area. Corral Hollow Valley is the northernmost point - includes the towns of Tesla and Carnegie
17	East Bay Regional Park District	Regional Trails System Gaps	Oakland to Union City and Oakland and Berkeley Hills	Two significant and complementary long-distance trails; San Francisco Bay Trail along the shoreline and the Bay Area Ridge Trail along the ridgeline overlooking the Bay.

Figure 14 - Priority Conservation Areas

Albany Hill
Albany
Berkeley
San Francisco Bay
Temescal Creek/North Oakland
Emeryville
Potential Oakland Gateway Area
Piedmont
Butters Canyon/Headwaters of Peralta Creek
Oakland
Leona Canyon Creek Tributaries
Ridgemont West
Alameda
East Bay Greenway
South Hills, San Leandro Creek
San Francisco
San Leandro
San Francisco Bay
Contra Costa County
Bethany Reservoir Area
Dublin
North Livermore, South Livermore Valley
Chain of Lakes Area
Livermore
Pleasanton
San Joaquin County
Hayward
Union City Hillside Area
Alameda County
Potential Tesla Area
Union City
Cedar Mountain Area
Site 1-Coyote Hills
Fremont
Newark
Duarte Canyon Area
San Mateo County
Santa Clara County

Not Shown:

San Francisco Bay Trail - Bay Area Ridge Trail

This PCA contains multiple segments in each county of the region except San Francisco that would close gaps in these trail systems.

East Bay Regional Parks District Regional Trails

This PCA contains multiple segments in Alameda and Contra Costa Counties that would close gaps in the EBRPD trail system.

Map Legend

- Priority Conservation Area
- Within Urban Footprint
- Within Urban Growth Limits
- Protected Open Space

For more information on the FOCUS program, visit http://www.bayareavision.org/initiatives

Scale:
Miles: 0 1 2 4
Kilometers: 0 1.75 3.5 7

FOCUS
a development and conservation strategy for the San Francisco Bay Area



Priority Conservation Areas in Alameda County

Community Design and Transportation Program

The Santa Clara Valley Transportation Authority (SCVTA) has adopted a Community Design and Transportation (CDT) program as part of its CWTP to better integrate transportation and land use and which also augments the CMP Land Use Analysis Program. This program was developed in partnership with member agencies and communities and is endorsed by their elected bodies. The SCVTA Board promotes the CDT program as its policy tool and primary program to integrate transportation and land use. It includes a comprehensive toolkit for the member agencies to use in all aspects of transportation and land use planning and in developing both public and private development projects. The CDT program also includes two grant funds program and an incentive program, which is designed to encourage better coordination of transportation and land use planning. One of the objectives of the CDT program is to support concentrated development in selected locations of the county.

The Alameda CTC recommended that a similar approach to better integrating land use and transportation in Alameda County be explored. Between now and the next update of the CMP, the Alameda CTC directed staff to identify the interest from local jurisdictions and the transit operators for implementing a similar program in Alameda County. A scope and the steps involved, including costs of developing and implementing the program, will be developed.

In addition, the VTA annually tracks land use developments countywide and gathers parcel development data from the local jurisdictions as part of the Conformity Findings process. Since this data would be great resource, the Alameda CTC Commission recommended staff to explore options for tracking developments countywide similar to VTA, along with identifying financial impacts to the agency and the jurisdictions.

CMP Legislation and Infill Development Areas

The legislative provision to support infill development does not any longer exist in statute any longer. In view of the current regional and state level efforts regarding the importance of linking transportation and land use to reduce the greenhouse gas emissions through infill land use developments, the Alameda CTC Commission recommended staff to explore ways of harmonizing policies, guidelines and regulations (e.g. deficiency plan) so that infill development could be easier to implement in Alameda County. In this regard, an issue paper was developed reviewing and identifying various policy and advocacy options available to support infill developments. The analysis (see Appendix F) lays out several strategies that the Alameda CTC could pursue to promote infill development. Some of the suggested strategies could be implemented on a short-term basis and others would take longer to implement. Collectively, these measures could facilitate a more integrated policy approach for infill development in Alameda County. The following is the list of suggested strategies:

Short-term strategies that would provide further flexibility include:

- Incorporate the use of level of service standards (qualitative and quantitative) for transit, pedestrian, and bicycles to allow a balancing of transportation performance goals;
- Establish policies and mitigation strategies aimed at congestion relief on a broader scale; and

- Adopt urban trip generation rates that more accurately reflect automobile trip generation in areas well served by transit and other services.

Long-Term Strategies that would provide a combination of exemptions and greater flexibility include:

- Advocate for relaxation from traffic LOS standards to be extended to all designated infill opportunity zones" statewide that meet established criteria, regardless of when the zones were established;
- Pursue legislative changes to eliminate a strict requirement for the use of LOS standards to determine the performance of highways and roadways as part of the Congestion Management Program;
- Adopt flexible standards for transportation impact assessment under CEQA in support of multimodal Congestion Management Plan goals;
- Impose multimodal transportation impact development fees in support of multimodal Congestion Management Plan goals; and
- Update conventional four-step models to provide a more accurate estimate of person trips by mode

The Alameda CTC could explore the possibility of adopting the recommended short term policies while pursuing the suggested legislative options in collaboration with the other CMAs.

REGIONAL TRANSIT EXPANSION PROGRAM (Resolution 3434)

The Regional Transit Expansion Program adopted by MTC in 2001 as Resolution 3434 identifies the regional commitment to transit investments in the Bay Area. It has been amended many times. The most recent amendment in September 2008 identifies a nearly $18 billion investment in new rail and bus projects that will improve mobility and enhance connectivity for residents in Alameda County and the Bay Area.

It includes a TOD Policy to condition transit expansion projects funded under Resolution 3434 on supportive land use policies. There are three key elements of the regional TOD policy:

- Corridor-level thresholds to quantify appropriate minimum levels of development around transit stations along new corridors;
- Local station area plans that address future land use changes, station access needs, circulation improvements, pedestrian-friendly design and other key features in a TOD; and
- Corridor working groups that bring together CMAs, city and county planning staff, transit agencies, and other key stakeholders to define expectations, timelines, roles and responsibilities for key stages of the transit project development process.

This policy is relevant within Alameda County for the following transit extensions:

- BART to San Jose
- Dumbarton Rail

- Ferry service extensions in Alameda and Berkeley
- AC Transit Bus Rapid Transit in Berkeley/Oakland/San Leandro

The Alameda CTC is working with the local jurisdictions, transit providers, congestion management agencies in adjoining counties, ABAG and MTC to address the policy in these corridors.

A companion resolution, Resolution 3357, articulates rail extension and improvement criteria and regional express bus and rapid bus program criteria. These criteria shall be considered during the funding process for the identified transit projects. The land use component of the criteria is included in the T-Plus Work Program as noted below.

RELATIONSHIP TO CALIFORNIA ENVIRONMENTAL QUALITY ACT

Under CEQA, local governments still have lead agency responsibility for preparing EIRs and conducting the associated transportation analyses. Local governments are responsible for proposing and analyzing methods to reduce negative effects on the transportation system. The Alameda CTC will comment throughout the EIR process, keeping local governments informed about the adequacy of the analyses and approving the use of any local or subarea transportation models used, or providing the local agency with access to information from the countywide travel model on cumulative impacts of projects.

In the case of smaller projects, local governments may wish to require project proponents to enter an agreement to provide a "fair share" portion for mitigating a cumulative impact. This addresses the legislative requirement that the CMP must be able to estimate costs associated with mitigating transportation impacts.

Environmental documents will typically identify impact mitigations for the proposed project. Two questions arise relative to mitigation proposals in environmental documents:

- Are the mitigation measures adequate to sustain the service standards in the CMP?
- Are the mitigation measures fully funded? If the environmental document shows full funding of mitigation measures, is the project sponsor expecting state or federal funding for all or a portion of the measures?

If transportation mitigation measures are inadequate and/or are underfunded, there may be significant implications for the regional transportation system. Either might result in failure to meet LOS standards, triggering potential non-conformance and the need for a deficiency plan. Furthermore, an environmental document may rely on state or federal funding of mitigation measures. Such funding may not be consistent with Alameda CTC project funding priorities. The Alameda CTC's policy regarding mitigation measures is:

- Mitigation measures must be adequate to sustain CMP roadway and transit service standards;
- Mitigation measures must be fully funded to be considered adequate; and

- Mitigation measures that rely on state or federal funds directed by or influenced by the Alameda CTC must be consistent with project funding priorities established in the CIP of the CMP, the CWTP and the RTP, or the Federal TIP.

In addition, the Alameda CTC is using the corridor/areawide management planning process, as adopted in the CWTP, to identify needed mitigation measures and for linking its funding decisions to needed mitigations.

Where disputes arise between two agencies as a result of the potential impacts of a project, the Alameda CTC may act as a mediator, if requested by one of the parties involved. Under the intent of the law, the Alameda CTC will require local agencies to establish a program for securing funding to mitigate the transportation impacts of their land use decisions. The mitigations and funding sources may be the same as, but not limited to, those proposed in the CEQA process.

Techniques other than using the countywide travel model are available for assessing possible transportation impacts on the MTS. These techniques are documented in the HCM, and may be used, at the local jurisdiction's option, to help assess the impacts on the MTS even when the Alameda CTC does not require such analysis. The 2000 HCM [30] be used for this purpose. The local jurisdiction may want to do this to assure itself that a given project approval will not endanger its compliance with CMP standards.

RELATIONSHIP TO TRANSIT

Overview

To fully address the relationship between land use development and impacts on the regional transportation system, transit operators must be included in the land use planning and approval processes. Through the CMP process, local jurisdictions are encouraged to develop and maintain a transit component of their General Plan Circulation Element. Also, local jurisdictions can provide a forum for the transit operators to participate more actively in land use decisions.

Policies

The Alameda CTC encourages local jurisdictions to:

- Consider transit impacts of new developments as part of site "traffic" impact studies.
- Include documentation of existing ridership and loads on transit lines serving new development, and assessing the impacts on usage (additional trips) on those lines in their environmental impact analysis process.
- Require transit mitigation of new developments, for both capital improvements and possibly operational costs, if transit services need to be added or enhanced due to new development.

[30] An evaluation of the comparative analysis of the 2010 Highway Capacity Manual to the 2000 HCM will be done in the 2013 CMP update.

- Include a transit section in their General Plan Circulation Element; AC Transit's "Designing with Transit," can assist in the development of this section.
- Include the appropriate transit operators in the land development review process; AC Transit's "Designing with Transit" should be used to increase transit use to the site through appropriate design treatment.
- Use transit as a mitigation measure for traffic and air quality impacts, in conjunction with the efforts of the transit operators. This could be accomplished through transit subsidies to employees and parking charges.
- Promote new development along existing and funded new transit routes.
- Reduce parking requirements for development that occurs along existing transit services.
- Coordinate traffic signals within their own jurisdictions and with other jurisdictions on arterial streets served by transit, and provide traffic signal priority for buses on major bus routes.
- Consult with appropriate transit operators before placing bus pullouts on major bus routes.

Environmental Assessment Checklist

Local jurisdictions can use the following environmental assessment checklist for guidance regarding design elements in development proposals that could facilitate the provision of transit services. The list has been divided into two sections: development in areas with transit services and development in areas without transit service. This list is not intended to cover all aspects of every development, nor is it intended to replace transit operator review of specific environmental documentation. Greater detail on these and other design issues can be found in the two AC Transit documents referenced earlier.

Development near Transit Services

- Transit planners consider one-fourth of a mile on either side of a bus line or transit station the prime "catchment" area for that line. This general rule should be applied to determine if a development is "near" transit services.
- The number of trips generated by the project and its impact on the existing transit service need to be addressed. If the trip generation cannot be absorbed with the current transit capacity, the environmental document should address ways of mitigating these impacts.
- Pedestrians must have access between the transit service and the development. The site plan should provide good access between buildings and from buildings to the transit stops. Sidewalks should be provided on both sides of all streets to provide access to bus stops. Sidewalks and curb cuts at intersections should be designed for handicapped accessibility. Designs should avoid requiring pedestrians to walk through parking lots to access transit service.
- Where the environmental document raises the possibility of private shuttle services, a cost analysis of providing this service versus subsidizing existing transit service should be included.

Development in Areas without Transit Services

- An environmental review of a development in an area without transit service should be extensive, to avoid a design which precludes the extension of transit services.
- The number of trips should be assessed of possible demand generated for new transit services. If development is significant enough to create a strong demand for services, the environmental review should address a funding mechanism for the service. No statements should be made regarding the possible extension of transit services without consultation with the affected transit operator(s).
- Traffic lanes must be at least 11 feet wide to provide for satisfactory bus operation.
- Sidewalks should be provided.
- Intersection turning radii: It is desirable to have a corner radius of 30 to 55 feet (based on proximity of curb parking) in order to expedite right turns to and from through lanes.
- Roadway grades: Roadways prepared for bus service should have grades equal to or less than 12 percent for both uphill and downhill operations. Grades of eight percent or less are desirable.
- Traffic Index for Pavement Design: In order for the streets in a development to support bus traffic, their traffic index should be at least 8.0.
- A continuous, safe system of bicycle facilities such as bike lanes and paths , including support facilities such as lockers should be considered.

Countywide and Local Climate Action Planning Activities

At its December 2008 Board retreat, the Alameda CTC also expressed qualified support for pursuit of CMA climate action –related transportation strategies, and an exploration of how those would relate to local land-use strategies. All local jurisdictions in Alameda County have initiated steps towards developing climate action plans, most of which include consideration of:

- General Plan Elements – policy changes
- Zoning – policy changes
- TOD/design
- Higher density land uses near transit
- Mixed use land uses near transit
- Street design standards – more inclusive of walking, biking and transit, i.e. Complete Streets
- Green building codes/standards

Based on these transportation strategies that each local jurisdiction is contemplating or adopting, the Alameda CTC has developed Climate Action priorities in order to see how the Alameda CTC can best support local efforts. These priorities are shown in Table 15. Additionally, MTC has developed a draft “Transportation, Land Use and Greenhouse Gases – A Bay Area Resource Guide” which provides an

overview of the feasibility, potential impact and cost-effectiveness of forty-five strategies for climate action, including land use policies.

Parking Standards and Policies

Parking for automobiles is a significant but under-recognized factor in the relationship between land use and transportation. It has been customary for local jurisdictions to require development projects to provide a minimum number of parking spaces. Moreover, most parking is underpriced. These two factors encourage driving, leading to inefficient land use and more congestion. With the support of local jurisdictions, the Alameda CTC plans to explore and review parking policies and standards as a way to develop parking management strategies as a land use tool for local jurisdictions to promote alternative modes and reduce greenhouse gases.

CEQA Reform

As public agencies have gained decades' of experience in applying CEQA and as new issues (such as global warming) emerge that were unanticipated by the original legislation, the State Office of Planning and Research has initiated a revision of CEQA with respect to the analysis and mitigation of potential effects of greenhouse gas emissions. Revising CEQA to broaden the analysis and mitigation options to take into account trips made by other modes than automobile trips, such as walking, biking, and transit would facilitate TOD projects. As part of the 2011 CMP update, the Alameda CTC explored moving toward a standard of multi-modal level of service to supplement existing service level methodologies as described under Development Review Process section of this chapter.

COMPLIANCE AND CONFORMANCE

The Alameda CTC is responsible for monitoring conformance with the adopted CMP[31]. Among the requirements, each city and county must have adopted and be implementing a land-use analysis program. While the Alameda CTC does not have the authority to approve or deny local developments, it may find the local jurisdiction in non-conformance. At the time of the finding, the Alameda CTC will provide recommendations for corrective actions. If after 90 days the local jurisdiction is still in non-conformance, the Alameda CTC is required to provide notice to the CTC and the State Controller. The notice includes the reasons for the finding and evidence that the Alameda CTC correctly followed procedures for making the determination.

The State Controller would then withhold the non-conforming jurisdiction's increment of subventions from the fuel tax made available by Proposition 111. The jurisdiction will not be eligible to receive funding for projects through the federal STP and CMAQ Program.

If within the 12-month period following the receipt of a notice of non-conformance, the Alameda CTC determines that the city or county is in conformance, the withheld Proposition 111 funds will be released. If after the 12-month period the city or county has not conformed, the withheld Proposition 111 funds will

[31] California Governement Code Section 65089.3

be released to the Alameda CTC for projects of regional significance included in the CMP or a deficiency plan.

If a proposed development was specified in a development agreement entered into prior to July 10, 1989, then it is not subject to any action taken to comply with the CMP, with the exception of those actions required for the trip-reduction and travel-demand element of the CMP.[32]

In some cases the Alameda CTC may find that additional mitigation measures are necessary to prevent certain segments of the CMP-network from deteriorating below the established LOS standards, before a conformance finding is made. In such cases, the Alameda CTC will require the local jurisdiction to determine whether the additional mitigation measures will be undertaken as a condition of project approval, or whether they will be implemented as part of a deficiency plan for the CMP-network segments affected.

LOCAL GOVERNMENT RESPONSIBILITIES

Local jurisdictions will have the following responsibilities regarding the analysis of transportation impacts of land use decisions.

- Modeling, using the most recent Alameda CTC -certified travel-demand model, all GPAs and large-scale projects consistent with general plans that meet the 100 p.m. peak-hour threshold. Model results shall be analyzed for impacts on the MTS and shall be incorporated in the environmental document.
- Forwarding to the Alameda CTC all NOPs, draft EIRs/statements, final EIRs/statements and final disposition of the GPA/development requests.
- Working with the Alameda CTC on the mitigation of development impacts on the MTS.
- Biennially providing an update (prepared by the jurisdiction's planning department) of the estimated land uses likely to occur using ABAG's most recent forecast for a near-term and far-term horizon year; this land use information will be provided in a format that is compatible with the countywide travel model.

In addition, each local jurisdiction must demonstrate to the Alameda CTC that the Land Use Analysis Program is being carried out by September 1 of each year.

[32] California Government Code Section 65089.7

Table 15 — Priorities for Climate Action Measures

	Short (within 2 years) 2011-13	Medium (2 - 10 years) 2013-21	Long (10 - 25 years) 2021-36
Action	Technical assistance to local jurisdiction Climate Action Programs		
	Transit Oriented Development (TOD) programs - existing and expansion		
	Transportation Demand Management (TDM) programs - existing and expansion and monitoring		
Action/ Advocacy	Parking standards/policies		
	CMP - strengthen LU & TDM elements Policies supporting Infill Development		
		Emissions - monitoring & evaluation	
		Legislative relief from LOS standards for infill development Traffic impact fee	
	Improvements in freight/services transportation		
	Standards of multi-modal 'level of service' (person throughputs) and standards for modeling Vehicle Miles Travelled		
	Transit service improvements - trips competitive with driving times		
Advocacy	New (not redirected) revenues for climate action implementation		
	Stronger vehicle fuel efficiency and emissions standards		
	CEQA reform		
	Alternative vehicle and vehicle-fuel technology		
	Improved albedo		
	Green building		
Institutional Roles	Partnerships with other agencies (local, regional, state)		
	Investigate potential for stronger role in land use planning in relation to transportation		

NEXT STEPS

Pending the outcomes of the 2012 CWTP and 2013 RTP updates, the CMP Land Use Analysis Program will be revised to further strengthen the connection between land use and transportation in Alameda County. In this regard, the Alameda CTC directed staff to implement the following recommendations for or prior to the 2013 CMP Update:

- Conductscomparative analysis of the 1985 and 2000 HCMs to the 2010 HCM in terms of:
  - LOS standards used for the project impact analysis under the Land Use Analysis program.
  - Analysis for transitioning to multi-modal level of service from the current auto based LOS standards.
  - Pending availability of funding, conduct a Feasibility Study for implementing an ATG measure for land use impact analysis. Depending on the outcome of the feasibility study, and also the economy, an ATG or areawide impact fee could be reconsidered during future CMP updates.
- Determine if there is interest from local jurisdictions and the transit operators for a program similar to the SCVTA's CDT program in Alameda County. A scope and the steps involved, including the cost of developing and implementing the program, will also be developed.
- Explore options for tracking land use developments countywide including identifying any costs to the agency and the jurisdictions.
- Explore the possibility of adopting the recommended short term policies in the issue paper to promote infill developments while pursuing the suggested legislative options in collaboration with the other CMAs.
- For improving mobility and identifying and funding mitigation measures in long and cross county corridors:
- Consider establishing a means for projects that impact long travel corridor and traverse multiple jurisdictions within the County to contribute its fair share of required mitigation measures throughout the corridor;
- Explore developing partnerships for sharing the cost for implementing related mitigation measures for congested cross county corridors; and
- Explore establishing cross county partnerships with adjacent counties to develop mutually agreeable strategies for cross county corridor improvements.

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CHAPTER SEVEN

Capital Improvement Program

BACKGROUND

The Alameda CTC must develop, as part of the CMP, a 6-year CIP to maintain or improve the performance of the multimodal transportation system for the movement of people and goods and to mitigate regional transportation impacts identified through the land-use analysis program[31] Capital improvement projects must conform to RTP, CWTP, and air quality mitigation measures[32] for transportation-related vehicle emissions.

It is clear that we cannot build our way out of congestion in the Bay Area transportation system by physically expanding the system. Consequently, system-management strategies must be developed and implemented as part of MTC's federal discretionary investment program to maximize use of the existing system. Such strategies should be designed to improve the use and safety of the existing multimodal transportation system, in the most cost-effective manner possible.

Preservation and maintenance of the existing system—including local roads and transit—remains essential. Therefore, it will be a key component among the many objectives to be achieved in programming federal discretionary funds. In particular, flexible funds will be used to address maintenance and rehabilitation shortfalls that cannot be satisfied from other federal, state, regional or local funding sources.

RELATIONSHIP OF CIP TO PLANS AND STUDIES

Regional Transportation Plan

Since the CMP ultimately will be incorporated into the RTP action element, projects selected for the Capital Improvement Program need to be consistent with the assumptions, goals, policies, and actions identified in that plan. The RTP, prepared by the MTC, is the basic statement of Bay Area transportation policy. Because of the interdependence of transportation planning and other regional planning, the regional plan strives to adopt policies that complement and support programs of federal, state and regional agencies. MTC has adopted a capital investment policy for the RTP.[33] This policy sets forth MTC's approach to capital investment in the transportation system.

The CIP in the CMP has been formulated in consideration of MTC's policy. The currently adopted RTP is Transportation 2035 (T-2035), to which an update has been initiated and is scheduled to be completed by April 2013. For the purposes of this 2011 CMP CIP, T-2035 assumptions are used.

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[31] California Government Code Section 65089(b)(5)

[32] The Air Quality Mitigation Measures are contained in the BAAQMD's 2010 Bay Area Clean Air Plan

[33] MTC Resolution 3893

Countywide Transportation Plan

Each county within the jurisdiction of MTC can prepare a long-range transportation plan (Countywide Transportation Plan) in cooperation with the cities, county and transit operators.[34] The CWTP is the primary basis for the county's component of the RTP. The Alameda CTC is in the process of updating its CWTP for Alameda County, which is anticipated to be completed spring 2012. This update is being coordinated with MTC's update of the RTP. For the purposes of this 2011 CMP CIP, the 2008 CWTP assumptions are used.

The Alameda CTC will continue to use its CMP as the primary vehicle for implementing the long-range countywide transportation plan. The CMP CIP guidelines and other funding policies adopted by the Alameda CTC require projects seeking federal or state funding to be consistent with the CWTP. The Alameda CTC's transportation investment policies adopted with the current Alameda County 2008 CWTP are as follows:

- Maintain and operate existing facilities before diverting funds to build new facilities.
- Focus on high priority projects over the next several state and federal funding cycles to ensure delivery of these improvements.
- Give priority to projects that are most effectively coordinated with land use planning, with special focus on Priority Development Areas (PDAs).
- Encourage the purchase of alternative fuel transit vehicles to the greatest extent possible given financial constraints.
- Support strategies that reduce transportation's share of greenhouse gas emissions.
- Implement incentives for transit use, ride sharing and more efficient use of existing roads.
- Ensure that regional gateways are safely operated to manage traffic flow and, where appropriate, gives priority to the movement of carpools, buses and commercial vehicles.
- Ensure that no individual project is so costly that it compromises the improvement of the system as a whole.
- Secure additional funding for a CIP that meets priority needs as economically as possible.
- Ensure routine accommodation of pedestrians and bicyclists as identified in MTC Resolution 3765 and included in the 2006 Alameda Countywide Bicycle Plan.[35]

A DIVERSIFIED STRATEGY

The 2008 CWTP points to a diversified strategy for managing congestion and sustaining mobility. The following findings highlight this need for a strategy, which includes all reasonable options:

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[34] Assembly Bill 3705 (Eastin), Statutes of 1988

[35] An update to the 2006 Alameda Countywide Bicycle and Pedestrian Plan is scheduled to be adopted by the Alameda CTC in Spring 2012.

- The 2008 CWTP Tier 1 and Tier 2 include $1 billion in projects, programs and services.
- Even with this extensive investment, the countywide travel model forecasts congestion to become more severe by 2035.
- It is therefore clear that we cannot rely solely on investment in facilities and services as a way out of the transportation problem.
- The transportation needs in Alameda County outweigh the available revenues over the 25-year period in Alameda County.
- It is therefore apparent that all available options must be considered to sustain an acceptable level of mobility in Alameda County—pricing strategies, land use strategies, managing the existing system better to stretch its capacity, options such as telecommuting which reduce work trips, carefully selected transportation investment, new and/or expanded revenue sources, and other approaches which may surface, including strategies to reduce vehicle miles travelled and reduce greenhouse gas emissions.
- One approach by itself is unlikely to be successful.

These options will be carried forward to the current update of the Countywide Transportation Plan, which is scheduled for adoption in spring 2012. The 2013 CMP will fully incorporate the investment decisions made in the 2012 CWTP.

