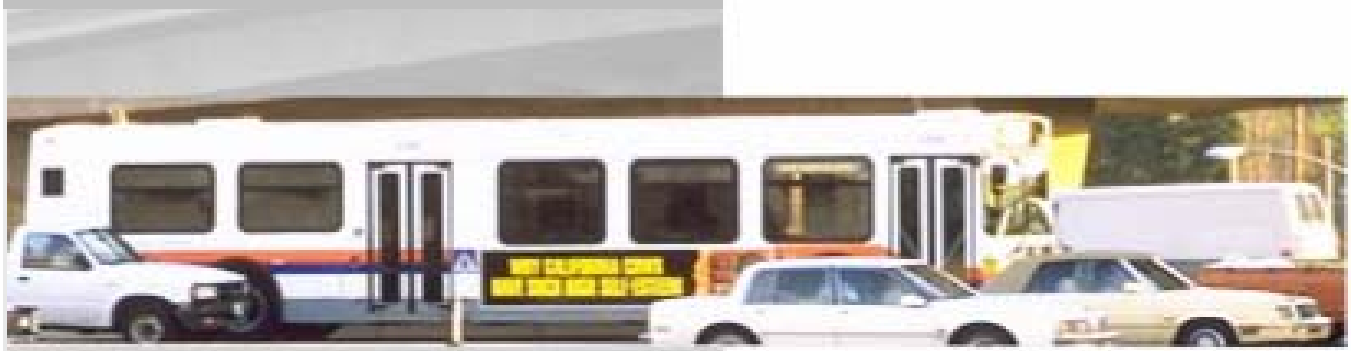
2003 Update

Orange County Congestion Management Program



November 2003

Table of Contents

Appendices

CMP GOALS

Reduce traffic congestion

Coordinate land use and development

Determine gas tax fund eligibility

Introduction

In June 1990, the passage of Proposition 111 gas tax increase required urbanized areas in the State with a population of 50,000 or more to adopt a Congestion Management Program (CMP). Decisions made the following year by the majority of local governments in Orange County designated the Orange County Transportation Authority (OCTA) as the Congestion Management Agency (CMA) for the county. Since then, OCTA has been charged with the development, monitoring and biennial updating of Orange County's CMP. The goals of Orange County's Congestion Management Program are to reduce traffic congestion and provide a mechanism for coordinating land use and development decisions. The CMP is also the vehicle for proposing transportation projects, which are eligible to compete for the State gas tax funds.

The passage of Assembly Bill 2419 in July 1996 provided local agencies the option to elect out of the CMP process without the risk of losing state transportation funding. For this to occur, a majority of local governments, representing a greater part of the county population, must adopt resolutions electing to be exempt from the CMP. However, because CMP requirements are similar to those of the Orange County Measure M Growth Management Program, and because the CMP's developed in the Southern California area provide the basis for fulfilling federal requirements for the Congestion Management System (CMS) prepared by the Southern California Association of Governments (SCAG), local jurisdictions in Orange County expressed a desire to continue the existing CMP process. The OCTA Board of Directors affirmed this decision on January 13, 1997.

Since 1992, the Orange County CMP has been developed and submitted by OCTA every even year. Because the Congestion Management Programs for all other counties in the SCAG region are submitted every odd year, coincident with the preparation of the Regional Transportation Improvement Program (RTIP), OCTA prepared an interim CMP in 1999 to bring

Orange County into conformity with the SCAG CMP schedule. All subsequent updates have been prepared to coincide with this timetable.

The 2003 Orange County CMP is a composite of OCTA and local agency programs and submittals, developed through a cooperative effort involving local jurisdictions, public agencies, business, and community groups. While the Congestion Management Program embodies several of Orange County's policies for improving traffic congestion and air quality, it is not the only program designed to do so. The Measure M Growth Management Program, for example, was developed to assess and mitigate the impacts of local land use decisions on the transportation network. In addition, the countywide air quality strategy incorporates policies that help to reduce air pollution and ease traffic congestion. The OCTA's long-range transportation plan, Directions 2030, establishes multi-modal policies, goals, and programs for the county and ties all of OCTA's programs into a unified transportation strategy designed to address the transportation needs arising from continued growth both within the county as well as in neighboring communities. This plan was developed with extensive community and local agency input and coordination. While these other programs are not discussed at great length in the 2003 CMP, it should be realized that they, too, play an important part in improving traffic congestion and air quality.

Land Use Coordination

Legislative Text

There are two provisions of the CMP legislation that specifically address the assessment of land use decisions and their impacts upon the CMP Highway System.

Government Code Section 65089(b)(4) requires development and implementation of "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". Further, it also states: "In no case shall the program include an estimate of the costs of mitigating inter-regional 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 that are not reimbursed from toll revenues or other state and federal sources. The (congestion management) agency shall calculate the amount of credit to be provided."

Government Code Section 65089.3 requires the congestion management agency to monitor implementation of the CMP biennially and make a determination as to whether the county and the cities have adopted and implemented a program to analyze the impacts of land use decisions. An estimate of the costs associated with mitigating these impacts must be included in the program.

Compliance

Each jurisdiction in Orange County selected a CMP Traffic Impact Analysis (TIA) process to analyze impacts of development project submittals on the CMP Highway System (CMPHS). Local jurisdictions were given a choice of either using the process outlined in the CMP TIA guidelines (see Appendix A-1) or using their existing traffic-environmental analysis processes, as long as consistency is maintained with the CMP TIA guidelines.

Since January 1, 1994, the selected TIA process has been consistently applied to all development projects meeting the adopted trip generation thresholds (i.e., 2,400 or more daily trips for projects adjacent to the CMP Highway System and 1,600 or more daily trips for projects that directly access the CMP Highway System).

Exemptions from this requirement were allowed for selected categories of development projects consistent with state legislation (see Appendix A-2 for a listing of exempt projects). For each of the traffic impact analyses conducted, attention was focused on:

- Identifying the extent to which, and location where, trips generated by the proposed project cause CMPHS intersections to exceed their LOS standards

- Assessing feasible mitigation strategies capable of reducing the identified impact, thereby maintaining the adopted LOS standard

- Utilizing existing environmental processes and inter-jurisdictional forums to conduct cooperative, inter-jurisdictional discussion when a proposed development which will generate an increase in traffic at CMPHS locations outside the jurisdiction's boundaries was identified, and where proposed CMP mitigation strategies include modifications to roadway networks beyond the jurisdiction's boundaries

The biennial reporting process enables jurisdictions to report any locations where CMPHS level of service standards are projected to be exceeded as well as the extent to which they would be impacted as a result of development project approvals undergoing CMP traffic impact analyses. All jurisdictions in Orange County were found in compliance with the CMP land use coordination requirement.

Transportation Demand Management

Legislative Text

As originally enacted, CMP legislative provisions specifically addressed Transportation Demand Management. Government Code Section 65089(b)(3) requires "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". Section 65089.3 also specified that the Lead Agency should biennially monitor local jurisdictions' compliance with the requirement to adopt and implement a trip reduction and travel demand ordinance.

In 1995, these provisions were modified by revisions to the Federal Clean Air Act as well as Sections 40454 and 40717.9 of the California Health and Safety Code, which eliminated the requirement for mandatory employer based trip reduction programs. These programs became optional, with employers with 100 or more employees at a single worksite now only required to provide information to employees on rideshare and transit programs.

Introduction

Transportation Demand Management (TDM) programs are designed to reduce the need or demand for trips, especially during congested commute times. Transportation Demand Management strategies are geared toward increasing vehicle occupancy; promoting the use of alternative modes; reducing the number of work and non-work trips; and decreasing overall trip lengths.

The adoption of a TDM ordinance was required of every local jurisdiction for Orange County's 1991 Congestion Management Program. The ordinances adopted by local jurisdictions were based on a facilities standards approach contained in a model TDM ordinance prepared by OCTA. OCTA reviewed local jurisdiction TDM ordinances in 2002

to insure conformance with existing legislation that eliminated mandatory trip reduction programs.