The CIP includes projects, which further a diversified strategy. Operational improvements intended to efficiently use existing facilities, transit investment and coordination, intermodal freight facilities, non-motorized facilities, and other investment strategies have been considered in the development of the CMP Capital Improvement Program.

As adopted in the 2008 CWTP, the diversified strategy for transportation investments in Alameda County consists of seven component elements:

- An investment program with the flexibility to finance street, highway and mass transit projects where it offers the most cost-effective method of transportation improvement;
- A commitment to funding the highest priority projects in the County, including improvements that address the most congested corridors;
- Strategies designed to ensure enough funding for the maintenance, operation and operational improvement of existing facilities and services;
- Strategies designed to ensure efficient operation of those facilities that are essential for freight movement;
- Cooperative planning designed to engage city, county, Alameda CTC and state authorities in planning for corridor/areawide management;
- Planning guidelines designed to ensure strategic treatment of hubs, gateways and intermodal terminals; and

- Pricing policies designed to improve efficiency of the existing transportation system and reconcile mobility, air quality and greenhouse gases.

Corridor Studies

The Alameda CTC has identified a need for corridor/ areawide management planning, which was identified in the *2008 Countywide Transportation Plan* and described in Chapter 6 Land Use Analysis Program. The planning process approved in the plan will:

- Provide valuable information in assessing longer term land-use impacts and possible solutions;
- Identify comprehensive approaches to congestion management which can aid in the development of deficiency plans where level-of-service standards have been or are expected to be exceeded; and
- Provide support that allows each community within the corridor/area to demonstrate how the community's share of cumulative/regional transportation impacts could be mitigated through cooperative planning and investment. So far, Corridor studies have been completed for the following corridors: I-80, I-580/Altamont, I-880(Intermodal Corridor and North Corridor studies), San Pablo Avenue, the SMART Corridor programs in the San Pablo and I-880 Corridors, I-680 HOT Lane Feasibility Study, the Tri-Valley Triangle Study and the Central County and South County Local Alternative Transportation Improvement Programs.

Air Quality Attainment Plans

The Capital Improvement Program, required as part of the CMP, is closely related to federal and state air quality attainment plans. Because the Bay Area failed to attain national ambient air quality standards before the 1977 Federal Clean Air Act Amendments' 1987 deadline, a revised SIPwas developed. The purpose of this plan is to show the measures to be taken to reduce air pollution and maintain compliance with federal requirements for annual emissions reductions.

The RTP is required by federal law to conform to the SIP. Because CMPs are required to be consistent with the RTP, CMPs must also conform to the programs and policies outlined in the SIP.

State air quality legislation, specifically the California Clean Air Act of 1988, requires the BAAQMD to prepare a Clean Air Plan designed to bring the Bay region's air basin into compliance with state air quality standards by the earliest practicable date. The Clean Air Plan must include transportation control measures as well as stationary (e.g., oil refinery) source controls to achieve and maintain the respective standards for ozone and carbon monoxide.

Other legislation established a joint process between the MTC and BAAQMD for preparing the transportation control measures plan as part of the state Clean Air Plan.[36] The BAAQMD has ongoing efforts to attain the more stringent state one-hour ozone standard. As required by state law, the BAAQMD adopted a plan to attain this standard in 1991. The Clean Air Plan has been updated in 1994, 1997, 2000, 2005 and 2010.

[36] Assembly Bill 3971 (Cortese)

According to BAAQMD, ABAG, and MTC, the Bay Area's air quality setting has not changed much since 1991, although, steady progress has been made in reducing ozone levels in the Bay Area, the region is designated as non-attainment for both the one-hour and eight-hour state ozone standards. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Further, the Bay Area was designated as non-attainment for the national 24-hour fine particulate matter (PM2.5) standard in 2010, and is required to prepare a PM2.5 State Implementation Plan pursuant to federal air quality guidelines by December 2012. Under these circumstances, state law requires the Clean Air Plan to include all feasible measures to reduce emissions of ozone precursors and to reduce transport of ozone precursors to neighboring air basins.

In this context, to respond to air quality and climate protection challenges in the years ahead with a comprehensive planning approach, the Air District developed the 2010 Clean Air Plan to be a dual plan – the required update to the Bay Area's state ozone plan as well as to serve as a multi-pollutant plan to protect public health and the climate. The 2010 Clean Air Plan control strategy component builds on a solid foundation established by the 2005 Ozone Strategy, and previous ozone plans prepared in the 1991 to 2005 period. It includes revised, updated, and new measures in the three traditional control measure categories: Stationary Source Measures, Mobile Source Measures, and Transportation Control Measures. In addition, the Clean Air Plan identifies two new categories of control measures: Land Use and Local Impact Measures, and Energy and Climate Measures. Out of the total 55 control measures in the 2010 Clean Air Plan, 17 are transportation control measures.

The federal and state transportation control measures listed in the attainment plans have implications for county CMPs. MTC will give priority to proposed projects that support or help implement any of the transportation control measures outlined in this revised plan (see Appendix F for federal and state transportation control measures).

FUNDING SOURCES

Federal Surface Transportation Act

Approximately every six years, U.S. Congress has enacted a surface transportation act. The current act (SAFETEA), originally scheduled to expire on September 30, 2009, is still in effect through several legislative extensions. The funding provided through this legislation includes STP and CMAQ funds.

Safe, Accountable, Flexible, Efficient Transportation Equity Act

SAFETEA requires the RTP to be consistent with reasonable assumptions of future funding. SAFETEA also emphasizes methods to improve the operation of the existing transportation system. Such methods include traffic operations systems, arterial signal timing, parking management, transit transfer coordination, and transit marketing programs. These federal requirements have been considered in the development of the CMP Capital Improvement Program.

New Federal Transportation Act

In anticipation of the new federal surface transportation act (New Act) MTC has adopted an overall framework for the investment of roughly $1.4 billion of federal funding over the six-year New Act period (MTC Resolution 3925). The New Act time frame spans six years, from federal fiscal year (FFY) 2009-10 through FFY 2014-15.

Principles and Programming Structure for Investing STP and CMAQ Funds

The reauthorization or continuance of the SAFETEA is anticipated to make available additional STP and CMAQ funds to the region. Out of the estimated $1.4 billion of revenue estimated over a six-year period for the MTC region commitments totaling $633 million to programs and projects for the first three years (Cycle 1, FYs 2009-10 through 2011-12) of revenues have been made. The program categories funded in Cycle 1 included: Planning, Regional Operations, Freeway Performance Initiative, Climate Initiatives (including MTC funded Safe Routes to School Program), Regional Bicycle Program, Transportation for Livable Communities, Regional Streets and Roads Rehabilitation and Strategic Investments. In addition to commitments for the Cycle 1 three-year funding period, the MTC also approved a six-year overall framework.

In anticipation of the reauthorization of federal funds, MTC adopted a framework and schedule for programming future STP/CMAQ funds which are guided by the adopted RTP and other recently enacted legislation such as AB32 and SB375. T-2035 provides a backdrop of setting priorities for New Act funding and includes investments for Annual Programs and T-2035 [37] Core Programs.

Cycle 1 programming policies established a CMA Block Grant approach, which delegated program management and project selection to the county Congestion Management Agencies for three programs: the County Transportation for Livable Communities Program, the Regional Bicycle Program, and the Local Streets and Roads Shortfall Program. The objective of the block grant was to provide additional flexibility to the CMAs to better coordinate grant decisions to address various transportation program needs.

A Cycle 2 (FFY 2012-13 to 2014-15) proposal to establish the OneBayArea Grant program is being considered by the MTC Fall 2011. The proposal is an alternative to the Cycle 2 STP/CMAQ framework approved by the MTC in December 2009 that better integrates the region's federal transportation program with land-use and housing policies by providing incentives for the production of housing with supportive transportation investments. Feedback from stakeholders and technical working groups is being sought over the next several months with the OneBayArea Grant program anticipated to be adopted in December 2011.

[37] A new RTP is currently under development and is anticipated to be completed spring 2013.

State Transportation Improvement Program

The passage of SB 45 restructured the STIP. The legislation provides for more programming control at the county level and also increases the focus on project delivery. The STIP is a five-year programming document adopted by the CTC which identifies transportation projects for state transportation funds. The CTC updates the STIP biennially, in even-numbered years. Each coordinated statewide STIP update is roughly a one-year process, with the 2012 STIP update starting spring 2011. Projects that have been funded through the STIP include State highways, local roads, transit, intercity rail, pedestrian and bicycle facilities, intermodal facilities, and safety. Each new STIP cycle makes available two years of funding to program. The 2012 STIP will cover fiscal years 2012/2013 - 2016/17.

Alameda County Sales Tax Measure B

Measure B, Alameda County's half-cent transportation sales tax, was originally approved in 1986 to provide transportation funding for capital, local transportation, transit operations, and special transportation (paratransit) projects and programs. Voters reauthorized the half-cent sales tax in November 2000. The reauthorization also included funds for bicycle and pedestrian safety and transit center development.

Alameda County Vehicle Registration Fee

The Measure F Alameda County VRF Program was approved by the voters on November 2, 2010. The fee will generate about $11 million per year by a $10 per year vehicle registration fee. The VRF legislation identifies the following eligible project categories and proportional distribution amounts: LSR Funds (60 percent), Transit (25 percent), Local Transportation Technology (10 percent), and Bicycle and Pedestrian (5 percent).

Transportation Fund for Clean Air

TFCA is generated by a four-dollar vehicle registration fee, collected by the BAAQMD. Forty percent of the revenue generated by the fee is distributed to the counties it was collected. As the TFCA Program Manager for Alameda County, the Alameda CTC is responsible for programming the revenues received for Alameda County for the forty percent program. Eligible projects are those which result in the reduction of motor vehicle emissions, including, shuttles, trip reduction programs, bicycle projects, clean-air vehicles, alternative-fuel infrastructure, arterial management, and smart growth.

Proposition 1B

As approved by the voters in the November 2006 general elections, Proposition 1B enacted the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, authorizing $19.925 billion of state general obligation bonds for specified purposes. Proposition 1B includes funding for multiple programs, detailed in Table 16.

Table 16 — Proposition 1B Programs
To date, approximately $13.76 billion has been programmed to projects through the CMIA, TCIF, PTMISEA and TLSP programs.

Proposition 1B Program	Amount
Corridor Mobility Improvement Account	$4,500,000,000
Route 99 Corridor Account	$1,000,000,000
Trade Corridors Improvement Fund	$2,000,000,000
Trade Corridor Emission Reduction Account	$1,000,000,000
Port, Harbor, and Ferry Terminal Security Account	$100,000,000
School Bus Retrofit and Replacement Account	$200,000,000
State Transportation Improvement Program Augmentation	$2,000,000,000
Intercity Rail Improvement	$400,000,000
Public Transportation Modernization, Improvement, & Service Enhancement Account	$3,600,000,000
State-Local Partnership Program Account	$1,000,000,000
Transit System Safety, Security & Disaster Response Account	$1,000,000,000
Local Bridge Seismic Retrofit Account	$125,000,000
Highway-Railroad Crossing Safety Account	$250,000,000
State Highway Operations and Protection Program	$500,000,000
Traffic Light Synchronization Program	$250,000,000
Local Street and Road, Congestion Relief, and Traffic Safety Account of 2006	$2,000,000,000
Total	**$19,925,000,000**

Project Delivery

In light of the focus on project delivery for projects, the Alameda CTC has adopted an aggressive "Timely Use of Funds Policy." The policy applies to all funding programs administered by the Alameda CTC, including projects programmed in the STIP, federal STP /CMAQ and the TFCA program.

The policy defines a strategy for project delivery assistance and evaluation of extension requests. It includes the following provisions:

- The Alameda CTC will provide sponsors with consultant support in the implementation of projects. This support will include assistance in the development of a baseline schedule and on-call availability for project delivery questions.
- The Alameda CTC and the project delivery assistance consultant may host a project delivery workshop after the adoption of funding programs by the Alameda CTC . Attendance at this workshop may be mandatory for project sponsors and would provide an overview of the program specific requirements for project delivery.
- The policy establishes criteria for the evaluation of reprogramming and extension requests. These requests will be evaluated based on the nature of the circumstances causing the delay, the sponsor's adherence to the baseline schedule and previous milestones, and the sponsor's ability to meet future project delivery deadlines.
- Any project sponsor that fails to meet a timely use of funds deadline that results in a loss of programmed funds to Alameda County will be penalized in a future state or federal funding cycle an amount equal to the funds that were lost to Alameda County.

The complete Timely Use of Funds Policy is included as Appendix H.

THE CIP

The 2011 Alameda County Capital Improvement Program covers a 6-year period (fiscal year 2011-12 to 2016-17) and comprises the following:

- Major capital projects and rehabilitation projects programmed in the 2012 STIP and Federal Funding Act extensions; and
- Other major highway, transit and local projects intended to maintain or improve the performance of the CMP network.

The projects in the CIP are linked to the vision and projects presented in the 2008 CWTP. The CIP projects are a subset of the 25-year plan either as a specific capital project or from funding set aside to cover categories of projects, including maintenance and rehabilitation of local streets and roads, transit capital replacement, bicycle and pedestrian improvements, and operational improvements. In order to assure consistency with regional transportation and air quality goals, Alameda County's priorities for state and federal funding are developed to be consistent with MTC's programming policy.

The CIP includes projects anticipated to assist in maintaining the level of service and performance standards of the CMP. Funding for all projects, however, has not been secured. Some projects shown in the CIP may need supplemental funding from other sources or may be submitted for state/federal funding consideration in future years. Figure 15 describes the process for soliciting, evaluating and selecting projects for state and federal funding.

The Alameda CTC is exploring sources of new revenue for transportation facilities and services considered in the CWTP. Revenue enhancement is a critical component of the plan; the transportation

need over the next 25 years exceeds available revenues. The Alameda CTC will support new revenue sources which best meet the goals of the long-range transportation plan and CMP. These revenue sources could include a regional, state or federal gas tax increase, an extension and/or augmentation of the existing transportation sales tax, or a bridge toll increase. The CMP law itself suggests another possible funding source—traffic impact fees.[38] The Tri-Valley Transportation Council including the cities of Livermore, Dublin and Pleasanton and Alameda County has developed a sub-area traffic mitigation fee. The Council has adopted an Expenditure Plan identifying the projects to be included in the final fee and has begun implementation. The city of Livermore also adopted a traffic-mitigation fee in 2001 to fund regional transportation improvements in the city of Livermore.

Table 16 lists the Alameda County projects recommended for funding in the 2012 STIP. These projects have been screened for consistency with the CWTP. The 2012 STIP is scheduled to be approved by the CTC in April 2012.

Table 17 contains Major Capital Projects and Rehabilitation Projects programmed in the 2010 STIP, with Federal funds, Measure B, Proposition 1B and other major highway, transit and local projects intended to maintain or improve the performance of the CMP network.

The CMP law requires biennial updating of the CIP. In order to update the program, each city, the county, Caltrans, the Port of Oakland, each transit operator and other project sponsors must, by February 1 of each odd numbered year, submit to the Alameda CTC a list of projects intended to maintain or improve the level of service on the designated system and to meet transit performance standards.

[38] Section 65089(b)(4)

Figure 15 —Process for Selecting Projects for State and Federal Funding

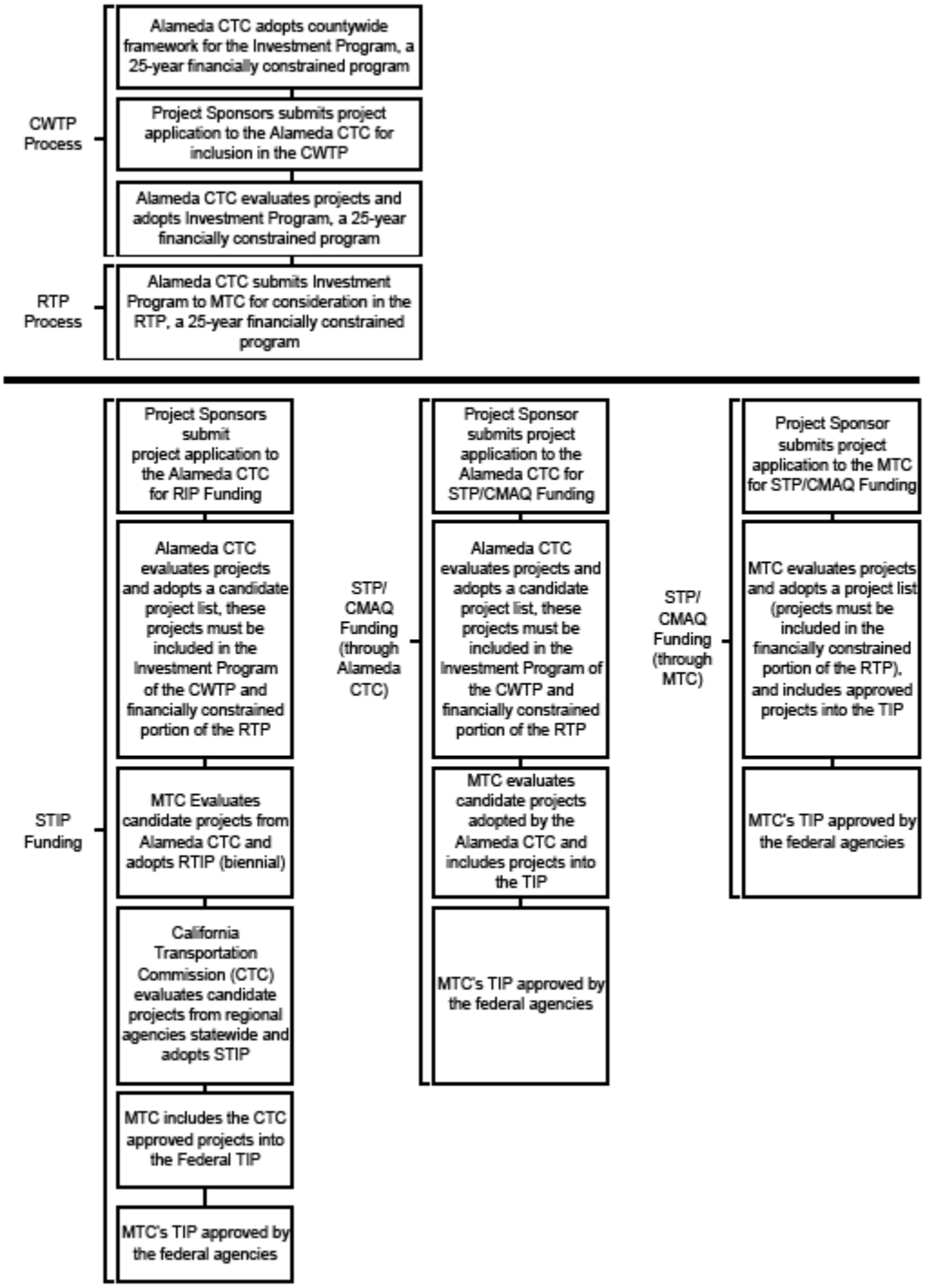

Table 17 — Projects Recommended for Funding in the 2012 STIP ($x1,000)
Table 17 reflects the 2012 STIP program approved by the Alameda CTC Board on October 27, 2011.

Forthcoming

SPONSOR	PROJECT	12-13	13-14	14-15	15-16	16-17	TOTAL

Table 18 — 2011 Capital Improvement Program

Table 18 shows the Major Capital Projects and Rehabilitation Projects programmed with STIP, Federal Transportation Act, Proposition 1B, Measure B, VRF, TFCA, CMA TIP and other funds intended to maintain or improve the performance of the CMP network.

		PROJECT FUNDING ($ X 000'S)			
Sponsor	Project Name / Description	Federal	State	Local	Total
Lump Sum Projects					
All Alameda Jurisdictions	Roadway Capital Investment	48,459	15,213	93,067	158,739
All Alameda Jurisdictions	Roadway Rehabilitation Investment	19,624	53,267	59,266	132,157
All Alameda Jurisdictions	Roadway Operations Investment	4,345	12,400	17,851	34,596
All Alameda Jurisdictions	Bicycle Pedestrian	32,573	19,760	51,591	123,124
All Alameda Jurisdictions	Transit Capital Replacement	132,730	18,743	104,596	256,069
All Alameda Jurisdictions	Other Projects	55,970	7,371	5,328	68,669
Individual Project Listings					
Roadway Capital Investment					
Alameda CTC	I-80/Gilman Interchange Improvements (Project Development only)	1,080		300	1,380
Alameda CTC	I-580 Eastbound Aux Lane	225	26,552	4,660	39,937
Alameda CTC	I-580 Eastbound HOT Lane	7,500		11,500	19,000
Alameda CTC	I-580 Westbound HOV Lane	6,615	135,100	29,379	171,094
Alameda CTC	Westbound I-580 Auxiliary Lane from Airway Boulevard to Fallon Road			5,040	5,040
Alameda CTC	East-West Connector in North Fremont and Union City		9,300	180,700	190,000
Alameda CTC	I-580 Corridor ROW Preservation/ Roadway Capital Investment	95,000	4,700	21,000	120,700
Alameda CTC	680 HOT Lane	235	795	715	1,745

Sponsor	Project Name / Description	PROJECT FUNDING ($ X 000'S) Federal	State	Local	Total
Alameda	Broadway Jackson		3,000	8,101	11,101
Caltrans	SR 24 Caldecott Tunnel 4th Bore # 1. Near Oakland, on SR 24, 2-lane 4th bore.	100,657	113,382	158,718	372,757
Caltrans	SR 24 Caldecott Tunnel Fourth Bore # 2. Realign WB SR24 to NB SR13 connector	4,700	20	10	4,730
Caltrans	Establish Highway Planting & Env Enhance. From East Temescal (Oakland) Separation to Gateway Blvd O/C			7,710	7,710
Caltrans	Sunol Grade HOV Corridor - NB HOV lane, ramp metering and auxiliary lanes		5,500	16,000	21,500
Caltrans	Mission Blvd/SR 880 I/C, Phase 1B/2 (widening Mission Blvd and replacing UPRR structures).	2,560		109,556	112,116
Caltrans/ Alameda CTC	I-880 SB HOV Lane Extension from Hegenberger Rd to Marina Blvd.	7,582	94,490	20,593	122,665
Emeryville	Powell Street Bridge Widening			4,775	4,775
Hayward	SR 238 Corridor Improvement project			117,300	117,300
Hayward	880-92 Reliever Route			27,037	27,037
Livermore	Isabel Avenue Widening (Route 84 Expressway between Ruby Hill Drive and Jack London Blvd)			130,000	130,000
Livermore	Isabel Avenue/I-580 Interchange, Phase 2 (Project Development only)			10,000	10,000
Livermore	W. Jack London Blvd. widen/extend between El Charro Rd. and Isabel Ave			28,000	28,000
Oakland	42nd/High St. Access Improvements to I-880		16,190	3,100	19,290
Oakland	Wake Avenue Roadway Improvements - OAB	4,200		1,000	5,200
Oakland	Maritime Street Reconstruction - OAB		14,600	1,460	16,060
Oakland	W. Grand and Maritime Intersection Improvements - OAB		3,500	4,050	7,550
Port of Oakland/Oakland	7th Street Grade Separation and Roadway Improvement project	110,000	110,000	3,250	223,250

Sponsor	Project Name / Description	PROJECT FUNDING ($ X 000'S) Federal	State	Local	Total
San Leandro/ Alameda CTC	Marina Bl/I-880 On-Off Ramp Improvements			31,800	31,800
San Leandro/ Alameda CTC	I-880/SR 112 (Davis St.) Interchange Improvements	600	9,600		10,200
Union City	Whipple Rd Widening & Enhancement, I-880 to Mission Blvd (Project Development & ROW only)				10,000
Roadway Rehabilitation					
See Lump Sum section for road rehabilitation investment total					
Roadway Operations Investment					
Alameda CTC	I-80 Integrated Corridor Mobility	3,243	77,850	12,958	94,051
Alameda CTC	I-880 North Safety and Operational Improvements at 23rd/29th	1,787	85,000	13,250	100,037
Alameda County	Patterson Pass Road Safety Improvements	800	3,200	2,000	6,000
Alameda County	Crow Canyon Road Safety Improvements		1,000	3,000	15,700
Alameda County	I-580/Strobridge Off-Ramp modification in Castro Valley		21,000		21,000
Alameda County	Vasco Road Safety Improvements (Phases 1 & 1A)	18,000	11,000	2,000	31,000
Alameda County	Vasco Road Safety Improvements (Phase 2)	25,000		2,000	27,000
Alameda County	Grant Line Road Safety Improvements		10,000		10,000
Bicycle Pedestrian					
Alameda County	Castro Valley Blvd. Streetscape Improvements Phase II		15,000	0	18,000
Alameda County	Coliseum BART to Bay Trail Connector		6,000	0	6,000
Alameda County	E.14th/Mission Pedestrian/Transit/Streetscape Improvements-Phases II & III		10,000	10,000	20,000
Alameda County	Hesperian Streetscape Improvements		13,100	1,500	14,600
Alameda County	Lewelling Blvd/East Lewelling Blvd. Improvements Phase II		11,700		21,500

Sponsor	Project Name / Description	PROJECT FUNDING ($ X 000'S) Federal	State	Local	Total
Alameda County	Sunol Area Circulation Improvements		10,000		10,000
Alameda County	Stanley Blvd Bike/Ped Improvements		3,100	13,900	17,000
Alameda County	Pedestrian and Streetscape Improvements in Cherryland/Ashland	3,100	5,000		8,100
Emeryville	I-80 Bike Ped Bridge at 65th Street - Construction Drawings			2,200	2,200
Oakland	MacArthur Blvd Streetscape	1,700		4,000	5,700
Union City	Bicycle/Pedestrian Connector over UPRR Tracks to Job Center				20,000
Transit Capital Replacement/ Expansion					
AC Transit	Revenue Vehicle Replacement	179,438	50,855	22,460	252,752
AC Transit	Zero Emission Bus Delta	148,625		29,725	178,350
AC Transit	Facilities rehabilitation and maintenance	50,000	10,000	112,541	172,541
AC Transit	Grand MacArthur BRT	2,880		720	3,600
AC Transit	Contra Flow Lanes/SF-Oak Bay Bridge			5,100	5,100
AC Transit	East Bay Bus Rapid Transit	75,000	50,000	90,600	215,600
AC Transit	Broadway College (Route 51) Corridor Improvements	29,040		7,260	36,300
BART	BART Oakland Airport Connector	130,700	167,900	185,500	484,100
BART	Warm Springs Extension		298,900	591,100	890,000
BART	BART Hayward Maintenance Complex			424,000	424,000
BART	Transit Capital Rehabilitation (Projects above Score 16)	1,529,307		382,327	1,911,634
BART	Transit Capital Shortfall	212,341		53,085	265,427

Sponsor	Project Name / Description	PROJECT FUNDING ($ X 000'S) Federal	State	Local	Total
BART	BART to Livermore Extension, Phase I: one station extension			446,000	446,000
BART	BART Bay Fair Connection			150,000	150,000
LAVTA	Atlantis Operations and Maintenance Facility	4,000	4,000	1,000	9,000
SJRRC/ACE	UPRR Capital Access Fee	8,688		2,172	10,860
SJRRC/ACE	Altamont Rail Corridor Development (Supporting HSR in new alignment)	3,207	6,074	2,000	11,281
Union City	Passenger Rail Station & Dumbarton Rail Segment G Improvement				180,000
Union City	Grade Separations at Decoto Neighborhood (Project development & ROW)				20,000
Union City Transit	Replacement Buses (10)	4,090	759	188	5,037
WETA	Rolling Stock (ferry vessels) Replacement/Rehabilitation	10,742		2,686	13,428
WETA	Facilities Expansion/Enhancement	2,600	29,720	525	32,845
Other Projects					
Alameda County	Castro Valley Transit Village				44,000
Alameda County	Fruitvale Avenue Railroad Bridge				11,000
Fremont	Irvington BART Station			120,000	120,000
Livermore	Livermore Village Infrastructure	2,500			2,500
Oakland	Lake Merritt Channel Improvements at 10th St.	55,323	2,000	14,000	71,323
Oakland	Snow Park/20th/Harrison Street			8,000	8,000
Oakland	MacArthur BART Transit Village Parking Structure, Site infrastructure, and Intermodal Access	1,608	31,650	18,800	52,058
Oakland	Coliseum BART Station Area Transit Village	18,885	8,485	7,650	35,020

Sponsor	Project Name / Description	PROJECT FUNDING ($ X 000'S) Federal	State	Local	Total
Port of Oakland	Outer Harbor Intermodal Terminal		131,889	142,407	274,296
San Leandro	Downtown San Leandro TOD	4,600		1,600	6,200
Union City	Union City Intermodal Station Phase 2	4,500	14,715		19,215

CHAPTER EIGHT

Conformance, Monitoring and Deficiency Plans

CONFORMANCE

The Alameda CTC is responsible for ensuring local government conformance with CMP. [39] The Alameda CTC compares the monitoring information provided by local governments to the requirements of the adopted CMP. Reasons for non-conformance could include inadequate monitoring information, inadequate deficiency plan development or failure to follow through with the program requirements for LOS, site design guidelines, capital improvements and land use analysis. In addition to these requirements, each city and the county must contribute its apportioned share to the support of the Alameda CTC's administrative costs.

If the Alameda CTC finds a local jurisdiction in non-conformance, it will notify the local jurisdiction, which then has 90 days to remedy the area(s) of non-conformance. If the local jurisdiction does not affect a remedy, the Alameda CTC will notify the State Controller to withhold the Proposition 111 fuel tax funds to that jurisdiction, and the jurisdiction will not be eligible to receive funding for projects through the federal Surface Transportation Program or Congestion Mitigation and Air Quality Program, or the State Transportation Improvement Program.

If, over the next 12 months, the Alameda CTC determines that the jurisdiction is in conformance, the withheld Proposition 111 funds will be released. If after the 12-month period the city or County has not conformed, the withheld Proposition 111 funds will be released to the Alameda CTC for other projects in Alameda County of regional significance included in the CMP or deficiency plans.

The Alameda CTC is responsible for ensuring local government conformance with four elements of the CMP:

- LOS Standards [40]
- Trip Reduction Program
- Land Use Analysis Program
- Payment of membership dues

Level of Service Standards

Local governments are accountable for meeting LOS standards as described in Chapter 3. If such standards are not met, a deficiency plan must be developed, which should describe how the adopted LOS

[39] If the city of Oakland is found to be out of conformance, the Port of Oakland's projects will be treated as a city of Oakland project for purposes of CMP requirements and state statutes.

[40] California Government Code Section 65089.3

standards at the deficient segment or intersection will be met, and how LOS and air quality improvements will be achieved.[41]

Travel Demand Management Element

Local jurisdictions must adopt site design guidelines as described in Chapter 5, Travel Demand Management Element and implement congestion-reducing capital projects to meet TDM requirements. The site design guidelines must enhance transit/pedestrian/bicycle access. Each jurisdiction must submit a Site Design Guidelines Checklist by September 1 of each year specifying that they have adopted and are implementing such guidelines to encourage the use of alternative modes of travel.

Further, they must undertake capital improvements that contribute to congestion management and emissions reduction. Each jurisdiction is required to participate in the Transportation Fund for Clean Air, Surface Transportation Program, Congestion Mitigation and Air Quality Program and other funding programs and to submit projects that support bicycle, pedestrian, transit or carpool use. Details are provided in Chapter 5. See Appendix E for the TDM Checklist.

Land Use Analysis Program

The Alameda CTC is required to develop a program that will analyze the impacts and determine mitigation costs of land use decisions on the regional system. Local governments are responsible for implementation of the program. The program approach is described in Chapter 6, Land Use Analysis Program.

Local jurisdictions are responsible for approving, denying, or altering projects and land-use decisions and are required to determine land-development impacts on the Metropolitan Transportation System and formulate appropriate mitigation measures commensurate with the magnitude of the expected impacts.

Capital Improvement Program

The Alameda CTC is required to prepare and biennially update a CIP aimed at maintaining or improving transportation service levels as described in Chapter 7, Capital Improvement Program. Each city, the county, transit operators and Caltrans will provide input to these biennial updates.

MONITORING

Monitoring provides feedback to determine whether the CMP's objectives are being met. The system performance data collected in the monitoring process can be used to adjust either the CMP or the actions of the local governments to meet legislative requirements. Monitoring also provides information that can be used to:

[41] California Government Code Section 65089.3(d)

- Update the countywide travel model and database;
- Adjust TDM measures, transit standards and LOS standards; and
- Determine whether it will be necessary for a local government to develop a deficiency plan.

Table 19 outlines the schedule and basic requirements for monitoring that each jurisdiction should undertake to document to the Alameda CTC that it conforms to CMP requirements. Further action by the Alameda CTC may be necessary to develop rules, procedures and other data requirements for monitoring and conformance.

LOS Standards

The Alameda CTC currently monitors LOS standards. If the cities, county or Caltrans assume this responsibility, monitoring may be accomplished through a self-certification process involving the local jurisdictions and/or Caltrans and the Alameda CTC. In this event, the responsible agency will annually monitor the LOS on segments of the CMP-network under its jurisdiction. Where a segment falls within two or more jurisdictions, the jurisdiction with the greatest segment mileage is responsible for monitoring the segment. If the local jurisdictions choose to conduct monitoring of LOS on CMP roadways, the process described below shall be followed.

The jurisdiction must conduct p.m. peak period (4 p.m. to 6 p.m.) and a.m. peak period (7 a.m. to 9 a.m.) travel-speed sampling on a non-holiday Tuesday, Wednesday or Thursday and analyze LOS based on that data consistent with the methods for determining LOS outlined in the Chapter 3, LOS Standards. Studies on the impact of proposed development may supply some of the data (provided the sampling is done during the timeframes specified above), thereby reducing the need for data collection.

For data collection, a test car is driven six times in each direction on all CMP-network. For roadway segments found to consistently operate at LOS A or B, the frequency may be adjusted later. More than six test car runs are performed on roadway segments operating at LOS E or F because a greater range or fluctuation in data typically occurs. Test car runs will be repeated biennially. Monitoring the Tier 2 network and a.m. peak monitoring for both Tiers 1 and 2 are for informational purposes only.

Table 19 — Conformance and Monitoring
Schedule of Local Government and Transit Operator Requirement

Designated Roadway System (Cities/County)

- By May 31, 2013 submit a list of potential CMP-designated routes based on Spring 2013 24-hour traffic counts for Tier-1 roadways and based on meeting the criteria for the Tier-2 network.

Roadway LOS Standards (Alameda CTC)*

- Biennially in even numbered years - Monitor the level of service on the designated system and report to the CMA by May 1 of each year relative to consistency with the adopted standards.

Performance Element (Alameda CTC/Transit Operators/Cities/County)

- By June 1 of each year - By submitting its short-range transit plan, report to the CMA relative to attainment of the established standards.
- As part of this report, identify the resources necessary to continue to maintain this transit performance level during the succeeding five years.
- August 1 of each year - Submit available transportation performance measurement data to Alameda CTC for use in the Annual Transportation Performance Report.

Trip Reduction and Travel Demand (Alameda CTC)

- By September 1 of each year - Submit the completed Site Design Guidelines Checklist to the Alameda CTC certifying that the Guidelines have been adopted and implemented.

Land-Use Analysis Program (Cities/County)

- By September 1 of each year - Demonstrate to the Alameda CTC that the program is being carried out.

Capital Improvement Program (Cities/County/Transit Operators/Caltrans/Port of Oakland/Others)

- By February 1 of each odd numbered year - Submit a list of projects intended to maintain or improve the level of service on the designated system, and to maintain transit performance standards. The TDM Element requires that local jurisdictions consider inclusion in the CIP, projects which support alternative modes.

* The Alameda CTC is currently monitoring level-of-service standards. If the cities, county or Caltrans assume responsibility, monitoring will be accomplished through a self-certification process involving the local jurisdictions and/or Caltrans and the Alameda CTC. See Chapter 3 for details relating to methods, frequency, etc.

Performance Measures

Although there are no statutory requirements regulating performance element monitoring, the Alameda CTC intends to continue preparing a transportation performance report annually. The report will summarize current performance data, highlight any significant changes in performance and provide broad

analyses of the results and any implications for policy and investment decisions made by the Alameda CTC.

DEFICIENCY PLANS

Deficiency plans provide a method for local governments to focus on areas where congestion problems are keeping system performance from meeting adopted standards. They provide an opportunity to analyze the causes of the problems and determine whether they can be fixed by local improvements or if it would be best to employ measures that will improve overall system efficiency and air quality.

Deficiency plans also provide local governments the opportunity to give priority to system and non-capital mitigation methods to relieve congestion. The statutes specifically point to improved public transit service and facilities, improved non-motorized transportation facilities, HOV facilities, parking cash-out programs and transportation control measures.

In view of the poor economic conditions and lack of availability of funds for transportation improvements, this deficiency plan requirement places hardship on the local jurisdictions. As part of the 2011 CMP Update, Alameda CTC considered this issue and explored options to provide support to improving deficient segments. The Commission approved the intent to develop a policy for giving funding priority to the CMP segments declared as deficient and directed staff to develop a specific approach. Based on the input received from the jurisdictions on this issue, it is recommended that in the evaluation process for funding, priority consideration be given to projects that would improve the performance of deficient segments through approaches such as awarding additional points to those projects.

Requirements

The need for deficiency plans is identified following the biennial LOS monitoring of the CMP roadway network. Deficiency plans are required when a CMP segment is not meeting the adopted LOS standard, after allowable exemptions. At a minimum, deficiency plans must include:

- Identification and analysis of the causes of the deficiency.
- A list of improvements necessary for the deficient segment or intersection to maintain the minimum LOS otherwise required and the estimated costs of the improvements.
- A list of improvements, programs or actions (and estimates of their costs) that will measurably improve multimodal performance of the system and contribute to significant improvements in air quality.
- An action plan of the most effective implementation strategies to maintain the minimum LOS standards at the deficient segment, or to improve the current and future LOS and contribute to significant air quality improvements. The action plan must include implementation strategies, a specific implementation schedule and a description of its funding and implementation strategies. Special consideration for state or federal requirements must be taken into account when determining

the feasibility of the action plan. Improvements funded through the CMP Capital Improvement Program, whether having local or system impact, must not degrade air quality.

Types of Deficiency Plans

There are two types of Deficiency Plans that can be developed depending on the needs of the local jurisdiction(s).

Localized Deficiency Plan

This type of plan is appropriate for addressing transportation impacts to a single CMP segment or roadway that has been identified as or anticipated to become deficient based on the LOS Monitoring. This plan will focus on analyzing the cause of deficiency by including the immediate surrounding area as the project area and identifying the list of improvement or mitigation measures in the action plan.

Areawide Deficiency Plan

An Areawide Deficiency Plan is appropriate for addressing transportation impacts to more than one CMP roadway in a larger geographic area that is likely not able to be mitigated back to conformance within the CMP LOS standards if considered within a localized area individually.

Guidelines

In January 1993, the Alameda CTC Board approved deficiency plan guidelines. The guidelines, which were developed with significant input from ACTAC, describe the process, timelines and acceptable methodologies for jurisdictions to use in developing deficiency plans. The full text of the guidelines can be obtained by contacting the Alameda CTC offices. The current deficiency plan guidelines do not include specifications for Areawide Deficiency Plans. The guidelines will be updated by summer 2012, prior to completion of 2012 LOS Monitoring Study, to incorporate the specifications for the development of Areawide Deficiency Plans.

Approval Process

Local governments are required to adopt deficiency plans at a “noticed” public hearing—one for which legal notices have been advertised. Local governments should provide sufficient notice of their intention to adopt deficiency plans to allow for members of the public to review and comment on it. Copies of the plans should be made available for review by interested agencies, groups and citizens.

After the local government has adopted the deficiency plan, it is forwarded to the Alameda CTC. The Alameda CTC must hold a noticed public hearing within 60 days of receiving the adopted plan, at which time it may either accept or reject the deficiency plan in its entirety. The Alameda CTC cannot modify the deficiency plan. The Alameda CTC will use the information provided by the program monitoring reports and consider the following items when reviewing deficiency plans:

- Consistency with the CMP, CWTP, RTP 2035, RTIP, general plans and air quality plans;
- Adequacy of the deficiency analysis;

- Effectiveness of proposed improvements;
- Linkage of proposed improvements to LOS change; and
- Impacts of proposed plans to other segments of the regional system.

The Alameda CTC will seek the input of local agencies during the review of deficiency plans. If the Alameda CTC rejects a deficiency plan, it must give a clear statement as to the reasons for rejection and should provide recommendations for improvements.

Local Government Responsibilities

Local governments are responsible for preparing and adopting deficiency plans—proposed methods for bringing areas that do not meet LOS standards up to par. However, they will need to consult with the Alameda CTC, Caltrans, local transit providers and BAAQMD as they prepare their deficiency plans. Local public-interest groups and members of the private sector may also have an interest in the development of deficiency plans.

During the process of developing the plan, the local agency will need to consider whether it is possible to make physical improvements to the deficient segment. It may not be possible to do so for a number of reasons, including cost, availability of real estate, public opposition and air quality plan conflicts.

In developing the deficiency plan, both local and system alternatives must be considered and described. Local governments and the Alameda CTC should examine the impact of the proposed deficiency plan on the CMP system. An action plan to implement the chosen alternative must also be provided.

Multi-jurisdictional Deficiency Plans

If more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in developing a deficiency plan to be adopted by all participating local jurisdictions. The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other local jurisdictions that have an impact on the system.[42]

Policies on Multi-Jurisdictional Deficiency Plan

- Jurisdictions must participate if traffic to or from that jurisdiction, either an origin or destination at the deficient segment, represents 10 percent, as estimated by a Alameda CTC-certified model, of the capacity of the freeway/roadway.

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[42] The Port of Oakland is considered a governmental subdivision of the city of Oakland. Should a deficiency occur on a segment within the city of Oakland, the city shall be responsible for preparing the deficiency plan. The Port's participation in the deficiency plan process shall be agreed upon by the city of Oakland and the Port prior to the preparation of the deficiency plan.

- In order to eliminate any gaps and to ensure continuity in the planning process, a jurisdiction that does not meet the 10 percent threshold shall be required to participate in the deficiency plan process if it is surrounded by jurisdictions which meet the threshold for participation.
- All participating jurisdictions shall adopt identical deficiency plan action plans.
- The percent contribution of traffic specifically does not imply a commensurate financial share of the Deficiency Plan Action Plan.
- All owners/operators of a deficient segment of freeway or roadway along with transit operators shall be invited to participate in the deficiency plan process.
- A jurisdiction shall have the right to appeal as depicted in the Multi-jurisdictional Deficiency Plan Appeal Process (Figure 13).
- For purposes of determining the capacity of a freeway or roadway the following criteria shall be used for multi-jurisdictional deficiency plans unless a local jurisdiction can demonstrate an alternative capacity:
    - Freeways - 2,000 vehicles/lane/hour;
    - 2-lane highways - 1,400 vehicles/lane/hour; and
    - Arterials - 800 vehicles/lane/hour.

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 outlined above, that jurisdiction shall be considered in non-conformance with the CMP.[43]

Local jurisdictions outside Alameda County that contribute significantly to a deficiency plan will be invited to participate, but cannot be compelled to do so.

Conflict Resolution

Resolution of conflicts among local jurisdictions may be necessary during the multi-jurisdictional deficiency plan process. The ACCMA's adopted appeal process (see Appendix B-Alameda CTC Committees and Administration), shall be used for any unresolved conflicts associated with multi-jurisdictional deficiency plans.

Approved or Required Deficiency Plans

Table 19 shows the roadway or ramp segments that have required deficiency plans and their implementation have been completed. Table 20 shows the roadways segments that have required the deficiency plans, which are under implementation. Other Corridor Plans/Strategic Plan developed by Alameda CTC that can be used as a basis for future Deficiency Plans include the following.

[43] California Government Code Section 65089.4(e)

San Pablo Avenue/I-80 Corridor Plan

On April 24, 1997, the Alameda CTC Board recognized the San Pablo/I-80 Corridor Plan as a basis for a future deficiency plan. It would apply to the CMP network within the following sub-area of the San–Pablo study limits, including the freeway ramps and future University Avenue/I-80 HOV ramp: Alameda/Contra Costa County line (north); 14th Street to western boundary of Mandela Parkway, extending north to the eastern I-80 right-of-way (south); Martin Luther King Jr. Way/San Pablo Avenue, Marin, east side of San Pablo Avenue (east); and the eastern boundary of the I-80 right-of-way (west).

I-880 Strategic Plan

On January 20, 2000, the Alameda CTC Board similarly recognized the I-880 Strategic Plan as a basis for a future deficiency plan. The plan would apply to the CMP-network within the study limits: the I-880 Cypress Freeway connection (north); SR-237 in Milpitas (south); I-580/SR-238 and I-680 (east); and the San Francisco Bay (west).

Tables 20 and 21 show the most recent status of Deficiency Plan progress.

Table 20—Completed Deficiency Plans

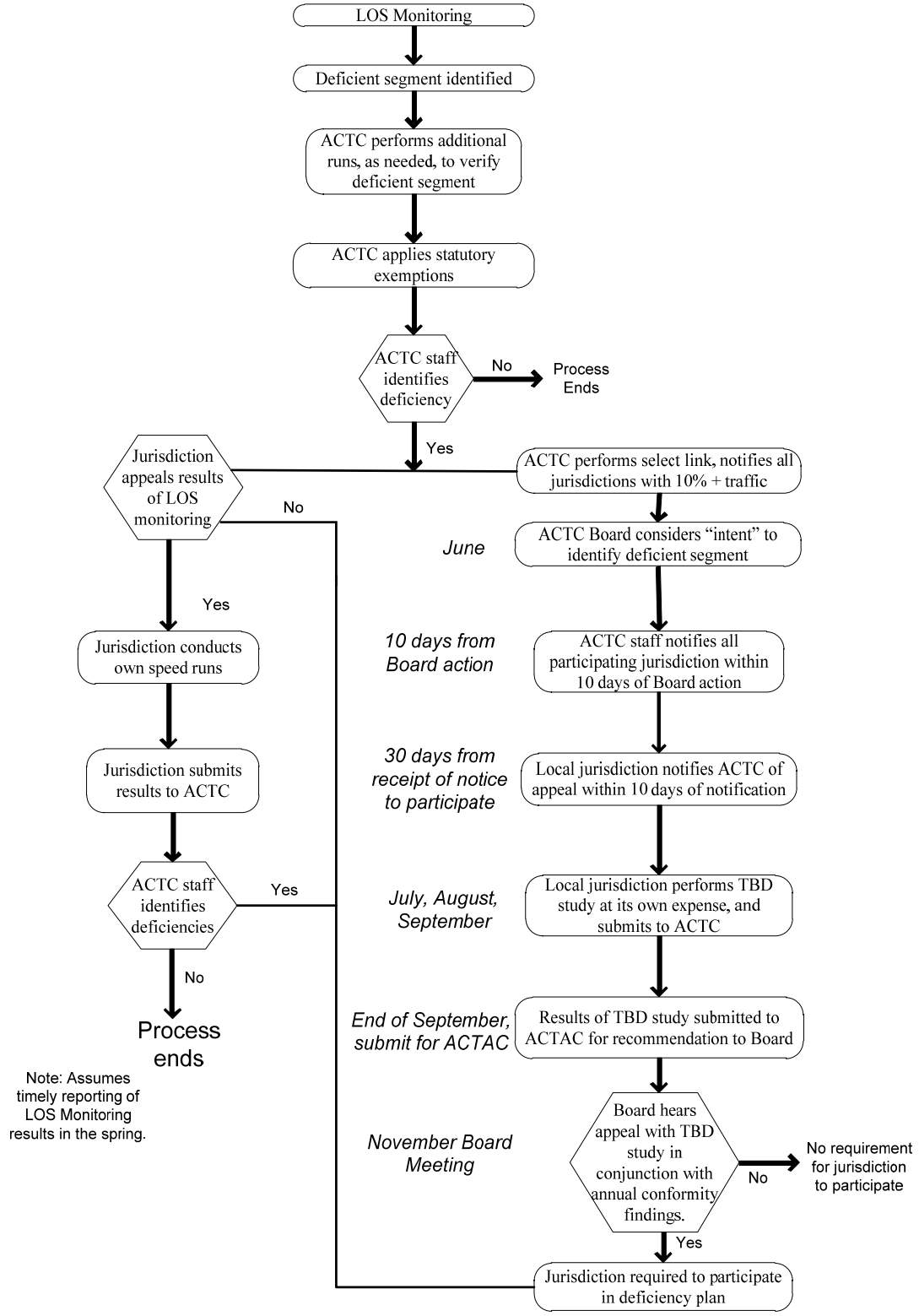
Segment	Jurisdiction	Year Req'd/Approval	Implementation Status
WB I-580, from Center Street to I-238.	Alameda County (participants: Oakland, San Leandro, Dublin, Pleasanton, Livermore)	2000/2001	Implementation completed in 2010 and LOS restored.
NB San Pablo Avenue, from Allston Way to University Avenue.	Berkeley (participants: Albany, Oakland, Emeryville)	1998/1999	Deficiency Plan has been implemented, LOS Standard restored.
SB University Avenue, from San Pablo Avenue to 6th Street.	Berkeley	1998/1999	Deficiency Plan has been implemented, LOS Standard restored

Table 21—Deficiency Plans Under Implementation

Segment	Jurisdiction	Year Req'd/Approval	Implementation Status
EB Mowry Avenue, from Peralta Boulevard to SR-238/Mission Boulevard.	Fremont (participant: Newark)	2000/2001	Short-term mitigation, widening Mission Boulevard from four lanes to six lanes, was completed in 2005.

Segment	Jurisdiction	Year Req'd/Approval	Implementation Status
The freeway connection between SR-260 eastbound (Posey Tube) and NB I-880.	Oakland (participating jurisdictions: Berkeley, Alameda)	1998/1999	Deficiency Plan is being implemented.
NB SR 185 (14th St) between 46th and 42nd Avenues	Oakland (Participating jurisdiction: Alameda)	2008/2009	Deficiency Plan is being implemented.

Figure 16 —Multi-jurisdictional Deficiency Plan Appeal Process



CONSISTENCY WITH REGIONAL TRANSPORTATION PLAN

The 2011 CMP conforms to MTC's criteria for consistency with the RTP Transportation 2035. The projects and programs shown in the CIP and the Performance Element meet the following three principles and goals of the RTP:

Principle	Goal
Economy	Maintenance & Safety Reliability Efficient Freight Travel Security & Emergency Management
Environment	Clean Air Climate Protection
Equity	Equitable Access Livable Communities

Additional consistency requirements are identified in the appropriate chapters in the CMP. Conformance with the CMP/MTS network can be found in Chapter 2; Resolution 3434 Regional Transit Expansion Program is acknowledged in Chapter 6; regional programming policies and principles are found in Chapter 7; and travel demand model consistency is found in Chapter 9. Table 22, in Chapter 10, summarizes consistency requirements and the 2011 CMP's compliance.

NEXT STEPS

- By summer 2012 prior to completion of 2012 LOS Monitoring Study, deficiency plan guidelines will be updated to incorporate the specifications for the development of Areawide Deficiency Plans.
- Conformance with RTP will be updated to incorporate the RTP (One Bay Area Plan) that will be adopted in spring 2013.

CHAPTER NINE

Database and Travel Model

Every CMA, in consultation with the regional transportation planning agency (MTC in the Bay Area), cities and the county, must develop a uniform database on traffic impacts for use in a countywide travel model.[44] The Alameda CTC in its role as the CMA must approve computer models used for sub-areas, including models used by local jurisdictions for land use impact analysis. All models must be consistent with MTC's modeling methodology and databases.