Existing TDM Programs

Trip Reduction/TDM Ordinances

To implement a comprehensive TDM program countywide, a uniform model TDM ordinance was established, affording local jurisdictions a consistent mechanism to directly comply with the spirit and intent of the CMP's legislative requirements for TDM. The model ordinance aims to promote carpools, vanpools, alternate work hours, park and ride facilities, telecommuting, and other traffic reduction strategies. Originally drafted for consistency with Regulation XV, the model ordinance was updated in 2001 to reflect the adoption of Rule 2202 by the South Coast Air Quality Management District.

Principal provisions of the TDM model ordinance are as follows:

- Applies to non-residential public and private development proposals expected to generate more than 250 employees;
- Contains a methodology for determining projected employment for specified land use proposals;
- Includes mandatory facility-based development standards (conditions of approval) that apply to proposals that exceed the established employment threshold;
- Presents optional provisions for implementing operational TDM programs and strategies that target the property owner or employer, and requires annual reporting on the effectiveness of programs and strategies proposed for facilities;
- Contains implementation and monitoring provisions;
- Includes enforcement and penalties provisions.

All local jurisdictions in Orange County have adopted TDM ordinances that incorporate the provisions of the model ordinance. Moreover, several jurisdictions have adopted ordinances that go beyond those contained in the model TDM ordinance. Such strategies include:

- Encouraging employers to establish and help subsidize telecommuting, provide monetary incentives for ridesharing, and implement alternative work hour programs;

- Requiring proposed development projects to establish and participate in Transportation Management Associations (TMAs);

- Requiring on-site bus loading facilities;

- Requiring pedestrian facilities such as sidewalks, paved pathways and pedestrian grade separations over arterial streets to connect a worksite to shopping, eating, recreation, parking, or transit facilities;

- Requiring participation in the development of remote parking facilities and the high-occupancy vehicles (i.e., shuttles, etc.) that serve them.

Employer-Sponsored Trip Reduction Plans

The TDM Ordinance adopted for the CMP is primarily a facilities based ordinance, although it also contains optional provisions for implementing operational programs and strategies that target property owners or employers. Previously, the Federal Clean Air Act, as well as South Coast Air Quality Management District (SCAQMD) Regulation XV required employers with 100 or more employees to prepare trip reduction plans intended to increase average vehicle occupancy. The CMP required that local TDM ordinances reflect these policies. However revisions to the Federal Clean Air Act, as well as Sections 40454 and 40929 of the California Health and Safety Code, eliminated the requirement for employer based trip reduction programs, making them optional. Consequently, public agencies can no longer require employers to develop and implement trip reduction plans. Employers are now required only to provide information on trip reduction programs. Further, the optional employer based trip reduction programs now apply to employers with 250 or more employees, rather than 100 or more employees.

Implementation of Adopted TDM Ordinances

Compliance with the TDM requirement for 2003 was measured against local jurisdiction implementation of their respective TDM ordinances. The CMP checklists developed for the CMP monitoring component provided this information. All local jurisdictions indicated that they had applied the TDM ordinance to development projects that met the thresholds specified in the ordinance.

Other Existing TDM Programs

TDM efforts in Orange County are not just limited to implementation of TDM ordinances. Other TDM activities are also underway throughout the County. These transportation demand management activities are summarized on the following pages.

Construction Mitigation

OCTA and Caltrans have developed a comprehensive public outreach program for commuters impacted by construction projects and improvements on Orange County freeways. The program was designed to alleviate traffic congestion during freeway construction by providing up-to-date ramp, lane and bridge closure information and suggestions on alternate routes and travel modes. Outreach efforts include public workshops, open houses, fast fax construction alerts, flyers and newsletters, as well as other collateral materials and presentation events. Detour and closure information is also made available at OCTA's website at www.octa.net and through the Orange County Freeway Construction Helpline at 1-800-724-0353.