The purpose of this requirement is to bring a uniform technical basis for analysis to congestion management decisions. This includes consideration of the benefits of transit service and TDM programs, as well as projects that improve congestion on the CMP designated system. The modeling requirement is also intended to assist local agencies in assessing the impacts of new development on the transportation system.

The Alameda countywide travel model is an essential tool to the CMP planning process. The CMP is a forward-looking program, espousing a philosophy of early action to prevent conditions from deteriorating. The model allows the Alameda CTC to anticipate and forecast the potential impacts of local land development decisions on the Metropolitan Transportation System.

FEATURES OF THE UPDATED COUNTYWIDE MODEL

The most recent update of the Alameda Countywide Travel Demand Model completed in May 2011 updated the land use assumptions to ABAG's Projections 2009 and revised several features. The following are the key elements of the updated countywide model:

- It uses Cube software.
- The base year of the model is 2000 and forecast years are 2005, 2020 and 2035.
- Five time periods are included: a.m. peak 1-hour; p.m. peak 1-hour; p.m. peak 2-hour; p.m. peak 4-hour; and daily.
- It contains 2,692 traffic analysis zones (TAZ)
- It includes more detailed road and transit networks and these networks are compatible with GIS.
- It incorporates the 2000 census and ABAGs' Projections 2009 land use and socioeconomic data with input from the local jurisdictions.
- Regarding other model features, the updated model contains:

[44] California Government Code Section 65089(c)

- San Joaquin County as an internal area in the countywide model through buffer zones. San Joaquin County land uses incorporated are based on the San Joaquin County travel forecast model as of February 2010.
- Other Bay Area Counties in more detail by including or retaining MTC's Regional Traffic Analysis Zones for these counties.
- Expanded MTC's home-work mode choice model by including additional details on transit modes. Transit/walk access and Transit/drive access sub-modes are divided into further sub-modes: transit/walk access mode was divided into local bus, express bus including ferries, light rail, commuter rail and BART; transit/drive access mode into park/ride and kiss/ride.
- Ramp meters and HOV bypass lanes at each freeway ramp which has or is planned to have ramp metering.
- A more detailed truck forecast model within the travel demand model.
- Future capacity-constrained peak hour traffic forecasts in addition to peak hour traffic forecasts based on unconstrained demand.
- Addition of greenhouse gas calculation tool.

Specific features and assumptions for various components of the model can be found in the model documentation dated August 2011 can be found the Alameda CTC website.

LAND USE DATABASE DEVELOPMENT

The database developed for use with the countywide travel model is based on data summarized in ABAG's Projections 2009 and incorporated into the MTC's regional model TAZs (RTAZ). The land use and socioeconomic data was allocated to Alameda CTC's countywide model TAZs based upon review and redistribution by the Alameda County jurisdictions. The jurisdictions totals generally stayed within one percent variation from the ABAG totals, but were permitted to redistribute if appropriate. Countywide totals after redistribution remained within plus or minus one percent of ABAG county totals, as required by MTC. By aggregating the projections made for each zone, the Alameda CTC can produce projections of socioeconomic characteristics for unincorporated areas of the county, the 14 cities and for the four planning areas for Alameda County.

MODEL DEVELOPMENT

The framework established for the model encompasses the following components:

- Trip generation (forecast of the number of trips by traffic analysis zone);
- Trip distribution (distribution of forecast trips between each traffic analysis zone);
- Modal split of inter-zonal trips (distribution of trips by mode within each traffic analysis zone); and
- Assignment (forecast of trips originating or destined to external zones).

These are the typical model components found in any model whose purpose is to produce simulations of travel demand based on different assumptions about land use, demographic and transportation characteristics.

Development and validation of the model were predicated on the following concepts.

- Consistency, to the greatest extent possible, with the assumptions and procedures established and used by MTC to produce regional travel demand forecasts. More specifically, maintaining the same variables in the equations that comprise the trip generation, trip distribution and mode split components of MTC's travel demand model framework.
- Where necessary (in order to produce validated forecasts of travel on arterials or intra-county transit services), enhance the capacity of MTC's models by incorporating the simulation of certain types of travel not modeled by MTC (More specifically the addition of new transit sub modes).

The model was developed using the CUBE software developed by Citilabs, which is an interactive transportation planning program that produces numerical and graphic representations of travel supply and demand. The model has been structured to provide forecasting detail that adequately addresses the evaluation needs of both countywide and corridor-specific transportation strategies. The countywide model has been developed and validated by:

- Defining a graphic zone structure detailed enough to depict changes in land use and demographics that would affect travel demand on arterials and intra-county transit systems; and
- Establishing highways and transit networks detailed enough for those types of travel demand.

In addition, the model incorporates land use and demographics of the nine-county Bay Area based on the ABAG's' Projections 2009 and for San Joaquin County from the San Joaquin County Travel Model. This allows the model to produce travel demand forecasts that incorporate influences of regional travel demand on transportation facilities in Alameda County. Travel originating or terminating outside the nine-county Bay Area and San Joaquin County is also taken into account, based on the data from the Caltrans statewide model.

PLANNING AREAS

Alameda County has been subdivided into four areas of analysis, or planning areas. Planning areas are analogous to four of the five MTC super districts in Alameda County.[45] The planning areas are defined as follows:

[45] MTC superdistricts 18 and 19 comprise Planning Area 1, while superdistricts 17, 16 and 15 equate to Planning Areas 2, 3 and 4, respectively.

- Planning Area 1 consists of the cities of Albany, Berkeley, Emeryville, Oakland, Alameda and Piedmont;
- Planning Area 2 consists of San Leandro, Hayward, and the unincorporated areas of Castro Valley and San Lorenzo;
- Planning Area 3 consists of Union City, Newark and Fremont; and
- Planning Area 4 consists of Pleasanton, Dublin, Livermore and the unincorporated areas of east County.

TRAFFIC ANALYSIS ZONE SYSTEM

The traffic analysis zone structure developed for the countywide travel model is a refinement of the 1,454 zone structure MTC uses for their nine-county regional travel model. Traffic analysis zones are small geographical subdivisions of a region. Socioeconomic variables, such as households and employment data, are collected at the traffic analysis zone level for input into the travel demand models. Ultimately, the auto vehicle trips and number of individual trips on transit ("person trips") will be assigned from each traffic analysis zone onto the highway and transit networks.

The countywide model required disaggregating or splitting the MTC zones into more and smaller traffic analysis zones. Within Alameda County, MTC's zone system was refined to better suit the more detailed highway and transit networks in the countywide model. The new traffic analysis zones nest within the larger MTC zones. This ensures accurate disaggregation of MTC's person trip tables to the traffic zones, and allows direct comparisons between the Alameda countywide model outputs and those of the MTC model. As a result of this zone refinement effort, the new model contains the following 2,692 TAZs:

- 1405 TAZs within Alameda County
- 159 TAZs in buffer areas (52 in West Contra Costa County, 48 in South Contra Costa County, 26 in San Joaquin County, and 33 in Santa Clara County).
- 1097 TAZs in the remainder of the Bay Area same as the MTC's RTAZs
- 31 Gateway Zones

Maps of the 1405 TAZs within Alameda County, grouped by the four planning areas, are available on the Alameda CTC website.

TRANSPORTATION SYSTEM NETWORK

The countywide model road network includes the following road types:

- Freeways
- Freeway ramps and metered ramps

- State routes
- Arterial streets
- Collector streets that carry traffic through neighborhoods to adjacent neighborhoods
- Streets that are likely to be analyzed in a local traffic study

The transit network in the countywide model was developed from the MTC model network with refinements to match the additional zonal detail within Alameda County. Highway networks by planning areas are available at the Alameda CTC website.

MODEL RESULTS

The model produces the following countywide travel information:

- Trip Generation
- Trip distribution
- Modal split of inter-zonal trips for home-based work trips and total trips
- Forecast of trips originating or destined to external zones
- Peak hour LOS and traffic volume projections by segment (2000, 2005, 2020 and 2035)
- Directional miles of congestion, by type of facility (arterial, freeway)
- Mean highway speed
- Transit Accessibility
- VMT, by facility and by LOS
- Travel times for selected O-D pairs
- GHG emission for primary pollutants

Model output traffic volumes for all roadway segments for all horizon years and all time periods by planning areas are posted on the Alameda CTC website.

MODEL ADEQUACY

The model has been tested and validated for 2000[46] conditions. The validation procedure compared the model outputs to observed traffic volumes and transit ridership data. During validation, adjustments were primarily made to model inputs, such as the road network and base year land uses, rather than calibrated parameters such as trip generation rates or distribution factors. Based on the model calibration, MTC consistency check, and the model validation, the following conclusions were made:

[46] It is anticipated that during the next model update the model base year will be updated to 2010 consistent with the most recent census.

- The countywide model is generally consistent with the MTC model in terms of numbers and types of trips, distribution between the Bay Area Counties, and travel modes
- The model estimates reasonable numbers of vehicles and transit riders to and from Alameda County
- The countywide model estimates 2000 base year traffic on most screen lines and major regional facilities at a level of accuracy sufficient to support evaluation of peak hour traffic patterns on the CMP network; for example, select link analysis.

NEXT STEPS

The model will be further refined, generally as part of the requirements to update the database to the latest ABAG Projections database. Further, it will be updated using the land use information and network characteristics that will be submitted periodically to the Alameda CTC by local jurisdictions as part of the land development impact analysis process of the Alameda CTC. Specific future updates to the countywide model will be to:

- Incorporate 2010 census data;
- Update the model base year from 2000 to 2010 to correspond with the 2010 census; and
- Change the long-term forecast year from 2035 to 2040.

CHAPTER TEN

Conclusions and Implementation Issues

The CMP has several interrelated elements intended to foster better coordination among decisions about land development, transportation and air quality.

CONCLUSIONS

Several conclusions can be reached about the CMP relative to the requirements of law and its purpose and intent. The CMP fulfills the spirit and intent, as well as the requirements of the law, because it:

1. **Contributes to maintaining or improving transportation service levels**.

The projects and programs contained in the CMP are a subset of the Capital Investment Program adopted in the Alameda County 2008 CWTP. The CMP can be viewed as the short-range implementation program for the CWTP. As the first step towards the year 2035 projects and programs, the CMP is making progress toward maintaining or improving transportation service levels.

2. **Conforms to MTC's criteria for consistency with *Transportation 2035***.

Table 20 lists MTC's consistency requirements for CMPs in the Bay region. The CMP has met all these requirements.

3. **Provides a travel model consistent with MTC's regional model**.

In June 2007 and in May 2011, the Alameda Countywide Travel Demand Model was updated to use the Cube platform and incorporates land use based on ABAG Projections 2009. This ensures consistency with the MTC model assumptions.

4. **Is consistent with MTC's Transportation Control Measures Plan**.

The transportation control measures plan has been incorporated in the BAAQMD's 2010 Clean Air Plan for the Bay Area as shown in Appendix E. The CMP includes many project types and programs identified in the plan. The Alameda CTC will work with the BAAQMD and project sponsors to define appropriate responsibility and timely implementation of these measures. It is therefore reasonable to conclude that the CMP is consistent with the Plan.

5. **Specifies a method for estimating roadway LOS consistent with state law**.

There are two approaches permitted by the law for assessing LOS. The CMP specifies using the 1985 HCM approach. As part of the 2013 CMP Update, a comparative analysis of 1985 and 2000 HCMs to the most recent 2010 HCM will be developed to transition to using the 2010 HCM for the CMP Level of Service standards.

6. **Identifies candidate projects for the RTIP and federal TIP which meet MTC's minimum requirements**.

The RTIP and federal TIP candidates listed in the CMP's CIP have been evaluated and all candidate projects conform to MTC's screening criteria.

7. **Developed in cooperation with jurisdictions and other interested parties.**

The 2011 CMP update process included circulation of proposed policy papers and draft documents to interested parties through regular mailings for ACTAC, the Planning, Policy and Legislation Committee and Alameda CTC Commission meetings as well as posting them on the Alameda CTC website. The mailing list included technical representatives of all cities in Alameda County, the county of Alameda, transit operators, the Port of Oakland, the BAAQMD, MTC, Caltrans and ABAG. In addition, the designation of the CMP network will be coordinated with adjacent counties within the MTC region and is expected to be consistent with those CMPs.

8. **Provides a forward-looking approach to transportation impacts of local land use decisions.**

The Land Use Analysis Program provides for consultation with the Alameda CTC early in the land development process. Early input will help ensure a better linkage between land use decisions and transportation investment.

9. **Considers the benefit of Green House Gas reductions in developing the CIP.**

GHG emission reductions are not yet required in either the Federal or State Clean Air Plans; however, the CMP considers the benefits of GHG reductions in the Land Use Analysis Program and in developing the CIP. The Land Use Analysis Program now identifies the Alameda CTC's Priorities for Climate Action Strategies to help reduce GHG emissions. These priorities will help guide the development of future projects and programs. When evaluating projects for the 2012 STIP, it is anticipated that the evaluation criteria include consideration of climate change impacts.

Table 22—MTC's Regional Consistency Requirements for CMPs

RTP Consistency
· Have the RTP goals and objectives been included in the CMP?
· Does the CMP include references to Resolution 3434?
CMP System
· Have all State highways and principal arterials been included?
· Are all state highways identified?
· Has the CMA developed a clear, reasonable definition for "principal arterials" as part of its submittal plan?

- Has this definition been consistently applied in the selection of arterials to include in the designated system? If not, why?
- How does the CMP-designated system relate to MTC's MTS in the *Transportation 2035*?
- Does the CMP System connect to the CMP Systems in adjacent counties?

Air Quality Requirements

- Does the CMP include locally implementable Federal and State TCMs, as previously documented and included in MTC's Transportation-2035, MTC Resolution 2131, and the BAAQMD's Bay Area 2010 Ozone Strategy?

Modeling Consistency

- Is the "base case" forecasting network limited to the approved TIP?
- Are "ABAG consistent" demographics used? If alternative demographics have been used in addition to the "ABAG consistent" forecasts, have the demographic inputs and travel forecasts been compared to the "ABAG consistent" based travel forecasts?
- Are the regional "core" assumptions for auto operating costs, transit fares and bridge tolls being used, or are reasons to the contrary documented?
- Does the forecasting model include transit and carpool use (through either a person trip generation model or a "borrowed share" approach)?
- Does the model produce trip distribution results that are reasonably consistent with those of MTC?
- Is the modeling methodology documented?

LOS Consistency

- Is LOS assessed using a methodology agreeable to MTC?

RTIP/TIP Requirements

- Are the proposed RTIP projects consistent with the RTP?
- Do the projects proposed for inclusion in the RTIP meet the minimum screening requirements established by MTC for the RTIP?

Process

- Has the CMP been developed in cooperation with all concerned agencies (i.e., transit agencies, applicable air quality district(s), MTC, adjacent counties, etc.?)
- Has the CMP been formally adopted according to the requirements of the legislation?

Note: Detailed requirements for regional consistency are outlined in MTC Resolution 3000, revised June 3, 2011. The supporting documentation can be obtained at the CMA Offices.

IMPLEMENTATION ISSUES

During this and previous CMP updates, several issues surfaced, requiring further Alameda CTC action. Some of these issues may also require action by the Legislature.

1. **Cost Exceeds Funding**

The Alameda CTC has identified the cost of maintaining or improving transportation service levels through the year 2035 as part of the 2008 CWTP. This cost is large and well beyond existing funding sources. Further statewide attention to transportation funding will be necessary, if the CMP law is to achieve its intended goal.

The CMP law also imposes significant costs on local government that are not uniform throughout the urbanized areas of the state. In southern California, existing transportation commissions are the designated CMAs. These commissions have funding resources available to them for their CMP not available in the Bay region. Consequently, a higher percentage of Proposition 111 fuel tax subventions will be devoted to CMP administration in the Bay region than in southern California. These inequities among different parts of the state may not have been intended by the author of the legislation (Assemblyman Katz).

With the passage of the federal ISTEA of 1991, Transportation Efficiency Act in 1997 and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005 new requirements have been placed on MTC relative to congestion management. MTC is passing funds through to the CMAs in the Bay region to assist in implementing the federal acts related to transportation funding. These funds, however, do not fully cover the cost of Alameda CTC's administration of its congestion management functions.

2. **Limited CMA Authority**

Funding programs, such as transit operating funds, most transit capital funding, the interregional road program, the highway rehabilitation program and the toll bridge program are outside the scope of the CMP. Caltrans administers the interregional road program and highway rehabilitation program. It is difficult for the Alameda CTC to fulfill the intent of the CMP legislation because so many programs are beyond its authority.

3. **LOS Responsibility**

CMP law indicates that Caltrans is responsible for monitoring LOS standards on the state highway system, if the CMA designates responsibility to Caltrans.[47] As state-owned facilities, it is reasonable to assume that the state is responsible. The Alameda CTC will continue to work with Caltrans on LOS monitoring to ensure that consistent LOS results can be maintained if the Alameda CTC delegates future monitoring responsibilities to Caltrans.

[47] Katz, Statutes of 1995

The CMP law also recognizes that responsibility for sustaining LOS standards on local roadways and the state highway system should be shared between the local government where the roadway is found and other local jurisdictions which contribute significant a percentage of traffic. This change in state law recognizes that other jurisdictions may be partially responsible for the roadway exceeding the standards and that local government has little authority over the state highway system. Some exemptions, such as interregional trips, have been built into the current law. But these exemptions do not deal sufficiently with the problem. Corridor-level planning may offer the most reasonable approach to this multi-jurisdictional problem and has been used successfully in the past to identify deficiencies and strategies to improve them. Staff will work with the Commission to identify future corridor studies to be done by the next CMP Update.

4. **Scope of the CMP-network**

The CMP-network is reviewed every four years, with the next review scheduled for 2013. However, State law does not provide incentives to local jurisdictions to add roadways to the CMP-network. In fact, there are significant disincentives to adding roadways that may in the future deteriorate to LOS F. Jurisdictions would be required to prepare a deficiency plan or risk losing Proposition 111 gas tax funds.

5. **Transportation revenue shortfalls**

State and federal transportation funding continues to be inadequate to address both capital and transit operating costs. The shortfalls may jeopardize the ability to maintain and improve transportation LOS. Worsening traffic congestion on the CMP-network will trigger requirements for local jurisdictions to prepare and adopt deficiency plans or risk losing Proposition 111 gas tax funds for local projects. They will be compounded by the requirements to implement SB 375-Redesigning Communities to Reduce Green House Gases, which is currently an unfunded mandate.

6. **Land Use Analysis Program**

The Alameda CTC will continue to improve the Land Use Analysis Program to make it meaningful, but not resource-intensive. The results of the MTC/Alameda CTC transportation and land use partnership will be amended into the CMP, as appropriate and future CMPs will incorporate any changes recommended as part of the current update of the CWTP and RTP where integration of land use and transportation is playing a key role because of SB 375 and the development of SCS

7. **CMP-Network Roadways**

A procedure and schedule for adding roadways to the CMP-designated system. Jurisdictions will review their roadways systems for routes that may meet the “Criteria for Inclusion of Principal Arterials.” For potential routes, each jurisdiction will conduct 24-hour traffic counts for a period including a Tuesday through Thursday of a typical week. Traffic counts should be taken around the first week in Spring 2013. In order to be in compliance with the CMP, each jurisdiction must submit potential CMP-designated routes to the CMA by June 30, 2013.

Additionally as part of the 2011 CMP Update, the Alameda CTC Commission reviewed the CMP roadways criteria and recommended a two-tier approach. The existing CMP roadways criteria was

originally adopted in 1991 and the CMP network based on that criteria was developed during the same year with the exception of addition of a segment of Hegenberger Road in Oakland in 2007. Since the land use and traffic pattern have changed since then, to reflect this change, Alameda CTC adopted a two-tier approach wherein the existing CMP roadways are categorized as Tier 1 network and it will be subject to CMP Conformity and roadways meeting a set of newly adopted criteria will be categorized as Tier 2 network and will be used only for informational monitoring.

8. **Congestion Pricing Strategies**

The Alameda CTC secured federal funding to evaluate, plan and implement a "value-pricing" demonstration project in the I-680 Corridor. The project was completed and opened to traffic in fall 2010. The legislation also approved a second HOT (Express) lane in the County. The Alameda CTC approved I-580 as a candidate corridor, and it is currently in design stage. As a first step, EB I-580 HOT lane was open to traffic in November 2010. The I-580 HOT lanes are anticipated to be open to traffic in 2014. Other strategies include:

- Off-peak transit fare discounts;
- Parking ticket surcharge by the Alameda County jurisdictions, with revenues devoted to transit; and
- Parking pricing in Berkeley

9. **CEQA Reform and need for multi-modal LOS**

The State Office of Planning and Research has initiated a revision of CEQA with respect to the analysis and mitigation of potential effects of greenhouse gas emissions. Revising CEQA to broaden the analysis and mitigation options to take into account trips made by other modes than automobile trips, such as walking, biking, and transit would facilitate TOD projects and the development of PDAs. Therefore, for the 2013 CMP, the Alameda CTC will work with its partners toward identifying a standard of multi-modal level of service to supplement existing service level methodologies.

10. **Implementation of SB 375 – Redesigning Communities to Reduce Greenhouse Gases**

Adopted in 2008, Senate Bill 375 – Redesigning Communities to Reduce Greenhouse Gases - mandates an integrated regional land-use and transportation planning approach to achieve targets for reducing greenhouse gas emissions from automobile/light trucks. MTC, the CMAs and local jurisdictions are required to find ways to provide more projects and programs that integrate transportation and land use and reduce GHG emissions. This requires new approaches to providing transportation infrastructure and services to improve mobility and ease congestion in Alameda County. The focus is on reducing VMT.

The Alameda CWTP, currently being updated, is attempting to meet the SB 375 requirements by placing increased level of emphasis on land use planning, transportation and sustainability. Also, the Alameda CTC has already developed Climate Action priorities detailing transportation strategies and is working with its partners to implement them.

11. **Parking Standards and Policies**

Parking for automobiles is a significant but under-recognized factor in the relationship between land use and transportation. With the support of local jurisdictions, the Alameda CTC plans to explore and review parking policies and standards as a way to develop parking management strategies as a land use tool for local jurisdictions to promote alternative modes and reduce greenhouse gases.

12. **Infill Development Areas**

In view of the sunset of the legislative exemption for Infill Opportunity Zones that support infill development and in view of the current efforts regarding the importance of the land use and transportation connection in the context of SB 375, as part of the 2011 CMP Update, the Alameda CTC explored ways of harmonizing policies, guidelines and regulation so that infill development is easier to implement. An issue paper was developed reviewing and identifying various policy and advocacy options available to support infill developments. The paper is attached as Appendix G – CMP Legislation and Infill Development Areas to this report. The analysis lays out several short term and long term measures that the Alameda CTC could pursue to promote infill development. The short term measures offer temporary relief through adopting flexible evaluation standards, broad scale congestion relief etc. while the long term measures include advocating for legislative exemption for existing infill development areas from the LOS standards; advocate for flexible LOS standards under CMP and CEQA; imposing multi-modal transportation impact development fees; and updating the conventional models for accurate estimate of trips by various modes. Collectively, these measures could facilitate a more integrated policy approach for infill development in Alameda County. Prior to the 2013 CMP Update, the Alameda CTC could explore the possibility of adopting the recommended short term and long term strategies to promote infill developments in Alameda County as described in the issue paper

13. **Mitigating impacts on cross county corridors or long corridors traversing jurisdictions**

Currently the CMP's Land Use Analysis Program does not have a mechanism in place for contribution of fair share for projects that would impact long travel corridors that traverse several Alameda County jurisdictions or for cross county corridors. Since improvement measures to mitigate the cumulative impact will be too expensive for one agency or jurisdictions to pay, Alameda CTC as part of the 2011 CMP update, reviewed the status and made the following recommendations.

- For congested cross county corridors, explore developing partnerships for sharing the cost for implementing related mitigation measures. Also, for long term corridor improvements for such corridors, explore establishing cross county partnerships to develop mutually agreeable strategies for improvements. As a first step in this direction, a county line development study could be considered.
- For projects that may impact long travel corridors that traverse multiple jurisdictions within the County, explore establishing a means for the project to contribute its fair share of required mitigation measures.

14. Improving the Land Use and Transportation Connection in Alameda County

Alameda CTC, as part of the 2011 CMP Update, performed a comprehensive review of the existing activities related to land use and transportation connection in addressing SB 375 requirements in terms of an increased level of emphasis on integration of land use planning, transportation and sustainability and recommended the following:

LOS Measures and the Land Use Analysis Program
The current LOS measure for the CMP purposes is auto focused and is based on the Highway Capacity Manual. Given the current focus on reduction of VMT through better integration of land use and transportation, it has become important to have LOS measures that consider project impacts on all modes. In this regard, Alameda CTC recommended that order to address the impact of development projects on multi-modes, a feasibility study for implementing an impact analysis measure that supports alternative modes in Alameda County, similar to the ATG measure being considered by SFCTA be conducted prior to the 2013 CMP Update.

Program to promote Land Use and Transportation Integration
Another approach reviewed by Alameda CTC in addressing the SB 375 requirements is a comprehensive program, similar to VTA's Community Design and Transportation Program (CDT), that promotes better integration of land use development and transportation in Alameda County and is supported by financial incentives., Such a program could be developed in partnership with the member agencies and communities and endorsed by their elected bodies. Between now and the next update of the CMP, the Commission directed staff to identify the interest from local jurisdictions and the transit operators for implementing a similar program in Alameda County. A scope of work summarizing the steps involved, including costs of developing and implementing the program, will be developed.

15. Level of Service Standards and HCM As part of the 2009 CMP Update, the need to take into account trips made by modes other than automobile was reviewed. The level of service standards is used in two elements of the CMP – LOS Monitoring and the Land Use Analysis Program. Regarding the LOS Monitoring, the CMP legislation shows that that roadways are required to be monitored for auto level of service, the CMP currently uses 1985 HCM for this purpose. For the Land Use Analysis Program, the legislation recommends assessing impacts to the county transportation system by using multimodal performance measures adopted by the congestion management agency, and the CMP recommends using 2000 HCM for this purpose. Based on the review, Alameda CTC recommended that as part of the 2013 CMP Update, a comparative analysis of the 1985 and 2000 HCMs to the 2010 HCM be prepared to transition to using the 2010 HCM for roadway standards in the LOS Monitoring element and for conducting project impact analysis in the Land Use Analysis program, including exploring the option for transitioning to multi-modal standards

16. Funding Priority for Deficient Segments Based on the biennial LOS Monitoring Study, if any of the CMP roadway segment fails to meet the required minimum LOS standard of E and declared as deficient, a deficiency plan is required to be prepared identifying mitigation measures including funding to improve the performance of that segment. Given the poor economic conditions and lack of availability of funds for transportation improvements, this requirement places hardship on the local jurisdictions. As part of the 2011 CMP Update, Alameda CTC considered this issue and approved the intent to develop a policy for giving funding priority to the CMP segments declared deficient based on the LOS Monitoring results. Based on the input received from the jurisdictions, it is recommended that in the evaluation

process for funding, priority consideration be given to projects that would improve the performance of deficient segments through approaches such as awarding additional points to those projects.

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APPENDIX A

Government Code Section 65088-65089.10

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 authority's 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.

(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.

(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 B

Alameda CTC Committees and Administration

STATUS OF ACCMA AND ALAMEDA CTC

Subsequent to the adoption of the 2009 CMP, the Boards of ACCMA and ACTIA began the process of merging the two separate entities into a newly created joint powers agency, the Alameda CTC. The major purposes of the merger are to reduce administrative expenditures and thereby save Alameda County taxpayers' money, and to offer improved strategic planning and on-going transportation project and program implementation. Although all three agencies continue to exist at the present time, the Alameda CTC Board has assumed responsibility for all activities of ACCMA and ACTIA, and the Alameda CTC Board also serves as the governing board of ACCMA and ACTIA. It is anticipated that ACTIA and ACCMA will be formally dissolved during the current fiscal year, and Alameda CTC will be explicitly designated as the successor agency to both entities.

COMMITTEES

The Alameda CTC Board has three standing committees: the Finance and Administration Committee (FAC), the Programs and Projects Committee (PPC), and the Planning, Policy and Legislation Committee (PPLC). Alameda CTC is also advised by the Alameda County Transportation Advisory Committee (ACTAC).

Finance and Administration Committee

The functions and authority of the FAC are agency operations and performance; human resources and personnel policies and procedures; administrative code; salary and benefits; procurement policies and procedures; procurement of administrative contracts; contract preference programs for entities such as local business enterprises, small business enterprises and disabled business enterprises; bid protests and complaints related to administrative contract procurement; annual budget and financial reports; investment policy and reports; audit reports, financial reporting, internal controls and risk management; and the annual work program.

Programs and Projects Committee (PPC)

The functions and authority of the PPC are local, state, ACCMA Transportation Improvement Program , TFCA, Vehicle Registration Fee (VRF) programs and Expenditure Plan programs and projects; local, state and federally funded projects and funding programs; the annual strategic plan for programs and projects; funding requests from project sponsors and other eligible recipients; paratransit services programs and projects; bicycle and pedestrian projects and programs; funding allocations to various transportation programs and projects; eminent domain proceedings; environmental evaluations; contract procurement; good faith efforts policies and procedures; and bid protects and complaints regarding engineering and construction contract procurement.

Planning, Policy, and Legislation Committee

The functions and authority of the PPLC are the CMP; CWTP; federal, state, regional and local transportation and land-use planning policies and studies; amendments to the 1986 Expenditure Plan or the 2000 Expenditure Plans; amendments to the VRF Expenditure Plan; transit-oriented development and priority development area projects and programs; the annual legislative program; state and federal legislative matters; general and targeted outreach programs; and advisory committee performance and effectiveness.

Technical Advisory Committee

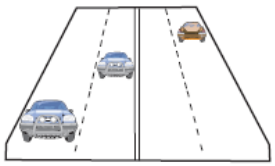
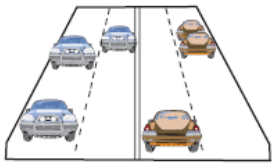
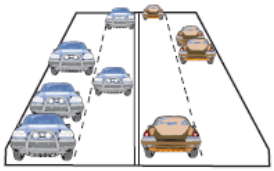
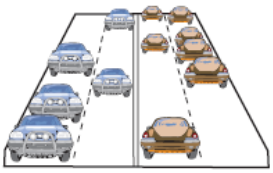
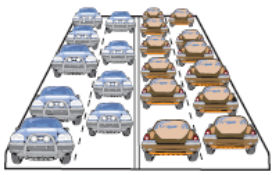
The ACTAC functions as the technical advisory committee to the Alameda CTC. ACTAC is comprised of one staff representative, preferably from a planning or public works department, from each of the following: Alameda CTC, each City, the County, BART, AC Transit, the Livermore Amador Valley Transit Agency, the Port of Oakland, the Metropolitan Transportation Commission, and Caltrans. Alameda CTC's executive director is the chairperson of ACTAC.

Administrative Costs

Alameda CTC's administrative costs regarding administration of the CMP related activities are paid from levies on each city and the county in proportion to the fuel tax subventions under Proposition 111. The levies are based on the annual congestion management agency budget, which is adopted by April 1 of each year. MTC has entered into contracts with the Bay Area CMAs to assist in meeting the requirements of TEA-21. These revenues have reduced the levy to the cities and county for support of congestion management activities. Alameda CTC will continue to advocate legislative measures that provide funding for these administrative costs so that fuel tax subventions to local government can be fully employed to address local transportation needs.

APPENDIX C

Levels of Service

Level of Service		Flow Conditions	Delay	Service Rating
A		Highest quality of service. Free traffic flow with low volumes. Little or no restriction on maneuverability or speed.	None	Good
B		Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.	None	Good
C		Stable traffic flow, but less freedom to select speed or to change lanes.	Minimal	Adequate
D		Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.	Minimal	Adequate
E		Unstable traffic flow and rapidly fluctuating speeds and flow rates. Low maneuverability and low driver comfort.	Significant	Poor
F		Forced traffic flow. Speed and flow may drop to zero.	Considerable	Poor

Source: Highway Congestion Manual, 1985, Transportation Resource Board

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APPENDIX D

Performance Report - Executive Summary

Forthcoming

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APPENDIX E

Travel Demand Management Checklist

The Travel Demand Management (TDM) Element included in Alameda County Congestion Management Program requires each jurisdiction to comply with the Required Program. This requirement can be satisfied in three ways:

- Adopting "Design Strategies for encouraging alternatives to using auto through local development review" prepared by ABAG and the Bay Area Quality Management District;
- Adoption of new design guidelines that meet the individual needs of the local jurisdictions and the intent of the goals of the TDM Element; or
- Providing evidence that existing local policies and programs meet the intent of the goals of the TDM Element.

For those jurisdictions that have chosen to satisfy this requirement by Option 2 or 3 above, the following checklist has been prepared. In order to insure consistency and equity throughout the County, this checklist identifies the components of a design strategy that should be included in a local program to meet the minimum CMP conformity requirements. The required components are highlighted in bold type and are shown at the beginning of each section. A jurisdiction must answer Yes to each of the required components to be considered consistent with the CMP. Each jurisdiction will be asked to annually certify that it is complying with the TDM Element. Local jurisdictions will not be asked to submit the back-up information to the CMA justifying its response; however it should be available at the request of the public or neighboring jurisdictions.

Questions regarding optional program components are also included. You are encouraged but not required to answer these questions.

(Note: Bold type face indicates those components that must be included the "Required Program" in order to be found in compliance with the Congestion Management Program.)

BICYCLE FACILITIES

Goal

To develop and implement design strategies that foster the development of a countywide bicycle program that incorporates a wide range of bicycle facilities to reduce vehicle trips and promote bicycle use for commuting, shopping and school activities. (Note: examples of facilities are bike paths, lanes or racks.)

Local Responsibilities

1a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

1a.1 provides a system of bicycle facilities that connect residential and/or non-residential development to other major activity centers?

Yes No

1a.2 bicycle facilities that provide access to transit?

Yes No

1a.3 that provide for construction of bicycle facilities needed to fill gaps, (i.e. gap closure), not provided through the development review process?

Yes No

1a.4 that consider bicycle safety such as safe crossing of busy arterials or along bike trails?

Yes No

1a.5 that provide for bicycle storage and bicycle parking for (A) multi-family residential and/or (B) non-residential developments?

Yes No

1b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

PEDESTRIAN FACILITIES

Goal

To develop and implement design strategies that reduce vehicle trips and foster walking for commuting, shopping and school activities.

Local Responsibilities

2a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that incorporate the following:

2a.1 provide reasonably direct, convenient, accessible and safe pedestrian connections to major activity centers, transit stops or hubs parks/open space and other pedestrian facilities?

Yes No

2a.2 provide for construction of pedestrian paths needed to fill gaps, (i.e. gap closure), not provided through the development process?

Yes No

2a.3 include safety elements such as convenient crossing at arterials?

Yes No

2a.4 provide for amenities such as lighting, street trees, trash receptacles that promote walking?

Yes No

2a.5 that encourage uses on the first floor that are pedestrian oriented, entrances that are conveniently accessible from the sidewalk or transit stops or other strategies that promote pedestrian activities in commercial areas?

Yes No

2b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

TRANSIT

Goal

To develop and implement design strategies in cooperation with the appropriate transit agencies that reduce vehicle trips and foster the use of transit for commuting, shopping and school activities.

Local Responsibilities

3a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

3a.1 provide for the location of transit stops that minimize access time, facilitate intermodal transfers, and promote reasonably direct, accessible, convenient and safe connections to residential uses and major activity centers?

Yes No

3a.2 provide for transit stops that have shelters or benches, trash receptacles, street trees or other street furniture that promote transit use?

Yes No

3a.3 include a process for including transit operators in development review?

Yes No

3a.4 provide for directional signage for transit stations and/or stops?

Yes No

3a.5 include specifications for pavement width, bus pads or pavement structure, length of bus stops, and turning radii that accommodates bus transit?

Yes No

3.b How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

CARPOOLS AND VANPOOLS

Goal

To develop and implement design strategies that reduce the overall number of vehicle trips and foster carpool and vanpool use.

Local Responsibilities

4a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

4a.1 For publicly owned parking garages or lots, are there preferential parking spaces and/or charges for carpools or vanpools?

Yes No

4a.2 that provide for convenient or preferential parking for carpools and vanpools in non-residential developments?

Yes No

4.b How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

PARK AND RIDE

Goal

To develop design strategies that reduce the overall number of vehicle trips and provide park and ride lots at strategic locations.

Local Responsibilities

5a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

5a.1 promote park and ride lots that are located near freeways or major transit hubs?

Yes No

5a.2 a process that provides input to Caltrans to insure HOV by-pass at metered freeway ramps?

Yes No

5b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance

Design Review

Standard Conditions of Approval

Capital Improvement Program

Specific Plan

Other

APPENDIX F

Federal and State Transportation Control Measures

The following lists include adopted federal and state transportation control measures (TCMs) for the San Francisco Bay Area. Detail on federal TCMs can be found in the Transportation Improvement Program (MTC) and the state TCMs in the 2010 Clean Air Plan (BAAQMD).

Federal TCMs in the 2001 Federal Bay Area Ozone: Attainment Plan (State Implementation Plan)

TCM	Description
Original TCMs from 1982 Bay Area Air Quality Plan	
TCM 1	Reaffirm Commitment to 28 percent Transit Ridership Increase Between 1978 and 1983
TCM 2	Support Post-1983 Improvements in the Operators' Five-Year Plans and, After Consultation with the Operators, Adopt Ridership Increase Target for the Period 1983 through 1987
TCM 3	Seek to Expand and Improve Public Transit Beyond Committed Levels
TCM 4	Continue to support development of HOV Lanes and Ramp Metering
TCM 5	Support RIDES Efforts
TCM 6*	Continue Efforts to Obtain Funding to Support Long Range Transit Improvements
TCM 7	Preferential Parking
TCM 8	Shared Use Park and Ride Lots
TCM 9	Expand Commute Alternatives Program
TCM 10	Information Program for Local Governments
TCM 11**	Gasoline Conservation Awareness Program (GasCAP)
TCM 12**	Santa Clara County Commuter Transportation Program

TCM	Description
Contingency Plan TCMs Adopted by MTC in February 1990(MTC Resolution 2131)	
TCM 13	Increase Bridge Tolls to $1.00 on All Bridges
TCM 14	Bay Bridge Surcharge of $1.00
TCM 15	Increase State Gas Tax by 9 Cents
TCM 16*	Implement MTC Resolution 1876, Revised — New Rail Starts – BART Extension to Colma only
TCM 17	Continue October 1989 Post-Earthquake Transit Services
TCM 18	Sacramento-Bay Area Amtrak Service
TCM 19	Upgrade Caltrain Service
TCM 20	Regional HOV System Plan
TCM 21	Regional Transit Coordination
TCM 22	Expand Regional Transit Connection Ticket Distribution
TCM 23	Employer Audits
TCM 24	Expand Signal Timing Program to New Cities
TCM 25	Maintain Existing Signal Timing Programs
TCM 26	Incident Management on Bay Area Freeways
TCM 27	Update MTC Guidance on Development of Local TSM Programs
TCM 28	Local Transportation Systems Management (TSM) Initiatives
New TCMs in 2001 Ozone Attainment Plan	
TCM A	Regional Express Buss Program
TCM B	Bicycle/Pedestrian Program
TCM C	Transportation for Livable Communities
TCM D	Expansion of Freeway Service Patrol
TCM E	Transit Access to Airports

* Deleted by EPA action from ozone plan.

** Deleted by EPA action from ozone plan, but retained in Carbon Monoxide Maintenance Plan.

Source: Metropolitan Transportation Commission, 2009.

State TCMs in the 2010 Clean Air Plan

TCM A1: Local and Area-wide Bus Service Improvements
TCM A2: Local and Regional Rail Service Improvements
TCM B1: Freeway and Arterial Operations Strategies...
TCM B2: Transit Efficiency and Use Strategies
TCM B3: Bay Area Express Lane Network....
TCM B4: Goods Movement Improvements and Emission Reduction Strategies
TCM C1: Voluntary Employer-Based Trip Reduction Programs
TCM C2: Safe Routes to Schools and Safe Routes to Transit Programs
TCM C3: Ridesharing Services and Incentives
TCM C4: Conduct Public Outreach & Education
TCM C5: Smart Driving
TCM D1: Bicycle Access and Facilities Improvements
TCM D2: Pedestrian Access and Facilities Improvements
TCM D3: Local Land Use Strategies
TCM E1: Value Pricing Strategies
TCM E2: Promote Parking Policies to Reduce Motor Vehicle Travel
TCM E3: Implement Transportation Pricing Reform

Source: BAAQMD, 2010 Clean Air Plan

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APPENDIX G

CMP Legislation and Infill Development Areas

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TO: Beth Walukas, Alameda County Transportation Commission
Saravana Suthanthira, Alameda County Transportation Commission

FROM: Rebecca Kohlstrand, Parsons Brinckerhoff
Sudhish Verma, Parsons Brinckerhoff

SUBJECT: Infill Development Summary

DATE: August 29, 2011

Summary

Infill development projects, in spite of their perceived environmental benefits, do not usually fare well under the prevailing traffic impact analysis methodologies. Senate Bill 1636, which amended the regulations governing Congestion Management Plans (CMPs), allowed local governments to designate "infill opportunity zones" before December 2009 and provided exemptions from traffic level of service standards for those designated zones. The current 2009 Congestion Management Plan for Alameda County did not identify "infill opportunity zones" as local jurisdictions did not request designations; thereby the relaxation of traffic level of service standards for infill development in the county is now precluded. This memorandum lays out several strategies that the Alameda County Transportation Commission (Alameda CTC) could pursue to promote infill development in conjunction with the 2011 update of their CMP. Some strategies could be implemented on a short-term basis and others would take longer to implement. Collectively, these measures would facilitate a more integrated policy approach for infill development in Alameda County.

Short-term strategies that would provide further flexibility include:

1. incorporate the use of level of service standards (qualitative and quantitative) for transit, pedestrian, and bicycles to allow a balancing of transportation performance goals ;
2. establish policies and mitigation strategies aimed at congestion relief on a broader scale; and
3. adopt urban trip generation rates that more accurately reflect automobile trip generation in areas well served by transit and other services.

Long-Term Strategies that would provide a combination of exemptions and greater flexibility include:

1. advocate for relaxation from traffic LOS standards to be extended to all designated infill opportunity zones" statewide that meet established criteria, regardless of when the zones were established;
2. pursue legislative changes to eliminate a strict requirement for the use of LOS standards to determine the performance of highways and roadways as part of the Congestion Management Program;
3. adopt flexible standards for transportation impact assessment under CEQA in support of multimodal Congestion Management Plan goals;
4. impose multimodal transportation impact development fees in support of multimodal Congestion Management Plan goals; and
5. update conventional four-step models to provide a more accurate estimate of person trips by mode.

Background

Infill Development in the Bay Area

Communities across the country are increasingly recognizing that the spread out patterns of growth, which have shaped American communities for the past several decades, are difficult to sustain. In the Bay Area, current urban growth boundaries continue to allow development on the periphery of the metropolitan area, and in many cases this development follows the relatively conventional patterns of large, low-density subdivisions. A renewed emphasis on infill development to address growing environmental concerns related to climate change is occurring at the state and regional level. This increased awareness of environmental issues, in addition to growing fiscal constraints at all levels of government, is prompting local jurisdictions to rethink their strategies on how to best accommodate and focus future growth.

In response to these concerns, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), in cooperation with the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC), and in partnership with congestion management agencies, transit providers, and local governments throughout the Bay Area, created the FOCUS Program to encourage infill development in designated Priority Development Areas. Through the FOCUS Program, MTC and ABAG are working with local governments and other partners in the Bay Area to encourage future growth near transit services in existing communities that surround the San Francisco Bay, enhancing existing neighborhoods and providing housing and transportation choices for all residents as a means of addressing the high cost of housing, traffic congestion, and protection of natural resources.

Priority Development Areas (PDAs) are locally-identified, infill development opportunity areas within existing communities. They are generally areas of at least 100 acres where there is local

commitment to developing more housing along with amenities and services to meet the day-to-day needs of residents in a pedestrian-friendly environment served by transit. To be eligible to become a PDA, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service, and planned for more housing.

By November 2007, 115 PDAs had been identified in the nine-county San Francisco Bay Area, including 27 within Alameda County. Since the original adoption, additional PDAs have been added to the program as well as Growth Opportunity Areas (GOAs – additional areas of growth identified by local jurisdictions). Alameda County currently has 34 identified planned and potential Priority Development Areas and 14 Growth Opportunity Areas (see Figure 1). Though the PDAs and Growth Opportunity Areas are located throughout the county, the greatest concentration of PDAs and GOAs occur along the I-880 and BART corridors from Berkeley in the north to Union City in the south and passing through Oakland, San Leandro, and Hayward. There are also concentrations of PDAs in Fremont, Newark, Pleasanton, Dublin, and Livermore.

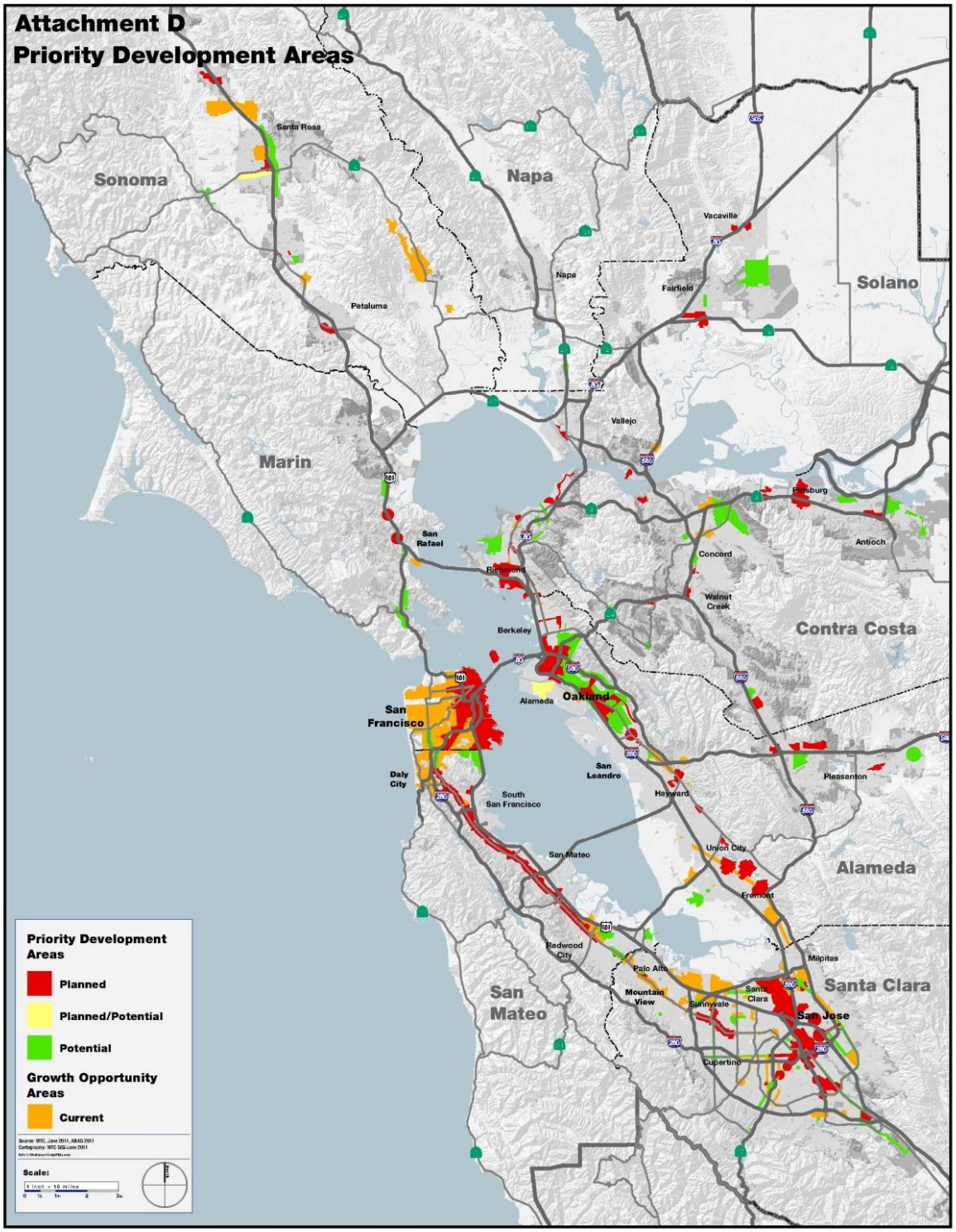
Congestion Management Plans

The requirement for preparation of countywide Congestion Management Plans (CMPs) was originally established by state legislation in 1989 (California Governmental Code 65088 and 65089). These requirements became effective in June of 1990 when voters approved Proposition 111. The purpose of this legislation, as originally adopted and subsequently amended, is to prioritize transportation funding decisions based on transportation system performance, local land use decisions that affect system performance, and the implementation of transportation control measures that impact air quality. The current legislation requires that a Congestion Management Plan contain the following five elements:

1. Traffic level of service standards established for a system of designated highways and roadways. The legislation stipulated that level of service be measured using Circular 212 or the Highway Capacity Manual (or a methodology consistent with the Highway Capacity Manual). Level of service E was established as the minimum acceptable level of service, except in areas where the service level was already at LOS F or within an infill opportunity zone.

2. Performance measures to evaluate current and future multimodal system performance for the movement of people and goods. At a minimum, the performance measures were to consider highway and roadway systems and transit systems.

3. A travel demand element promoting alternative transportation methods, including but not limited to carpools, vanpools, transit, bicycles, and park-and-ride lots, balancing of jobs and housing, and other strategies to more efficiently use transportation system capacity.


Attachment D
Priority Development Areas
Sonoma
Napa
Solano
Marin
Contra Costa
Alameda
San Mateo
Santa Clara
Santa Rosa
Petaluma
Napa
Vacaville
Fairfield
Vallejo
Benicia
Pittsburg
Antioch
Concord
Walnut Creek
San Rafael
Richmond
Berkeley
Alameda
Oakland
San Francisco
Daly City
South San Francisco
San Leandro
Hayward
Pleasanton
San Mateo
Union City
Fremont
Redwood City
Palo Alto
Mountain View
Sunnyvale
Santa Clara
San Jose
Milpitas
Cupertino
Priority Development Areas
Planned
Planned/Potential
Potential
Growth Opportunity Areas
Current
Scale:

4. A program to analyze the impacts of local land use decisions on the regional transportation system and an estimate of the costs of mitigating such impacts.

5. A seven-year Capital Improvement Program, developed using the performance measures, aimed at maintaining or improving the performance of the multimodal system for the movement of goods and people.

The CMP legislation aims to increase the productivity and effectiveness of the existing transportation system by focusing the expenditure of transportation dollars on projects that cost-effectively manage congestion, improve air quality, and allow continued growth.

As part of the Congestion Management Program, the Congestion Management Agency is required to monitor the level of service on the designated CMP Roadway System at least biennially. During the LOS monitoring, if any of the CMP roadways are found to not meet the minimum LOS standards, a Deficiency Plan is required to be developed to improve that roadway. State law determines the minimum standard for the CMP roadway to be LOS E.

Deficiency Plans - Deficiency Plans are the tool by which local jurisdictions are required to address degradation in service levels on the highway and roadway systems as identified through the monitoring program. Deficiency Plans are required by law to contain the following four provisions:

- An assessment of the cause of the system deficiency,
- A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service required and the estimated costs of the improvements,
- A list of improvements, programs, or actions and cost estimates that will measurably improve multimodal performance and contribute to significant improvements in air quality, and
- An action plan consistent to implement the improvements identified above.