Transit/Shuttle Service

Transit service is an integral part of Orange County's TDM activities. Local fixed route comprises the largest portion of OCTA's transit services. In addition to local fixed route service, OCTA also provides commuter services such as commuter rail service (Metrolink) and rail connector bus service (Stationlink). The transit services section of the CMP contains a complete description of Orange County's existing

and planned transit services. Recent improvements to transit service include continued expansion of services on both commuter rail lines serving Orange County, as well as the expansion of bus service to maintain transit service standards. In the past two years since the CMP was last updated, bus boardings have increased more than 10 percent with ridership on Metrolink commuter rail service in Orange County increasing by 22 percent.

Jobs/Housing Balance

To satisfy the Measure M Growth Management Program requirements, all local jurisdictions in Orange County developed Growth Management Programs that address a jobs/housing balance as it relates to transportation demand. The adopted policies represent a commitment towards achieving balanced land usage, where residential, non-residential and public land uses are proportionally balanced.

Transportation Management Associations

Presently, Orange County has Transportation Management Associations (TMAs) located in the following areas:

- Costa Mesa (South Coast Metro TMA)
- Newport Beach (Newport Center TMA)
- Irvine (Irvine Spectrum TMA)
- Anaheim (Anaheim Transportation Network)

The TMAs are comprised of groups of employers in an area who work together to solve mutual transportation problems and implement programs to increase average vehicle ridership.

Park-and-Ride Lots

The availability of park-and-ride lots is essential to supporting Orange County's TDM efforts. In recognition, a Park-and-Ride Master Plan was prepared to guide the development of new park-and-ride lots in Orange County. Currently there are 42 park-and-ride lots in Orange County providing over 4,800 parking spaces, with many more lots anticipated over the next several years. These lots serve as transfer points for commuters to change from one mode of travel (private auto) to another, higher capacity mode (bus, train, carpool, vanpool). Providing a convenient system of park-and-ride transfer points throughout the county encourages the use of higher capacity transit systems which improves the efficiency of the transportation system. Park-and-ride lots are also a natural companion to the development of a countywide system of High Occupancy Vehicle (HOV) lanes and transitways on the freeways.

Present plans assume the use of federal, state, and Measure M funds to pay for many of the new park-and-ride spaces. A second means to acquire new park-and-ride spaces is through shared or joint-use of commercial parking lots. This is the least costly alternative for adding new spaces, makes best use of existing capacity, and complements private business interests and uses. The Master Plan proposes that new park-and-ride spaces be phased so that the least costly, shared-use lots are developed first and the more costly permanent lots later. In addition, OCTA coordinates on an ongoing basis with other counties and Caltrans to develop park-and-ride lots serving inter-regional traffic.

Telecommuting Centers

OCTA and the South Coast Air Quality Management District jointly developed the Intermodal Surface Transportation Efficiency Act/Transportation Control Measure Partnership to provide funding for several projects including two Telecommuting Work Centers (TWC). The goal of the TWC is to provide a prototype alternate work location for persons who commute long distances to

employment locations within Orange County. Commuters have the opportunity to travel to work via electronic highways instead of congested freeways. The Downtown Anaheim Telework Center is located in the Anaheim Redevelopment Area and provides office space and services for people interested in telecommuting. In addition, TeleBusiness centers in the cities of San Juan Capistrano and Mission Viejo offer professional working environments for telecommuters in the southern part of Orange County.

Bicycle and Pedestrian Facilities

Between 1990 and 2003, OCTA has allocated over $125 million for bicycle and bus stop improvement projects. Over the last few years, an additional $3 million was allocated specifically for bicycle projects through the federal Transportation Efficiency Act (TEA-21) program. Additionally, OCTA solicits Transportation Demand Management (TDM) projects from the cities every 2 years. Approximately, $2 million in funds are available under this program. Examples of eligible TDM projects are bikeways, transit shelters, and carpool incentives.

The current Regional Transportation Improvement Program for Orange County has approximately $14 million programmed for bikeways. The Regional Transportation Plan assumes $29 million will be available for non-motorized projects through the year 2025.