While the provisions for the Deficiency Plan provide some flexibility in the types of improvements that can be implemented to address system deficiencies; by placing a primary emphasis on level of service standards for reduction of congestion on highways and roadways, the CMP, continues to focus on investments in the movement of traffic. This continued investment in highway and roadway system improvements can negate other efforts to achieve a measureable shift to alternative modes of transportation and inadvertently offset or diminish the potential advancements that might result from transportation investments in a more balanced multimodal system.

Senate Bill 1636 - In recognition of the environmental benefits afforded by infill development and in an attempt to balance the need for traffic level of service standards with the need to build infill housing and mixed-use commercial developments within walking distance of mass transit facilities and higher density areas, the CMP legislation (Section 65088) was amended in 2002 (Senate Bill

1636, Figueroa) to provide greater flexibility for local jurisdictions in balancing traffic level of service standards with the need to build infill housing and mixed-use development within walking distance of mass transit facilities, downtowns, and town centers. Local jurisdictions were given options to pursue the following actions in infill opportunity zones:

- Use an alternative area wide level of service standard or a multimodal personal level of service standard that takes into account planning for residential development within one-third of a mile of mass transit stations, shops, and services to reduce long-distance commute trips and improves the jobs housing balance and increases the use of alternative transportation modes.
- Approve a list of flexible level of service mitigation options that includes roadway expansion and investments in alternate modes of transportation infrastructure including transit and pedestrian and transportation demand management programs.

The designation of infill opportunity zones, however, had to occur prior to December 31, 2009 for this provision to be applicable. Within Alameda County, 27 Priority Development Areas were originally designated in the FOCUS program in November 2007. These PDAs were identified in the 2009 Congestion Management Program, but designation of these zones was at the request of local jurisdictions. As a result, the CMP did not designate any of these PDA's as "infill opportunity zones," thereby precluding an exemption from the provisions of traffic level of service standards. [1]

Reconciliation of Policies Promoting Infill Development and CMP Policies Related to Level of Service Performance

While the Congestion Management Plan regulations allow for some flexibility in determining how congestion is measured and what mitigation measures are implemented in response to increasing congestion, outside of designated "infill opportunity zones," there is still a requirement to measure performance based on traffic level of service. To address a degradation in traffic level of service on CMP designated highways and roadways, in a way that is compatible with emerging land use and environmental standards a creative approach is required in considering both direct and indirect impacts or off-setting measures in future Deficiency Plans to accommodate the desired infill development.

There are several strategies that could be pursued by the Alameda County Transportation Commission in its role as the Congestion Management Agency. A brief discussion of the short and long-term strategies and approaches is provided below:

Short-Term Strategies

Adopt Multimodal Level of Service Standards - Exclusively focusing on a traffic level of service standard that emphasizes movement of vehicles over movement of people, will continue to take Alameda County in a direction that focuses transportation investment on roadways rather than on

[1] 2009 Congestion Management Program, Alameda County Congestion Management Agency.

multimodal strategies to reduce congestion. The Alameda CTC has already acknowledged the importance of pursuing investments in other modes and better integrating transportation and land use decisions. These values are reflected in the Countywide Transportation Plan and in the investment strategies that have been funded through the county's ½ cents sales tax. ACTC is also currently undertaking efforts to incorporate multimodal level of service standards in the 2013 Congestion Management Plan.

Alameda County can adopt and encourage the use of level of service standards for transit, pedestrian, and bicycles that qualitatively as well as quantitatively measure performance to ensure that consideration is given to these impacts for all major transportation investments that are made. Communities such as San Francisco and Alameda have already adopted a multimodal approach to transportation impact assessment and are placing higher priority on transit, pedestrian, and bicycle movement than on accommodating traffic flows. Both of these cities have adopted Transit First policies that reflect these priorities. In support of this policy, using performance measures such as reduction in per capita Vehicle Miles Travelled (VMT), reduction in greenhouse gas emissions, or increasing the modal share for alternative modes of travel could all be considered as alternative standards for assessing performance.

Establish Policies and Mitigation Strategies Aimed at Congestion Relief on a Broader Scale (Areawide Deficiency Plans) - Research shows that moderate to high density development in mixed-use neighborhoods that provides transit services and bicycle and pedestrian opportunities will result in lower generation of automobile trips and shorter trips that can more easily be accommodate by walking. Transportation and land use investments that support these results are consistent with the region's Sustainable Community Strategy and the overall transportation and environmental goals identified in the Congestion Management Program regulatory codes. Yet the performance measures stipulated in the Congestion Management Program regulatory codes and the Deficiency Plans addressing system non-performance continue to focus on measures to achieve traffic level of service standards. ACTC has the ability to establish new policy guidelines, but also mitigation strategies that are implemented on a broader basis than a roadway segment to achieve congestion relief.

To effectively approach congestion relief by investing in alternative modes of travel, land use and transportation decisions need to be closely integrated. If a Deficiency Plan focuses mainly on mitigation measures to relieve congestion on a specific segment or link of a roadway, it will be more difficult to address congestion relief that follows a larger policy imperative. Providing policy guidelines that allow for implementation of Deficiency Plan measures that advocate for investments in alternatives modes of travel, such as transit, bicycle, and pedestrian infrastructure to support land use decisions at an areawide level (i.e. areawide Deficiency Plans) is an alternative and viable approach. These alternative mitigation strategies, when applied at a countywide or citywide level, provide a reasonable basis for the reduction of per capita Vehicle Miles Travelled (VMT) or increasing transit, pedestrian, or bicycle mode shares within a jurisdiction, and provide a more creative and effective approach to reducing congestion and achieving the land use and environmental goals that are also of value to the community.

Adopt Urban Trip generation rates - In preparing traffic and transportation impact analyses, professionals often rely on the Institute of Transportation Engineers' (ITE) published trip generation rates. ITE data typically reflects isolated suburban development usually lacking availability and

proximity of transit service, and the ITE study sites often have limited pedestrian or bicycle access. As a result, using ITE trip generation rates for urban infill development projects that are well served by transit and have good pedestrian access could significantly over-predict vehicular traffic impacts.

The use of trip generation data has implications beyond traffic impact analysis. It also has potential economic and environmental consequences. Trip generation rates are used in the development and application of traffic impact fees and are a major determinant in the approval of development projects. The use of auto-oriented suburban traffic generation data for fee assessment in urban infill areas can produce an inherent inequity in the approval process by overcharging impact fees.

To address this inequity and develop trip generation rates that can be used for Smart Growth projects, the California Department of Transportation (Caltrans) undertook a study of trip generation rates for urban infill development to supplement ITE trip generation data. Local jurisdictions and transit agencies from throughout the state participated in the Technical Advisory Committee for this effort and the study was funded by FHWA and state grants. The initial results, which did trip generation studies in the San Francisco Bay Area, Sacramento Area, Los Angeles Area, and San Diego Area, were published in 2009. Though the data points are limited, the initial results are available on the web for use in assessing the impacts of urban infill projects. The state hopes to supplement the published results with additional survey data to validate their initial trip generation findings. Transitioning to these trip generation rates in urban areas, will provide a much more accurate assessment of the impacts of future development and clarify the extent to which mitigation measures are required.

Long-Term Strategies

Legislative Relief to Provide Exemptions from LOS Standards for Infill Development - The CMP legislation, as amended, acknowledges the importance of infill development as a means of achieving more compact, dense, and mixed-use development. This infill development supports walking trips, a reduction in vehicle miles travelled (by accommodating shorter trips), and an improvement in the overall air quality. As noted above, the CMP regulations provide for flexibility in the application of traffic level of service standards for "infill opportunity zones" designated before December 31, 2009.

If Alameda CTC wishes to identify "infill opportunity zones" at this time, they could join with other jurisdictions at the local and regional level to advocate for statewide flexibility or exemptions to be extended to all designated "infill opportunity zones" that meet established criteria, regardless of when the zones were established. This would allow for ongoing progress towards the regional goals that are advocated in the Sustainable Community Strategies set forth by MTC.

Provide Legislative Relief from Traffic Level of Service (LOS) Standards - Transportation performance measures have traditionally been focused on maintaining levels of service for vehicular traffic flows rather than focusing on the movement of people through the transportation system. This methodology has been embraced in the Congestion Management Plan, which identifies LOS as the primary performance measure and is also the accepted standard for determining the significance of a transportation impact under the California Environmental Quality Act (CEQA) guidelines. This acceptance of traffic LOS standards as the primary measure of

transportation system effectiveness has focused transportation investment on expanding highway and roadway capacity, often to the detriment of alternative modes of travel.

Because LOS is primarily an automobile-oriented measure, it does not address the trade-offs between providing efficient automobile travel and the impacts on other community values. Some of the key values that can conflict with efficient automobile travel are listed below.

- Creating pleasant walking and bicycle environments
- Developing well utilized public transportation systems
- Reducing vehicle travel to minimize air pollution and green house gas emissions

The strict use of automobile level of service standards as a design threshold and a transportation impact criterion passively encourages urban sprawl, increase dependence on the automobile, and create physical environments that are not conducive to walking and bicycling. Many cities that have adopted policies in support of a successful transit system and a pleasant walking and bicycling environment find it difficult to implement projects consistent with these policies because of their impacts to auto LOS.

LOS has many limitations when it comes to non-automobile traffic. LOS ignores potential effects on non-automobile modes. LOS thresholds are used to determine the size of roadways which influences land use form. LOS thresholds are established without recognizing the influence on air pollutants and greenhouse gases, which are negatively affected by facilitating the use of automobiles above all other modes.

Alameda CTC could join with other Congestion Management Agencies and local jurisdictions to pursue legislative changes to eliminate a strict requirement for the use of LOS standards to determine the performance of highways and roadways as part of the Congestion Management program. This strategy would be contingent upon identifying other multimodal measures to assess overall transportation system performance or to address congestion relief on a broader scale (see discussion under short-term strategies regarding multimodal level of service standards and mitigation strategies aimed at areawide deficiency plans). In the broader context, to have real impacts, it may also be necessary to revise CEQA standards to comprehensively address the problem.

Adopt flexible standards and approach for transportation impact assessment under CEQA – To effectively achieve the desired changes in travel behavior, all of the policies and regulations affecting development and transportation investment need to be integrated. Developers and planners interested in infill development have cited CEQA as a stumbling block to development due to its focus on mitigating intersection level of services impacts. The commonly accepted practice of using intersection LOS standards for transportation impact analysis under CEQA has had a large influence on extending the use of this practice to Congestion Management Plans.

While generating a lower number of vehicles trips per unit of development than low density development, an increase in development density will still likely result in increases in traffic volumes in the immediate vicinity of a development, causing level of service (LOS) impacts and the need for mitigation. In developed urban areas with constrained rights-of-way, such mitigation measures are not only expensive, but also often impractical or undesirable to implement. As a

result, the local jurisdiction ends up making "findings of overriding considerations" to allow development of the project to move forward, without providing reasonable contributions to alternative transportation improvements. In suburban areas, the continued investment in the expansion of roadway capacity fosters continued reliance on autos and the need to devote large areas of land to parking facilities.

One approach to taking a broader perspective to transportation mitigation involves the use of Program and Master EIRs. For example, the transportation impacts in a city or a subarea of a city may be mitigated through more strategic approaches to congestion management that cannot be realized when analysis is conducted and mitigations implemented at an individual project level. If, for example a Downtown Plan is adopted for Oakland or Livermore, and a program level EIR is completed to assess the cumulative transportation impacts, the effects of modal shifts to increased transit, bicycle, and pedestrian travel can be more easily identified than can be done at an individual project level. The same is true for the mitigation measures and investments in alternative transportation modes that may be necessary for these modal shifts to be realized. By providing an early framework for how development should occur and a broad mitigation strategy, subsequent CEQA analysis for individual projects could then be focused on issues that relate specifically to the land use, density, and design of a specific project and developers could pay a transportation impact fee that contributes their fare share to implementing broad measures aimed at congestion relief.

Additional flexibility in CEQA could also be accomplished through performance-based approvals. The City of Oakland recommends establishing a performance-based approach to mitigate impacts, reducing review costs to developers and focusing their resources on mitigating impacts rather than paying for environmental review.

The 2009 Congestion Management Program adopted by the San Francisco County Transportation Authority, outlined a strategy for introducing automobile trips generated (ATG) as a measure for assessing the impacts of transportation projects. The Authority is working with city departments to implement this new assessment methodology.

Multimodal Transportation Impact Development Fees - In suburban areas and many cities, transportation development fees have been collected for the sole purpose of contributing to a fund for roadway improvements. This strategy is evolving into a broader approach in many communities where developer fees are being collected at a city or regional level to address congestion issues and are eligible for use on transit, pedestrian, and bicycle improvements as well as roadway improvements. While impact development fees fall outside the realm of the Congestion Management Plan, they are a piece of the puzzle in moving towards implementing an integrated approach to congestion management as they provide transportation funding and reinforce through investments, the policies that a jurisdiction hopes to achieve.

San Francisco is a leader in this area, having implemented a Transit Impact Development (TIDF) fee 30 years ago. The San Francisco MTA has recently updated the TIDF and is exploring expansion of the TIDF to include collection and use of an impact fee for bicycle and pedestrian improvements as well. An additional objective was to streamline the CEQA review process. As part of this evaluation, much of the discussion has been centered around the green house gas emissions impacts that result from every new automobile trip that is generated within the city and how best

to mitigate those impacts at a scale that allows for a shift in travel patterns and an ultimate reduction in the per capita vehicle miles travelled. Study results were completed in July 2011 and the proposal is being reviewed by commissions and will undergo environmental review if endorsed by the Board of Supervisors.

Jurisdictions within Alameda County have also pursued similar strategies. The Tri-Valley Transportation Development Fee, which was established in 1998 by the Tri-Valley Transportation Council (membership includes Alameda and Contra Costa Counties and the cities of Dublin, Livermore, Pleasanton, Danville, and San Ramon), uses fees collected from developers to fund high priority highway and transit projects, including BART station and BRT improvements. While there may be growing interest, a multimodal approach has not yet received wide support in Alameda County.

Update Conventional four step models - In most cases, the forecasting models used for regional transportation planning are not set up to capture the effect of innovative land use strategies. They typically do not capture the changes in vehicle travel generated by increasing development in walkable communities with convenient access to transit as they are focused on projecting the vehicular travel demand. Quantifying benefits is also complicated by the challenges of measuring the net benefit of a set of infill projects as compared to the impacts that might occur if the development occurred in an outlying area with fewer transportation services.

Although less vehicle travel and fewer emissions are reasonable outcomes to expect from infill development, quantifying such benefits has proved challenging. The analytical framework at the heart of nearly all regional transportation planning models has difficulty capturing interactions between land use and transportation systems. Even when MPOs have incorporated land use feedbacks into their travel demand models, they tend to be regional in nature and fail to capture neighborhood level characteristics. It is these smaller scale land use patterns that often contribute most to the reduced driving expected from well designed infill projects. Other common limitations include: only examining work-related travel, not considering walking as a mode of travel, and including very little detail on land use characteristics between "travel analysis zones."

EPA has prepared case studies demonstrating how modifications to the models - such as building indices to reflect changes in travel patterns, shifts to non-motorized travel, and total emissions based not only car trips but also on distance traveled – and can better capture the benefits of infill development. The EPA study determined that the aggregate analysis zones used in conventional travel demand modeling limit the ability to analyze intra-zonal trips, non-motorized travel, or trip-chaining, and that the effect of these limitations can be minimized through implementation of one or more enhancements.

Conclusion

Current regulations governing Congestion Management Plans are limiting in terms of providing exceptions to or relaxation from the traffic level of service standards as a measure of performance, outside of infill opportunity zones. Opportunities do exist, however, for legislative relief or creative application of performance standards and mitigation measures to be consistent with policies that support infill development. By identifying a policy direction in the 2011 update of the Congestion

Management Plan, the Alameda CTC can begin to achieve results and continue to move forward in reconciling policies related to infill development.

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APPENDIX H

Project Delivery and Timely Use of Funds Policy

PROJECT DELIVERY ASSISTANCE

The Alameda CTC will provide consultant services to assist in monitoring the implementation of projects programmed to receive state, federal or TFCA funds programmed by the Alameda CTC. This service will include ongoing collection of project monitoring information and development of a quarterly status report on the delivery status of projects programmed to receive state, federal funds or TFCA funds programmed by the Alameda CTC. The Consultant will also meet with Caltrans local assistance as needed to review the status of the Caltrans review of Alameda County projects.

The Alameda CTC will provide consultant services to project sponsors to assist in the delivery of state, federal or TFCA funded projects programmed through the Alameda CTC. This assistance could include services such as project delivery workshops for sponsors and development and management of a project delivery website. Due to budget limitations in the Alameda CTC's project oversight contract, one on one on call assistance will likely be limited to the review of documents and answering questions relative to a specific funding program. Sponsors that require assistance beyond this level, such as completing documents that are required for project delivery, can contract with the Alameda CTC's oversight consultant directly or request the Alameda CTC expand the current scope of work on a task order basis to provide the necessary support. Any additional task order work completed through the Alameda CTC contract will be reimbursed to the Alameda CTC from the local agency receiving the support. Billing rates for any additional support work will be based on the rates in the current Alameda CTC contract with the oversight consultant.

Agencies receiving funding through the Alameda CTC will, as part of the application process, submit to the Alameda CTC a baseline schedule for project delivery. The Alameda CTC's project monitoring consultant will provide assistance to sponsors in the development of the baseline schedule to insure that all required state and federal approvals are accounted for in the schedule. Agencies agree to provide the Alameda CTC with quarterly updates on project delivery status and to notify and seek the Alameda CTC's concurrence on any significant changes to the project delivery schedule, scope or cost. The baseline schedule will identify major milestones for each project that are critical for timely delivery of the project. These milestones will likely include start and end dates for: environmental clearance, development of PS&E, acquisition of right of way and construction of the project. Deadlines associated with any timely use of funds provisions such as Caltrans or California Transportation Commission authorizations and/or approvals will also be identified.

The Alameda CTC may host a workshop on project delivery after the adoption of a state/federal/TFCA program by the Alameda Board. The workshop would review the project delivery requirements of the particular funding program(s) adopted by the Alameda CTC and provide an opportunity for project sponsors to have questions related to the specific program answered by both Alameda CTC staff and staff

from other agencies that may have project approval authority (i.e. Caltrans, the Air District, MTC). Attendance at this workshop may be mandatory for all project sponsors.

EXTENSION AND REPROGRAMMING REQUESTS

The Alameda CTC will consider the following prior to endorsing an extension or reprogramming request: *Are the circumstances causing the delay truly "extraordinary," or an oversight during project planning?*

Although the circumstances may be unforeseen, baseline project schedules should incorporate risk factors related to unknowns. Are these circumstances "beyond the control" of the implementing agency. Sponsors requesting extensions or reprogramming will be required to provide justification why the circumstances causing the delay are "extraordinary and beyond their control."

Has the project sponsor exercised due diligence in the delivery of the project and is such diligence documented? Have previous milestones in the project delivery scheduled been met and has the Alameda CTC been notified of and concurred with any changes to the schedule? The Alameda CTC should be notified when a delay situation, or potential delay situation, arises in order to be prepared to review the request and to take whatever action may be required to assure no loss of funding to Alameda County. Sponsors requesting extensions or reprogramming must demonstrate that previous milestones identified in the baseline schedule as critical to the delivery of the project have been met, or that the Alameda CTC was notified and concurred with any potential delays to the project schedule.

If the Alameda CTC were to grant an extension or reprogramming, how prepared is the sponsor to meet future delivery deadlines? For example, failure to meet the initial STIP project delivery deadline – project allocation approval – will result in the funds being deprogrammed from the project but returned to the county share. However, once the initial allocation has been received, failure to meet any future SB 45 deadlines will result in a loss of funds to both the project and the county. Sponsors requesting extensions or reprogramming requests must provide the Alameda CTC with a revised schedule for project delivery and a strategy for resolution of the problem that is causing the delay in project delivery. This revised schedule will also provide detail relating to the impact this delay and modified schedule may have on other projects sponsored by the respective agency. The Alameda CTC will consider the circumstances causing the project delivery delay and the impact on other projects being implemented by the sponsor and may deny the extension or reprogramming request until the sponsor can demonstrate an acceptable resolution to the problem causing the delay.

TIMELY USE OF FUNDS POLICY

Any project sponsor that fails to meet a timely use of funds deadline that results in a loss of programmed funds to Alameda County will be penalized in a future state or federal funding cycle an amount equal to the funds that were lost to Alameda County.

This policy will apply to all funding programs administered by the Alameda CTC. Projects programmed to receive TFCA funds will be subject to additional delivery requirements included in the Alameda CTC's adopted TFCA Timely Use of Funds Policy.

APPENDIX I

Technical and Policy Guidelines

USE OF THESE GUIDELINES

Local jurisdictions are required to comply with standards set forth in the Alameda CTC CMP. These *Technical and Policy Guidelines* are intended to assist jurisdictions in complying with such standards. The guidelines are organized as follows:

- LOS Standards and monitoring;
- Deficiency plan preparation;
- Land use analysis;
- Transportation demand management; and
- Countywide Transportation Demand Modeling.

These Guidelines supplement the CMP and supersede requirements contained in all previous Programs and Guidelines, and will continue to be updated periodically to reflect new guidance adopted by the Alameda CTC Commission.

1. LOS STANDARDS AND MONITORING

Background and Purpose

LOS is a term used to describe traffic conditions on a given roadway. LOS takes into account variables such as travel speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, safety, road volume and road capacity.

Setting LOS standards for the CMP transportation system provides a tool to analyze the impacts of land use changes on the system and to measure one aspect of system performance—congestion. If performance falls below the standard discussed below, local jurisdictions are required to restore or improve the LOS.

Responsibility

By November of each year, the Alameda CTC is required to determine whether local jurisdictions are in compliance with the CMP. LOS monitoring is required only for segments operating at LOS C, D, E or F unless the local jurisdiction requires otherwise.

Jurisdictions may use Alameda CTC's LOS monitoring, or may conduct their own LOS monitoring. If a jurisdiction assumes responsibility for monitoring LOS on their roads or if Caltrans assumes responsibility for monitoring LOS on the freeway system, the following methodology should be used.

Note: The results of the 2010 LOS monitoring efforts, and a complete description of the methodology for data collection and analysis, are included in the 2010 LOS Monitoring Program[1].

Methodology

Measuring LOS is based on average travel speed, using the "floating car" technique consistent with the *Manual of Traffic Engineering Studies*[2]. This method involves defining the checkpoints for each roadway segment, collecting travel time data, computing travel speeds and comparing average speeds with the LOS speed ranges specified in the 1985 *Highway Capacity Manual*[3]. The relationship between LOS and average travel speed is shown in Chapter 3 Table 5 of the CMP.

Defining Roadway Segments

To ensure comparability of results for conformance determination purposes, LOS monitoring must be based on the roadway network segments established in the most current CMP. In cases where compelling reasons exist, local jurisdictions may request changes to network definition. The Alameda CTC must approve such a change before LOS monitoring begins.

Monitoring Frequency

The Alameda CTC surveys the entire CMP-network every two years. Regarding the number of travel time runs on each segment, a minimum of six runs is required for LOS E or F segments. For segments consistently operating at LOS A or B, the total runs could be reduced to four if needed.

2. DEFICIENCY PLAN GUIDELINES

Background and Purpose

Deficiency Plans are a way for jurisdictions to remain in compliance with the CMP. This process is initiated when LOS for a segment of road deteriorates below the established standard set forth in the California Government Code Section 65089 (b) (1) (B), as follows:

> *In no case shall the LOS standards for roads established be below the LOS E or at the current level, whichever is further from LOS A. When the LOS on a segment or at an intersection fails to attain the established LOS standard, a Deficiency Plan shall be adopted pursuant to Section 65089.4.*

Deficiency Plans should always be developed with consideration of the countywide transportation planning process, including forecasts of travel needs and planned capital improvements. Likewise,

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[1] *2010 LOS Monitoring* document is available at the Alameda CTC offices and electronically at www.alamedactc.org

[2] Paul C. Box and Joseph C. Oppenlander, *Manual of Traffic Engineering Studies*, 4th edition (Arlington, VA: Institute of Transportation Engineers, 1976).

[3] Transportation Research Board, Special Report 209, *Highway Capacity Manual*, (Washington, D.C.: Transportation Research Board, 1985) . 2013 Update of the CMP will develop a comparative analysis of 1985 HCM to 2010 HCM for LOS standards to transit to using 2010 HCM

existing deficiencies should always influence future countywide transportation planning and programming decisions. If the Deficiency Plan involves system-wide improvements, Alameda CTC staff, transit agencies, the BAAQMD, and the California Department of Transportation may also be involved.

Deficiency Identification

Biennially, the Alameda CTC identifies potentially deficient roadway segments based on LOS monitoring. Only trips originating inside Alameda County in the p.m. peak period are included in determining LOS conformity. The State statute also allows several types of travel to be removed from the determination, including:

- Interregional travel;
- Construction, rehabilitation, or maintenance of facilities that impact the system;
- Freeway ramp metering;
- Traffic signal coordination by the state or a multi-jurisdictional agency;
- Traffic generated by the provision of low and very low income housing;
- Traffic generated by high-density residential development within one-fourth mile of a fixed rail passenger station; and
- Traffic generated by any mixed use development located within one-fourth mile of a fixed rail passenger station; and if more than half of the land area or floor area of the mixed use development is used for high density residential housing.

In some cases, several jurisdictions are required to participate in a multi-jurisdictional Deficiency Plan process pursuant to Section 65089.4 (e) (1-3).

Process Overview

When the LOS on a given CMP-network segment deteriorates below the established state standard, the responsible jurisdictions(s) must prepare a Deficiency Plan, or forego additional gasoline tax subventions (pursuant to Section 2105 of the Streets and Highways Code). The Alameda CTC Commission determines whether a jurisdiction is required to prepare a Deficiency Plan at their November Commission meeting. The jurisdiction must prepare a Deficiency Plan by the following November Commission meeting to prevent its forfeiting of additional gasoline tax subventions.

The Deficiency Plan process allows a local jurisdiction to choose one of two types of Deficiency Plans.

Simple Deficiency Plan

Focusing on the deficient segment, the local jurisdiction develops a list of improvements necessary to meet LOS standards, and estimates the costs and implementation schedule of the proposed improvements. For a simple Deficiency Plan, measures to meet minimum LOS on the deficient segment do not have to be drawn from the BAAQMD list nor approved by the BAAQMD.

Multipurpose Deficiency Plan

A more complex Deficiency Plan may be required when a deficient segment cannot be improved to meet LOS standards. The jurisdiction must designate the segment as deficient, and develop and implement actions to measurably improve the overall LOS and contribute to significant air quality improvements. Such actions may not necessarily directly pertain to or have a measurable impact on the deficient segment itself but must show system-wide improvement. The plan should also contain an estimate of the costs of the proposed improvements, programs or actions.

For these types of plans, the BAAQMD has developed a list of actions which are considered beneficial for air quality and congestion management. Jurisdictions may include actions other than those on this list, provided the BAAQMD reviews and approves the list prior to plan adoption. The most current BAAQMD list of actions should always be consulted.

By summer 2012 prior to completion of 2012 LOS Monitoring Study, Alameda CTC recommended that the deficiency plan guidelines be updated to incorporate the specifications for the development of Areawide Deficiency Plans.

Note: A local jurisdiction may request, at any time while preparing a Deficiency Plan, that the conflict resolution process be instituted to resolve disputes, as necessary, and as set forth in the CMP.

PLAN DEVELOPMENT AND APPROVAL

Required Components

The scope of a Deficiency Plan should match the severity of the problem. Extreme deficiencies will need more significant actions; minor deficiencies need only minor actions. Action plans must be incorporated into future CMP documents. State law requires a Deficiency Plan contain and address the following:

- **Introduction and Setting**. A short description of the facility, including a map showing its location.
- **Deficiency Analysis**. The deficiency must be analyzed and described in terms of likely causes and the magnitude of the deficiency assessed.[4]
- **Screening of Actions**. An array of suitable actions should be evaluated at a sketch-planning level for potential effects on system-wide traffic congestion and air quality (traffic operations analyses or model forecasts may be required).
- **Suitable Actions**. Selected actions meant to remedy the specific deficiency should be detailed. If actions are considered which are intended to improve LOS on the CMP-network, those actions—

[4] The magnitude of the deficiency shall be defined as:

> The capacity constraint that prevents a roadway from operating at its appropriate level of speed. When biennial data become available through the LOS monitoring program, facility specific data on the relationship between volume and speed will allow for better definition of the magnitude of the deficiencies.

listed in the BAAQMD guidelines and other actions identified and approved by the BAAQMD—should be given a suitability assessment.

- **Implementation**. A detailed implementation plan should be developed, including description of the selected actions, anticipated costs, related funding sources and schedule.

Suitable Implementation Actions

Implementation actions fall into one of two categories:

- **Mitigation of Deficiency**. These types of improvements are designed to directly mitigate the specific deficiency such as highway, transit and other mode improvements.
- **Improve Air Quality/LOS**. The second types of actions are intended to provide measurable improvements to air quality and LOS, in cases where deficiencies cannot be mitigated directly.

Updates

To facilitate the process, the Alameda CTC Commission will accept minor updates to Deficiency Plans. The affected jurisdictions(s) may submit a notice to the Alameda CTC stating the reason for and content of the update. The Alameda CTC Commission will approve or reject the request for the update. Should the Alameda CTC Commission reject the request, the existing Deficiency Plan will remain in place.

Review and Evaluation

An acceptable Deficiency Plan will contain all of the required components listed above and will be evaluated on the following technical criteria:

- Completeness as required in California Government Code Section 65089.5;
- Appropriateness of the Deficiency Plan actions in relation to the magnitude of the deficiency;
- Reliability of the funding sources;
- Ability to implement the proposed actions (including jurisdictional control issues); and
- Reasonableness of the implementation plan schedule.

Alameda CTC staff and ACTAC members will review the draft Deficiency Plan. These groups will coordinate with the local jurisdiction (when the jurisdiction desires) to develop a Deficiency Plan acceptable to that jurisdiction and to the Alameda CTC. In the case of a multi-jurisdictional Deficiency Plan, the Alameda CTC staff and ACTAC will coordinate with the affected local jurisdictions, upon request.

Adoption

A final plan must be adopted by the affected local jurisdiction(s) at a noticed public hearing no later than 90 days following written notification of the annual conformance findings of the Alameda CTC Commission (presently scheduled to occur at the November Alameda CTC Board meeting). The Alameda CTC Commission will approve or reject a Deficiency Plan within 60 days of receipt of the Deficiency Plan from the local jurisdiction(s).

Jurisdictional Participation

Jurisdictions may be involved in two types of Deficiency Plans.

Single-Jurisdiction Deficiency Plan

If a deficient segment is entirely in one jurisdiction and all other jurisdictions contribute less traffic than is identified in the multi-jurisdictional Deficiency Plan process (discussed below), then the deficiency should be addressed through a local single-jurisdiction Deficiency Plan.

Multi-Jurisdictional Deficiency Plan

If a deficient segment crosses jurisdictional boundaries, borders two jurisdictions or if conditions in other jurisdictions contribute significantly[5], the deficiency must be addressed through a multi-jurisdictional Deficiency Plan pursuant to Section 65089.4 (e) (1-3).

Monitoring

Annually, the Alameda CTC will monitor implementation of the Deficiency Plans prior to the annual conformance determination (currently scheduled for November), to establish whether:

- They are being executed according to the schedule detailed in the implementation plan; or
- Changes have occurred that require modifications of the original Deficiency Plan or schedule.

Jurisdictions that have prepared and are implementing a Deficiency Plan must prepare annual status report updates for the November Board meeting. Cooperating jurisdictions that did not prepare the Deficiency Plan must also review the annual status report updates and submit a letter to the Alameda CTC stating they are in concurrence with the annual update from the lead jurisdiction. This information is required for the Board to make a determination at its November meeting whether the jurisdictions are in conformance with the CMP.

Compliance

Once the action plan identified in the Deficiency Plan is implemented, the local jurisdiction determines whether a measurable improvement in LOS has occurred or whether the plan needs to be further updated. Evaluation of the action plan may result in recommended changes to other elements of the CMP, such as the CIP or TDM Element.

A jurisdiction which is either not implementing the actions or not adhering to the stated schedule in the approved Deficiency Plan may be found in non-conformance, if the deficiency still exists.

[5] A significant contribution is defined as one that contributes 10% or more of the volume of traffic in that segment.

TRANSPORTATION DEMAND MANAGEMENT

Background and Purpose

TDM focuses on "demand-related" strategies designed to reduce the need for new highway facilities over the long term and to make the most efficient possible use of existing facilities. TDM also incorporates strategies to integrate air quality planning requirements with transportation planning and programming. Based on state law, [6] the purpose of the TDM Element in the CMP is to:

- Promote alternative transportation methods, including but not limited to carpools, vanpools, transit, bicycles and park-and-ride lots;
- Promote improvements in the balance between jobs and housing;
- Promote other strategies, including but not limited to flexible work hours, telecommuting and parking management programs; and
- Consider parking cash-out programs.[7]

The Alameda CTC and BAAQMD are required to coordinate the development of trip-reduction responsibilities and avoid duplication of responsibilities between agencies. However, cities and other local jurisdictions can establish their own TDM programs that go beyond the Alameda CTC and BAAQMD strategies, but they cannot currently require employers to implement an employee trip-reduction program unless the program is required by federal law.[8] In this regard, for trip reduction programs by employers, a legislative effort is currently underway through Senate Bill 582 (Emmerson), Regional Commute Benefits Policy. If enacted, this bill would allow MTC and BAAQMD to jointly adopt a commute benefit ordinance requiring employers operating in the nine county Bay Area to offer their employers one of the three choices:

- A pretax option;
- Employer-paid benefit; and
- Employer-provided transit.

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[6] California Government Code Section 65089 (b) (3).

[7] A parking cash-out program is defined as 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.

[8] Section 40929, added to the Health and Safety Code by SB 437 (Lewis) states: 40929 (a) Notwithstanding Section 40454, 40457, 40717, 40717.1, or 407717.5, or any other provision of law, a district, congestion management agency, as defined in subdivision (b) of Section 65099.1 of the Government Code, or any other public agency shall not require an employer to implement an employee trip reduction program unless the program is expressly required by federal law and the elimination of the program will result in the imposition of federal sanctions, including, but not limited to, the loss of federal funds for transportation purposes. (b) Nothing in this section shall preclude a public agency from regulating indirect sources in any manner that is not specifically prohibited by this section, where otherwise authorized by law.

Elements of a TDM Program

The TDM program includes four elements:

- **Required Program**. Mandates that local jurisdictions adopt and implement guidelines for site design that enhance transit, pedestrian and bicycle access.
- **Countywide Program**. Includes actions by the Alameda CTC to support the efforts of local jurisdictions.
- **Regional Program**. Includes actions by MTC, BAAQMD and Caltrans to meet areawide needs.
- **Comprehensive Program**. Recognizes the role of the private sector TDM opportunities.

Compliance with the Required Program

Mandatory compliance with the Required Program can be satisfied in one of three ways:

- Option 1: adopt "Design Strategies for Encouraging Alternatives to Auto Use through Local Development Review," prepared by ABAG and the BAAQMD;
- Option 2: adopt new design guidelines that meet the individual needs of the local jurisdictions and the intent of the goals of the TDM Element; or
- Option 3: provide evidence that the jurisdiction's existing policies and programs meet the intent of the TDM Element goals.

The Design Strategies Checklist found in Appendix D has been prepared for jurisdictions choosing to satisfy this requirement using the second or third option, above. This checklist identifies the components of a strategy that should be included in a local program to meet the CMP conformity requirements.

Local jurisdictions must provide proof of compliance annually in September prior to the November Alameda CTC Board meeting in which conformity is determined. (Note: See Table 18 for other conformance and monitoring schedule requirements).

LAND USE ANALYSIS PROGRAM

Background and Purpose

The purpose of the CMP Land Use Analysis Program is to:

- Ensure that local land use and regional transportation facility decisions are consistent;
- Assess the impacts of development in one community on other communities; and
- Promote information sharing between local governments when the decisions made by one jurisdiction may have an impact on another.

Tier I Projects

Reporting Requirements

Tier I projects are categorized as Tier I (a) and Tier I (b). A General Plan Amendment (GPA) is a Tier I(a) project and any Large-Scale Project Consistent with the General Plan[9] is a Tier I(b) project. Jurisdictions must report all Tier I projects to the Alameda CTC for regional transportation analysis.

Throughout the year, local jurisdictions are to forward to the Alameda CTC all Notices of Preparation (NOP) and draft, supplemental and final environmental documents with specified information on Tier I (a) and Tier I (b) projects with one exception: NOPs for Tier I (b) projects, for which a negative declaration is being prepared, do not need to be forwarded to the Alameda CTC. All supporting documentation and relevant data should be provided to the Alameda CTC within the initial scoping period specified by the California Environmental Quality Act (CEQA).

Submittal Requirements

Local jurisdictions must submit the land development application (study report/site plan for the proposed project or GPA) to the Alameda CTC, including:

- Description and map of the project location;
- Location of proposed street access and relationship to the Metropolitan Transportation System (MTS) roadway system;[10]
- Traffic studies prepared for the project;

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9 In February 1995, The Alameda CTC adopted the following policy for addressing Tier I (b) projects:

> That all NOPs of Environmental Impact Reports be forwarded to the Alameda CTC for comparison with the 100-trip p.m. peak threshold and, if exceeded, the Alameda CTCwill review and comment including requests for consideration of transportation impacts and mitigation measures to Metropolitan Transportation System facilities in the same manner as the current policy for general plan amendments.

[10]California Government Code requires that the Land Use Analysis Program assess the impacts of land development on "regional transportation systems." In the Bay Area, the regional transportation system is defined as the Metropolitan Transportation System (MTS), which has been officially designated by the Metropolitan Transportation Commission as part of its implementation of the 1991 federal Intermodal Surface Transportation Efficiency Act. Therefore, a distinction is made between the CMP roadway network that is used for LOS Monitoring of existing conditions **(**see Chapter 3, Level Of Service Standards) and the MTS system used for the CMP Land Use Analysis Program to determine impacts to the regional transportation system in the future. (By using the MTS for the Land Use Analysis Program, impacts on the CMP-network system will continue to be identified, since the latter is a subset of the MTS.) Further, in 2005, MTC updated the MTS to include Rural Major Collector streets and higher based on the Federal Functional Classification System (FFCS). The updated MTS is used by MTC for the purposes of funding and programming as well as in estimating roadway maintenance needs. The updated MTS was reviewed by ACTAC during the 2009 CMP Update to determine its usefulness and applicability to the Land Use Analysis Program. Based on ACTAC's input and discussions with MTC, it was determined that the updated MTS was not appropriate for the Land Use Analysis Program because it was too detailed for planning purposes and the previous version of the MTS would continue to be used.

- Description of proposed uses (single-family or multi-family dwelling units, low-income senior housing units, etc.);
- Quantification of the uses such as the number of dwelling units, number of stories of multiple story buildings, square feet of commercial use, number of employees by job types (manufacturing, retail, service, etc.);
- Expected occupancy date (year), or, if a multi-phase project, the expected occupancy dates for each phase; and
- Degree of completion (e.g. occupancy) by the CMP Capital Improvement Program (CIP) target year.[11]

Model Requirements

The Alameda CTC reviews transportation analyses of proposed land developments that require a general plan amendment and/or an environmental impact report. The Alameda CTC determines whether the proposed development would result in 100 additional p.m. peak hour trips. If so, the CMP Land Use Analysis Program requires the jurisdiction to conduct a traffic analysis of the project using the Countywide Travel Demand Model.

The Countywide Model has been updated to Projections 2009 for base year 2000 with horizon years 2005, 2020 and 2035[12]. Local jurisdictions are responsible for conducting the model runs themselves or through a consultant. The Countywide model is available to the local jurisdictions for this purpose. A letter must be submitted to the Alameda CTC requesting use of the model and describing the project. A copy of a sample letter agreement is available from the Alameda CTC upon request

Jurisdictions must address all potential impacts of the project on the MTS roadway and transit systems. The Alameda CTC does not have a policy for determining a threshold of significance for CMP requirements. Rather, it is expected that professional judgment will be applied to determine project level impacts.

- **Tier 1 (a) and (b) Land Development Application**. The local jurisdiction or their consultant must model forecasts for study horizon years 2020 and 2035 traffic volume-to-capacity ratios and traffic volumes. The Alameda CTC will use the forecasts to determine whether the proposal exceeds the trip-generation threshold—defined as 100 or more additional p.m. peak-hour trips over what is generated by the current land use designation for Tier 1 (a) and by the existing land uses for Tier 1 (b).

[11]The CMP CIP target year is the last year covered in the five-year Capital Improvement Program for a given CMP. For example, the 2011 CMP target year would be 2014/15.

[12] The Countywide Transportation Demand Model is updated following ABAG's issuance of new land use projections, usually every two years. However, with the adoption of the Sustainable Community Strategy in 2013, new land use projects are expected to be issued every few years in the same cycle as the Regional Transportation Plan.

- **Tier 1 (a) GPAs and Large-Scale Projects Consistent with the General Plan.** If the 100 p.m. peak-hour trip-generation threshold is exceeded, local jurisdictions or their consultants must model the impact of the project (and a "no project" scenario) on the MTS roadway system for study horizon years 2020 and 2035.
- **Tier 1 (a) or (b) Projects**. If the 100 p.m. peak-hour trip-generation threshold is not exceeded, the Alameda CTC will write a letter of exemption to the local jurisdiction.

The local jurisdiction must send a copy of the final decision/notice of determination to the Alameda CTC within 14 days of application approval. The data will be incorporated into the Countywide Transportation Demand Model's land use database, thus keeping it current.

Tier 2 Projects

Biennially, the Alameda CTC analyzes Tier II projects based on new land use projections issued by ABAG. Local jurisdictions have 60 days after receiving the projections in which to provide input on how their respective ABAG projections will be distributed by Countywide Travel Demand Model TAZs. Then the Alameda CTC will incorporate this information into the updated Countywide Travel Demand Model. Most recently, Projections 2009 land use and socioeconomic database from ABAG was incorporated into the model. All of the jurisdictions reviewed and provided comments on the distribution of the housing and forecast data in the traffic analysis zones within their jurisdiction boundaries. Based on their comments, the database was finalized in May 2011.

Other Programs to Reduce Congestion

Two programs, supported by the Alameda CTC, should be considered by local jurisdictions as additional ways to comply with the CMP Land Use Analysis Program.

Financial Incentives

As part of the terms of approval and/or developer agreements, financial incentive programs can help reduce traffic congestion. Employee-oriented financial incentives such as parking cash-out programs have proven to be successful in encouraging single-occupant drivers to choose other commute alternatives. For example, under this program, an employer offers to provide a cash allowance equivalent to the parking subsidy that the employer would otherwise pay to provide the employee with a parking space. Such a program applies to employers of 50 or more persons in air basins designated as "nonattainment" areas.[13]

Guaranteed Ride Home Program

The Guaranteed Ride Home program, sponsored by the Alameda CTC, ensures that any employee at participating worksites using alternative modes of travel can get home in case of an emergency. This program works in conjunction with other transportation demand management programs to reduce the number of drive-alone work trips made in Alameda County. The program is open to any Alameda County employer that provides employees who carpool, vanpool, use public transportation, bike or walk to work a free ride home in the event of an emergency or unexpected overtime. By alleviating employees' fears

[13] Section 43845 of the Health and Safety Code. The EPA determines whether air basins are in attainment.

about being “stranded” at work, the program provides a strong incentive for them to leave their cars at home and instead use carpools, vanpools or public transit to get to work.

COUNTYWIDE TRANSPORTATION DEMAND MODEL

Background and Purpose

California Government Code requires that every congestion management agency, in consultation with the regional transportation planning agency (MTC in the San Francisco Bay Area), cities and the County, develop a Countywide TDM. The purpose of this requirement is to establish a uniform technical basis for analysis and to assist local agencies in assessing the impacts of new development on the regional transportation system.

Description of the Countywide Transportation Demand Model

The nine-county San Francisco Bay Area region and areas surrounding the Bay Area are included in the travel demand model. Within Alameda County, the Countywide Travel Demand Model is based on and incorporates refinements to MTC’s TAZ system.

Model Adequacy

The most recent update to the model was completed in May 2011 by incorporating Projections 2009 of ABAG. In June 2007, the Alameda Countywide Travel Demand Model was updated to use the Cube platform. The model was then tested and validated for 2000 conditions. The validation procedure compared the model outputs to observed traffic volumes and transit ridership data. During validation, adjustments were primarily made to model inputs, such as the road network and base year land uses, rather than calibrated parameters such as trip generation rates or distribution factors. Based on the model calibration, MTC consistency check[14], and the model validation, the following conclusions were made:

- The countywide model is generally consistent with the MTC model in terms of numbers and types of trips, distribution between the Bay Area Counties, and travel modes;
- The model estimates reasonable numbers of vehicles and transit riders to and from Alameda County; and
- The countywide model estimates 2000 base year traffic on most screen lines and major regional facilities at a level of accuracy sufficient to support evaluation of peak hour traffic patterns on the CMP network; for example, select link analysis.

The model will be further refined, at least biennially, as part of the requirements to update the database to the latest ABAG Projections database. Further, it will be updated using the land use information and network characteristics that will be submitted periodically to the Alameda CTC by local jurisdictions as part of the land development impact analysis process of the CMP. The model will be next updated to

[14] The Countywide Transportation Demand Model must be consistent with, to the greatest extent possible, MTC’s modeling methodology and databases and the Countywide Transportation Demand Model for Compatibility Checklist

incorporate the 2010 census data; change the base year to 2010 to be consistent with the census; and update the forecast year to 2040 from 2035.,

Applications of the Countywide Model

The Countywide Model provides information to analyze operating conditions on any segment of the Alameda County roadway and transit system. Specifically, it can produce countywide information for 2000 base year with study horizon years of 2005, 2020 and 2035[15]. It can be used to estimate existing and future operating conditions on the CMP roadway system such as:

- Land use impacts and mitigation measures related to the CMP Land Use Analysis Program;
- The effect of projects proposed in the CMP CIP;
- Recommended actions or mitigation measures for Deficiency Plans; and
- Forecasting operating conditions on specific roadway segments.

Traffic Analysis for Proposed Projects

When a proposed project appears to generate at least 100 p.m. peak hour trips over existing conditions, the CMP Land Use Analysis Program requires the sponsoring local jurisdictions to develop traffic analysis using the most recent Countywide Travel Demand Model identifying the impact of the development on the selected MTS network. Potential impacts of the proposed project on the MTS would need to be addressed in the draft Environmental Impact Report.

Use of Countywide Transportation Demand Model

Since 1998, local jurisdictions have been responsible for conducting model runs themselves or through a consultant. The Countywide Model is available to local jurisdictions to run travel demand models through formal request. Before the Model can be released to the jurisdiction or its' consultant, a letter (signed by representatives from the jurisdiction and its consultant, if applicable) must be submitted to the Alameda CTC for each project, requesting use of the model and describing the project (sample of Model Agreement letter is available upon request).

The Alameda CTC Countywide Transportation Demand Model may be used for the following CMP-related uses:

- Forecasting of operating conditions on roadway segments;
- Local land use analysis testing and updating consistent with the current CMP Land Use Analysis Program requirements; and
- Testing of mitigation measures or Deficiency Plan recommendations.

[15] The base years and horizon years are generally updated every two years with the Countywide Transportation Demand Model update.

Countywide Model documentation, Traffic Analysis Zones, plots of the roadway network and traffic volume plots are available at the Alameda CTC website

CMP Annual Conformity Findings

Jurisdictions, therefore, need to submit information to the Alameda CTC demonstrating they are in compliance with the following:

- Land Use Analysis Program
- Deficiency Plan or Update (for some jurisdictions, as discussed above)
- TDM Site Design Checklist
- Payment of Annual Fees to Alameda CTC

The Alameda CTC reviews the draft conformity findings at each October Board meeting. The City's compliance with the Tier 2 Land Use Analysis Program depends on providing this information by the November Alameda CTC Commission meeting. If the jurisdiction is not in conformance by the November Alameda CTC Commission meeting, it could jeopardize its gas tax funding.

State Requirements

While the Alameda CTC does not have the authority to approve or deny local developments, it may find the local jurisdiction in non-conformance with the Land Use Analysis Program requirement of the CMP. At the time of the finding, the Alameda CTC would provide recommendations for corrective actions.

If after 90 days of notification, the local jurisdiction is still in non-conformance with the Land Use Analysis Program requirement of the CMP, the Alameda CTC is required to provide notice to the California Transportation Commission and the State Controller. The notice includes the reasons for the finding and evidence that the Alameda CTC correctly followed procedures for making the determination. The State Controller would then withhold the non-conforming jurisdiction's increment of subventions from the fuel tax made available by Proposition 111, and the jurisdiction will not be eligible to receive funding for projects through the federal STP and CMAQ Quality Program. If within the 12-month period following the receipt of a notice of non-conformance, the Alameda CTC determines that the city or county is in conformance with the Land Use Analysis requirement of the CMP, the withheld Proposition 111 funds will be released. If after the 12-month period the city or county has not conformed, the withheld Proposition 111 funds will be released to the Alameda CTC for projects of regional significance included in the CMP or a deficiency plan.

APPENDIX J

Sample Response for GPA and NOP

Date:

To:
Address:
Email:

SUBJECT: Comments on the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for City of xxxxxxxxxxx

Dear Ms./Mr:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the City of xxxxxxxxxx. The Project Area covers…… …:

Details added here

The Alameda County Transportation Commission (Alameda CTC), on behalf of the Alameda County Congestion Management Agency (ACCMA) through the powers delegated to Alameda CTC by the joint powers agreement which created Alameda CTC, respectfully submits the following comments:

- The City of……. adopted Resolution No. …… on …….. establishing guidelines for reviewing the impacts of local land use decisions consistent with the Alameda County Congestion Management Program (CMP). If the proposed project is expected to generate at least 100 p.m. peak hour trips over existing conditions, the CMP Land Use Analysis Program requires the City to conduct a traffic analysis of the project using the Countywide Transportation Demand Model for projection years 2020 and 2035 conditions. Please note the following paragraph as it discusses the responsibility for modeling.

    - The CMP was amended on March 26th, 1998 so that local jurisdictions are responsible for conducting the model runs themselves or through a consultant. The Alameda CTC and ACCMA have a Countywide model that is available for this purpose. The City of ……. and the ACCMA signed a Countywide Model Agreement on …….. Before the model can be used for this project, a letter must be submitted to the Alameda CTC requesting

use of the model and describing the project. A copy of a sample letter agreement is available upon request.

Potential impacts of the project on the Metropolitan Transportation System (MTS) need to be addressed. (See 2009 CMP Figure 2). The MTS roads in the city of ……. in the project study area are; ……. .

- The DEIR should address all potential impacts of the project on the MTS roadway and transit systems. These include MTS roadways as shown in the attached map as well as BART and AC Transit. Potential impacts of the project must be addressed for 2020 and 2035 conditions.

  - Please note that the ACCMA and Alameda CTC have *not* adopted any policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts (Please see chapter 6 of 2009 CMP for more information).

  - For the purposes of CMP Land Use Analysis, 2000 Highway Capacity Manual is used.

- The adequacy of any project mitigation measures should be discussed. On February 25, 1993, the ACCMA Board adopted three criteria for evaluating the adequacy of DEIR project mitigation measures:

  - Project mitigation measures must be adequate to sustain CMP service standards for roadways and transit;
  - Project mitigation measures must be fully funded to be considered adequate;
  - Project mitigation measures that rely on state or federal funds directed by or influenced by the CMA must be consistent with the project funding priorities established in the Capital Improvement Program (CIP) section of the CMP or the Regional Transportation Plan (RTP).

  The DEIR should include a discussion on the adequacy of proposed mitigation measures relative to these criteria. In particular, the DEIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and what would be the effect on LOS if only the funded portions of these projects were assumed to be built prior to project completion.

- Potential impacts of the project on CMP transit levels of service must be analyzed. (See 2009 CMP, Chapter 4). Transit service standards are 15-30 minute headways for bus service and 3.75-15 minute headways for BART during peak hours. The DEIR should address the issue of transit funding as a mitigation measure in the context of the Alameda CTC/ACCMA policies discussed above.

- The DEIR should also consider demand-related strategies that are designed to reduce the need for new roadway facilities over the long term and to make the most efficient use of existing facilities (see 2009 CMP, Chapter 5). The DEIR should consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. The Site Design Guidelines Checklist may be useful during the review of the development proposal. A copy of the checklist is enclosed.

- The EIR should consider opportunities to promote countywide bicycle routes identified in the Alameda Countywide Bicycle Plan, which was approved by the ACCMA Board in October 2006. The approved Countywide Bike Plan is available at http://www.accma.ca.gov/pages/HomeBicyclePlan.aspx.

- The Alameda Countywide Strategic Pedestrian Plan, developed by the Alameda County Transportation Improvement Authority (ACTIA), was adopted by both the ACTIA and ACCMA Boards in September 2006 and October 2006, respectively. The EIR should consider opportunities to promote pedestrian improvements identified in the Plan through the project development review process. The approved Plan is available at http://www.actia2022.com/ped-toolkit/Full_Ped_Plan.pdf

- For projects adjacent to state roadway facilities, the analysis should address noise impacts of the project. If the analysis finds an impact, then mitigation measures (i.e., soundwalls) should be incorporated as part of the conditions of approval of the proposed project. It should not be assumed that federal or state funding is available.

- Local jurisdictions are encouraged to consider a comprehensive Transit Oriented Development (TOD) Program, including environmentally clearing all access improvements necessary to support TOD development as part of the environmental documentation.

Thank you for the opportunity to comment on this Notice of Preparation. Please do not hesitate to contact me at 510.208.7415 if you require additional information.

Sincerely,

APPENDIX K

Glossary of Terms

AB 84. The original bill number for the legislation that required Project Study Reports (PSRs) and the development of Future Project Development lists by the counties.

Air Quality Attainment Plan. The plan for attainment of state air quality standards, as required by the California Clean Air Act of 1988. It is adopted by air quality districts and subject to approval by the State Air Resources Board.

Association of Bay Area Governments (ABAG). The regional agency that is responsible for regional planning other than for transportation. ABAG publishes forecasts of projected growth for the region.

Average Daily Traffic (ADT). The average number of vehicles passing a specified point during a 24-hour period.

Bay Area Air Quality Management District (BAAQMD). The regional agency created by the state legislature for the Bay Area air basin (Alameda, Contra Costa, western Solano, southern Sonoma, Marin, Napa, San Francisco, San Mateo, Santa Clara counties) that develops, in conjunction with MTC and ABAG, the state and federal air quality plans for the region. BAAQMD has an active role in approving the TCM (see definition below) plan for the region, as well as in controlling stationary and indirect sources of air pollution.

Bid targets. Based on the county minimum formula, each county is limited in the amount of funds that can be requested from the state in a given STIP cycle. This limit is called the bid target. In a multi-county region such as MTC, bid targets can be pooled to give additional flexibility at the regional level. MTC also uses bid targets for the federal Surface Transportation Program.

California Transportation Commission (CTC). A body appointed by the Governor and confirmed by the legislature that considers Regional Transportation Improvement Programs (RTIPs) and the PSTIP (see definitions below) and then includes transportation projects from these programs into the State Transportation Improvement Program (STIP). This qualifies the projects for state funding. The CTC also has financial oversight over the major programs authorized by Propositions 111 and 108.

Caltrans -- The California State Department of Transportation. Responsible, as the owner/operator of the state highway system, for its safe operation and maintenance. Proposes projects for Intercity Rail, Interregional Roads, and soundwalls in the PSTIP (see definition below). Also responsible for the HSOPP (see definition below), Toll Bridge, and Aeronautics programs. The TSM and State/Local Partnership Programs are administered by Caltrans. Caltrans is the implementing agency for most state highway projects, regardless of program, and for the Intercity Rail program.

Capital Improvement Program (CIP). As used in this document: A seven-year program of projects to maintain or improve the traffic level of service and performance measures developed by the CMP, and to mitigate regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to transportation-related vehicle emissions air quality mitigation measures.

Capital Outlay. "All money allocated by the CTC from the State Highway, Account, and the net revenues from the passenger rail transportation Bond Fund for streets, highways, guideways, and rail, but not including allocations or expenditures for projects for maintenance, traffic system management, intercity rail, and the state-local partnership program, which are expended for construction, including the acquisition of rights-of-way, reconstruction, and construction engineering." (Streets and Highways Code 188.)

Capital Priorities. A process used by MTC to evaluate and prioritize transit projects in the region. All sources of transit funding, including FTA grants, state programs, and other sources are considered. This process involves all of the transit operators in the region, including bus, rail, and ferries.

Congestion Management Agency (CMA). The agency responsible for developing the Congestion Management Program and coordinating and monitoring its implementation.

Congestion Management Program (CMP). A multi-jurisdictional program to reduce traffic congestion. Required of every county in California with an urbanized area as defined by the Census Bureau (at least 50,000 people).

Council of Governments. A voluntary consortium of local government representatives, from contiguous communities, meeting on a regular basis, and formed to cooperate on common planning and solve common development problems of their area. COGs can function as the RTPAs and MPOs in urbanized areas.

County Minimums. Instituted in 1983 by SB 215 (Foran), the county minimum represents the minimum share of programming each county should receive. Under this statute (Section 188.8 of the Streets and Highways Code), 70 percent of the capital outlay (defined above) funds must be expended in each county according to a formula based 75 percent on county population and 25 percent on state highway miles in the county. The county minimum calculated over a fixed five year period called a quinquennium.

Database. 1) A collection of data from which information is derived and from which decisions can be made; and 2) A non-redundant collection of data items that can be processed by one or more computer applications.

Federal Highway Administration (FHWA). A division of the U.S. Department of Transportation, established to ensure development of an effective national road and highway transportation system. It assists states in constructing highways and roads, and provides financial aid at the local level.

Federal Transit Administration (FTA). A division of the U.S. Department of Transportation, delegated by the Secretary of Transportation to administer the federal transit program under the Urban Mass Transportation Act of 1964, as amended, and various other statutes.

FTA Section 3 Funds. Discretionary transit capital fund provided by the federal government through FTA. New Rail Starts and Extensions are funded through this program, which operates through earmarking at the Congressional level. The Section 3 program is updated approximately every four years. The minimum local match is 20 percent, although larger local shares are encouraged.

FTA Section 8 Funds. Transit operating funds provided by the federal government through UMTA. Made available through Section 8 of the Urban Mass Transportation Act of 1972, Section 8 funds are available for planning components of the operating budget, only, such as development of Short Range Transit Plan.

FTA Section 9 Capital Funds. Capital funds provided by the Federal government through FTA. Section 9 capital funds are available to support capital purchases only. They must be matched with local capital funds on an 80 percent federal. 20 percent local basis.

FTA Section 9 Operating Funds. Operating funds provided by the Federal government through FTA. Available only to support annual operating budgets. Capital purchases must be supported with other funds. The total amount of Section 9 operating funds is determined by Congress each year and is then divided among regions and operators within regions on a formula basis.

FTA Section 16 (b) 2 Funds. Funds provided by the federal government through FTA to private non-profit providers of transportation for the elderly and handicapped. Program is administered annually in the Bay Area by MTC.

FTA Section 18 Funds. Transit funds provided by the federal government through FTA by formula to rural areas. Administered by Caltrans in California, these funds can be used for either capital or operating expenses. Capital projects require a 20 percent local match. Operating projects require a 50 percent local match.

Flexible Congestion Relief (FCR). One of the state's funding programs for local or regional transportation projects that will reduce congestion. State highway projects, local roads, and rail guideway projects are all eligible.

Fund Estimate. The STIP cycle begins with the development of the Fund Estimate, which compares existing commitments against total estimated revenue expected from state and federal sources. Caltrans estimates state and federal funds "reasonably expected" in annual increments for 7 years (the STIP period). The calculation of existing capital program commitments is based on Caltrans' Project Delivery Report (see definition below), while non-capital expenditures of operation and administration costs are estimated based on current spending and projected needs. This comparison of revenues to commitments results in an estimate of total uncommitted funds that are available for programming and which are then

prorated to each program category. The Fund Estimate is required by law to be submitted by 7/15 of odd-numbered years and to be adopted by the CTC by 8/15 of odd numbered years. CTC adopts a policy, known as the "Fund Estimate Methodology" that guides Caltrans in formulating the Fund Estimate.

High Occupancy Vehicle Lane (HOV). A lane of freeway reserved for the use of vehicles with more than a preset number of occupants; such vehicles often include buses, taxis and carpools.

Indirect Source Control Measure. The Federal Clean Air Act defines indirect source as "...a facility, building, structure, installation, real property, road or highway which attracts, or may attract, mobile sources of pollution." An indirect source control measure is a rule or ordinance established to reduce the mobile source emissions associated with specific activity centers such as those noted above.

Interregional Road System (IRRS). On February 1, 1990, Caltrans submitted a plan to the state legislature that identified a set of projects that "will provide the most adequate interregional road system to all economic centers in the State." Statute defines eligible routes that were included, and specified that these be located outside the boundaries of urbanized areas of over 50,000 population, "except as necessary to provide connection for continuation of the routes within urban areas." From this plan, Caltrans includes projects, consistent with the Fund estimate, in its PSTIP to the CTC for programming in the STIP.

Level of Service (LOS). A qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

Metropolitan Transportation Commission (MTC). Created by the state legislature in 1970 to prepare a Regional Transportation Plan for the nine counties of the Bay Area. Other important responsibilities include: approving transportation projects that receive state or federal funding, allocating several sources of funds for transit operations, evaluating the performance of the transportation system and the provision of transportation service, promoting and setting guidelines for transit systems coordination, and advocating adequate transportation funding. MTC consists of 16 voting members, including one member from ABAG, and one member from the Bay Conservation and Development Commission. MTC also includes 2 non-voting members, from the state and federal transportation agencies.

Metropolitan Transportation System . A regional, multi-modal transportation system defined as part of MTC's RTP (see definition below). Emphasizes a balanced strategy of highway, arterial, and transit capital investments and operational improvements to manage congestion projected over the next 20 years.

Model: Gravity. A mathematical trip distribution model that is based on the premise that the amount of travel between two zones in proportional to the amount of activity in each of the two zones and inversely proportional to the impedance to travel between the two zones. In other words, trips produced in any given area will distribute themselves in accordance with the accessibility of other areas and the opportunities.

Model: Land Use. A model used to predict the future spatial allocation of urban activities (land use), given total regional growth, the future transportation system, and other factors.

Model: Mode Choice. A model used to forecast the proportion of total person trips on each of the available transportation modes.

Model: Regional Growth. A model used to estimate land uses in a region.

Model: Travel Demand. A mathematical equation or graphic technique used to simulate traffic movements, particularly those in urban areas or on a freeway.

North/South Split. State law (Section 188 of the Streets and Highway Code) requires that programming be balanced so that 60 percent of the capital outlay (see definition above) is spent in the 11 Southern counties, and 40 percent is spent in the North (45 counties). This balance must occur for the period July 1, 1989 to June 30, 1993, and for each subsequent five year period. This rule has a serious impact on the type of projects programmed in the North or the South. Rehabilitation and safety funds have historically tended to be spent roughly 60 percent in the north, and only 40 percent in the South, due to worse weather conditions and more mountainous roads in the North. In addition, engineering costs are relatively higher in the North than in the South. Furthermore, Caltrans' project support for locally funded projects, of which the North has a disproportionate share, is also included. Thus, funds for capacity increasing projects have historically been weighted towards the South, so that the overall balance remains 60 percent/40 percent.

Obligation. An action by an administrative agency approving the spending of money for a specific purpose to a specific grant recipient.

Pavement Management System (PMS). Required by Section 2108.1 of the Streets and Highways Code, any jurisdiction that wishes to qualify for funding under the STIP must have a PMS that is in conformance with the criteria adopted by the Joint City/County/State Cooperation Committee. At a minimum, the PMS must contain:

- An inventory of the arterial and collector routes in the jurisdiction that is reviewed and updated at least biennially;
- An assessment of pavement condition for all routes in the system, updated biennially;
- Identification of all sections of pavement needing rehabilitation or replacement; and
- Determination of budget needs for rehabilitation or replacement of deficient sections of pavement for the current biennial period, and for the following biennial period.

Certification is done by implementing jurisdiction and submittal to MTC. MTC then makes a finding of agreement with the certification and transmits the certification to the CTC with the RTIP.

Peak (Peak Period, Rush Hours). 1) The period during which the maximum amount of travel occurs. It may be specified as the morning (A.M.) or afternoon or evening (P.M.). 2) The period when demand for transportation service is the heaviest.

Principal Arterial. The functional classification system at the federal level defines principal arterials for rural areas, urbanized areas, and small urban areas. (Note: other definitions of principal arterials exist). In urbanized areas, the principal arterial system can be identified as unusually significant to the area in which it lies in terms of the nature and composition of travel. Principal arterials derive their importance from service to rural oriented traffic, but equally or even more importantly, from service for major movements within the urbanized area. The principal arterial system should carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. In addition, significant intra-area travel, such as between major business districts and outlying residential areas, between major inner city communities, or between major suburban centers should be served by this system. Frequently, the principal arterial system will carry important intra-urban as well as intercity bus routes. Finally, this system in small urban and urbanized areas should provide continuity for all rural arterials which intercept the urban boundary. Because of the nature of the travel served by the principal arterial system, almost all fully and partially controlled access facilities will be part of this functional system. However, this system is not restricted to controlled access routes. The spacing of urban principal arterials will be closely related to the trip-end density characteristics of particular portions of the urban areas. The US Department of Transportation provides the guidance than 50-65 percent of the VMT should be accounted for on the principal arterial system.

Project Delivery Report. Government Code Section 14525.5 requires Caltrans to submit to the legislature by November 15 of each year a report on the delivery of all state highway projects in the adopted STIP which cost $1M or more and for which the department is the responsible agency for project development work (including some, but not all locally funded projects). The report must identify milestone dates by month and year for these projects, and must summarize the number of projects which met milestones and identify those that failed to meet one or more milestones. For those that failed, the report must explain the reasons for the delay and present a plan to resolve any problems and a new schedule for delivery. The Plan must also include an estimate of Caltrans' capital outlay project development staffing needs for the next fiscal year in order to delivery the adopted STIP. The Report must also include a determination of the portion of project development work that will be performed by Caltrans and the portion that will be "contracted out." This Plan is then assessed by the Legislative Analyst in its annual analysis of the Governor's proposed budget.

Project Study Report (PSR). Chapter 878 of Statutes 1987 requires that any capacity increasing project on the state highway system, prior to programming the STIP, have a completed PSR. The PSR must include a detailed description of the project scope and estimated costs. The intent of this legislation was to improve the accuracy of the schedule and costs shown in the STIP, and thus improve the overall accuracy of the estimates of STIP delivery and costs.

Proposed State Transportation Improvement Program (PSTIP). This seven-year program is based on the adopted STIP and the most recent Project Delivery Report. It may include additional schedule changes

and/or cost changes, plus new projects that Caltrans proposed for the interregional road system, retrofit soundwalls, and toll bridge and aeronautics programs, as well as the intercity rail program. Caltrans may also propose, under specified conditions, alternative FCR projects to those proposed in the RTIPs; this is the only overlap with the RTIPs. The PSTIP is due to the CTC on 12/1 of odd numbered years.

Proposition 116. Passed by voters in June of 1990, this initiative sponsored by the Planning and Conservation League provides $1.99B in rail bonds, primarily to projects specified in the legislation. Guidelines for the implementation of the program were available in the Fall of 1990.

Public Transit (Mass Transit). Passenger transportation service, usually local in scope, that is available to any person who pays a prescribed fare. Operated on established schedules along designated routes or lines with specific stops and is designed to move relatively large numbers of people at one time. Examples include bus, ferry, light rail and rapid transit.

Public Transportation. Transportation service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point to another. Routes and schedules may be determined through a cooperative arrangement. Subcategories include public transit service, and paratransit service that are available to the general public.

Regional Transportation Improvement Program (RTIP). A list of proposed transportation projects submitted to the CTC by the regional transportation planning agency (for the Bay Area. MTC), as a request for state funding. The individual projects are first proposed by the CMAs, then evaluated and prioritized by the regional agency for submission to the CTC. The RTIP has a seven year planning horizon, and is updated every two years. MTC may only include projects in its RTIP that are first included in a CMP.

Regional Transportation Plan (RTP). A comprehensive 20-year plan for the region, updated every two years by the regional transportation planning agency (for the Bay Area. MTC). The RTP includes goals, objectives and policies, and recommends specific transportation improvements.

Ridesharing. Two or more persons traveling by any mode, including but not limited to, carpooling, vanpooling, taxipooling, jitney and public transit.

Regional Traffic Signalization and Operations Program (RTSOP). Administered by MTC, this program was created to fund traffic signalization projects that implement cost effective traffic control measures. The types of eligible projects include signal re-timing; upgrades of existing controllers to comply with AB 3418 and NTCIP; repair, replacement, installation, and improvement of hard-wire interconnect systems; and upgrade and improvements to traffic signal systems.

Short Range Transit Plans (SRTP). A seven-year comprehensive plan required by federal and regional transportation funding agencies of all transit operators. The plans must define the operator's mission,

analyze its past and current performance, and plan specific operational and capital improvements to realize its short-term objectives.

State Highway Operations and Protection Program (SHOPP) [Formerly called the Highway System Operations and Protection Plan (HSOPP)]. A program created by state legislation that includes state highway safety and rehabilitation projects, seismic retrofit projects, land and buildings projects, landscaping, some operational improvements, bridge replacement, and the minor program. SHOPP is a four year program of projects, adopted separately from the STIP cycle. The June 1990 gas tax increase partially funds the program, but it is primarily funded through the "old" 9 cent gas tax and federal funds. For the purposes of the Fund Estimate, a formula based on a pavement index and safety concerns is used to estimate an additional 3 years of the SHOPP program.

State Implementation Plan (SIP). State plan required by the Federal Clean Air Act of 1990 to attain and maintain national ambient air quality standards. It is adopted by local air quality districts and the State Air Resources Board.

State/Local Partnership. Originally created by SB 140, and subsequently funded by the passage of Proposition 111 by the voters in June of 1990, the State/Local Partnership provides state matching funds for locally funded and constructed highway and exclusive public mass transit guideway projects. $2 billion over ten years have been designated for this program. Eligible projects are defined by the legislation and clarified by guidelines published by the Caltrans Division of Local Streets and Roads. Applications are annually submitted to Caltrans (by June 30 for the following fiscal year), which administers the program. The amount of state match available in a given year is dependent upon the number of eligible applicants and the size of the appropriation to the program by the legislature during the budget process. The state match can not exceed 50 percent.

State Transit Assistance (STA). This program provides funding for transit and transportation planning. Fifty percent of the revenues transferred to the TP&D Account (see definition below) are appropriated to STA. STA apportionments to regional transportation planning agencies (MTC in the Bay Area) are determined by two formulas. 50 percent by populations and 50 percent by the amount of operator revenues (fares, sales tax, etc.) for the prior year. The Bay Area usually receives about 38 percent of the amount available for STA state-wide. STA funds may be used for transit capital or operating expenditures. Passage of Proposition 117 disallows use of STA funds for streets and roads in the non-urban counties.

State Transportation Improvement Program (STIP). A list of transportation projects, proposed in RTIPs and the PSTIP, which are approved for funding by the CTC.

Traffic Systems Management (TSM) Program. A state-funded program that funds those projects which "increase the number of person trips on the highway system in a peak period, without significantly increasing the design capacity of the system, measured by vehicle trips, and without increasing the number of through traffic lanes". This program is funded outside of the STIP process, through direct

application to Caltrans. The CTC programs the projects from a prioritized list submitted by Caltrans. Statute requires that priority be given to projects from counties with adopted CMPs.

Transit Capital Improvement Program (TCI). A state program, currently funded primarily from the TP&D account (see definition below) for transit capital projects and the STA program (see definition above). An annual program, all state funds must be matched 50 percent by local funds.

Transit Operators Coordinating Council (TOCC). A statutorily created committee of MTC that consists of the General Managers of the major transit operators in the region. It meets monthly to discuss matters of mutual concern and to advise MTC.

Transportation Control Measures (TCMs). A measure intended to reduce pollutant emissions from motor vehicles. Examples of TCMs include programs to encourage ridesharing or public transit usage, city or county trip reduction ordinances, and the use of cleaner burning fuels in motor vehicles. MTC has adopted specific TCMs, in compliance with the Federal and State Clean Air Acts that can be found in MTC Resolution No. 3758 and the Transportation Control Measure Plan for the State Clean Air Plan prepared by MTC in January 2006.

Transportation Demand Management (TDM). "Demand-based" techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of the peak hours.

Transportation Improvement Program (TIP)- A federally required document produced by the regional transportation planning agency (MTC in the Bay Area) that states the investment priorities for transit and transit-related improvements, mass transit guideways, general aviation and highways. The TIP is the MTC's principal means of implementing long-term planning objectives through specific projects.

Transportation Management Association (TMA). A consortium of business and industry (private sector) interests formed to help solve mutual transportation problems. A TMA is not in any form a publicly sponsored or coordinated agency or group.

Transportation Planning and Development Account (TP&D). A state account, funded by the sales tax on the new 9 cent gas tax and the diesel sales tax, that is the primary funding source for the TCI (see definition above) program.

Transportation System Management (TSM). A set of relatively low-cost techniques to relieve congestion without adding vehicle capacity to the transportation system. TSM techniques are numerous. Some are "demand-based" techniques such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of the peak hours. (Sometimes the demand-based strategies are referred to as TDM). Other TSM measures are engineering-oriented, such as timing traffic signals to smooth the flow of traffic, and ramp metering, which regulates the entrance of vehicles onto a freeway, increasing the efficiency of the freeway.

Urban and Commuter Rail. A state funding program financed by the sales and bonds authorized by Proposition 108. Two additional bond measures to fund this program were rejected by voters in 1992 and 1994. All projects must be matched 50 percent by local funds. Projects are proposed through the CMP process to regional agencies, which then may include them in their RTIPs.

Urbanized Area. As defined by the Bureau of the Census, a population concentration of at least 50,000 inhabitants, generally consisting of a central city and the surrounding, closely settled, contiguous territory (suburbs). The boundary is based primarily on a population density of 1,000 people/mile, but also includes some less densely settled areas, as well as such areas as industrial parks and railroad yards, if they are within areas of dense urban development. The boundaries of urbanized areas, the specific criteria used to determine urbanized areas, or both, may change in subsequent censuses.

Vehicle Miles Traveled (VMT). Travel demand forecasting (modeling) is used to generate the average trip lengths for a region. The average trip length measure can then be used in estimating vehicle miles of travel, which in turn is used in estimating gasoline usage or mobile source emissions of air pollutants.

Vehicle Occupancy. The number of people aboard a vehicle at a given time; also known as auto or automobile occupancy when the reference is to automobile travel only.

Vehicle Trip. A one-way movement of a vehicle between two points.

APPENDIX L

Glossary of Acronyms

ABAG	Association of Bay Area Governments
AC Transit	Alameda-Contra Costa Transit District
ACCMA	Alameda County Congestion Management Agency
ACE	Altamont Commuter Express
ACTA	Alameda County Transportation Authority (1986 Measure B authority)
ACTAC	Alameda County Technical Advisory Committee
ACTIA	Alameda County Transportation Improvement Authority
ADA	Americans with Disabilities Act
ATG	Automobile Trip Generated
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit District
Caltrans	California Department of Transportation
CBTP	Community Based Transportation Plan
CDT	Community Design Transportation
CEQA	California Environmental Quality Act
CIP	Capital Investment Program
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Program
CTC	California Transportation Commission
CWTP	Countywide Transportation Plan
EIR	Environmental Impact Report
FWHA	Federal Highway Administration
GOA	Growth Opportunity Areas
GPA	General Plan Amendment
GRH	Guaranteed Ride Home Program
HCM	Highway Capacity Manual
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
JPA	Joint Powers Agreement

LAVTA	Livermore-Amador Valley Transportation Authority
LOS	Level of Service
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
NEPA	National Environmental Protection Agency
NOP	Notice of Preparation
O/D	Origin/Designation
PCI	Pavement Condition Index
RTP	Regional Transportation Plan
RTIP	Regional Transportation Improvement Program
SCS	Sustainable Communities Strategy
SCTVA	Santa Clara Transportation Valley Authority
SFCTA	San Francisco County Transportation Authority
SIP	State Implementation Plan
STA	State Transit Assistance
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
SWITRA	Statewide Integrated Traffic Record System
TAZ	Traffic Analysis Zones
TCM	Transportation Control Measures
TCRP	Transportation Congestion Relief Program
TDM	Travel Demand Management
TEP	Transportation Expenditure Plan
TFCA	Transportation Fund for Clean Air
TIP	Transportation Improvement Program
TLC	Transportation for Livable Communities
TMS	Transportation Management System
TOD	Transit Oriented Development
TOS	Transportation Operations System
V/C	Volume/Capacity
VMT	Vehicle miles traveled