In 1995, OCTA developed an integrated system of countywide commuter bikeways as part of the Commuter Bikeways Strategic Plan (CBSP). Updated in August 2001, the primary focus of the plan is to provide bicycle commuters with attractive, convenient bicycle facilities that link residential areas with activity centers and intermodal transportation centers. In an effort to accommodate the diverse needs and interests of Orange County bicycle commuters, several public agencies and private sector organizations reviewed and commented on the plan at various stages of development. Contributors included Caltrans, the Orange County Bicycle Coalition, as well as the 34 Orange County cities and the County of Orange.

In 1995, OCTA launched a successful demonstration project to install bicycle racks on four bus routes, which served work sites, schools, shopping malls, and the beach. The success of the demonstration program led to a decision to equip all large buses in the OCTA fleet with bicycle racks. This program was completed June 1998. In addition, bicycle lockers have been installed at Metrolink stations in Anaheim, Fullerton, Irvine, and Orange.

A comprehensive update of the CBSP was completed in August 2001 to expand the focus on commuter bikeways to include more local routes, as well as emphasize

regional connectivity and coordination. The plan was updated to ensure consistency with the requirements of California Streets and Highways Code 891.2. Consistency allows local jurisdictions to adopt the plan and apply for funds available in the Bicycle Transportation Account.

Compliance

The Orange County Congestion Management Program requires every local jurisdiction to adopt a TDM ordinance based on a model ordinance prepared by the County of Orange. Each local jurisdiction in Orange County has prepared, adopted, and implemented a TDM ordinance, therefore complying with the TDM requirement of the 2003 Congestion Management Program.

Transit Services Performance Measures

Legislative Text

Government Code Section 65089(b)(2) requires that performance measures be established for the highway and roadway system, and for the frequency and routing of public transit. It also calls for coordination of transit service provided by separate operators. This section evaluates transit system performance in Orange County, while Congestion Management Program Highway System performance measures are discussed in following sections.

Background

In addition to planning and providing funding for highway and roadway improvements in Orange County, the Orange County Transportation Authority offers a variety of transit services to residents of its service area. Not only do these services provide essential transportation services to a growing segment of the population unable to drive, but also alternatives to the automobile.

Since the adoption of the previous CMP, the use of OCTA transit services has grown. Changes implemented over the past two years to make both transit service and fares more responsive to customer needs have resulted in a 10 percent increase in ridership since 2001. To meet this increased demand and to maintain service standards for passenger loading and on-time performance, OCTA has been implementing a transit expansion program which increased the level of service by approximately 11 percent by the end of 2003, compared to 2001 levels.

Commuter rail service, funded in part by OCTA and operated by the Southern California Regional Rail Authority (Metrolink), continues to see growing demand. Ridership on both the Orange County Line and Inland Empire – Orange County Line shows continued growth. The trains on the Orange County Line, which operates both peak direction and reverse direction service between Oceanside and Downtown Los Angeles, remains one of

the most productive in the Metrolink system, providing essential congestion relief in the busy Santa Ana Freeway Corridor. The Inland Empire – Orange County Line was the first suburb-to-suburb commuter rail line in the country, connecting Riverside and San Bernardino with Orange County. Launched in May 2002, the 91 Line provides much needed service for commuters traveling from largely residential areas in Riverside to employment centers in Orange and Los Angeles Counties. As a part of the expanded rail service, new feeder bus service was added and schedules on existing routes were modified to insure bus/rail connections for the new trains.

The Congestion Management Program performance measures are designed to provide an index of both the effectiveness and efficiency of transit services in Orange County. These measures are based on indices used in OCTA's long range planning process, and allow identification of areas needing improvement.

Description of Transit Services

Transit services provided by OCTA can be categorized into the five broad functional modes listed below. The bus services are further broken into sub-modes (large/small bus, direct/contract operation) for performance reporting based on their specific market orientation and method of operation.

- **Local Bus Service** provides transportation for local travel needs, and may be provided by either large or small buses. Contractors provide most or all of the small bus service.

- **Express Bus Service** provides direct, freeway-based service between residential areas and employment centers, primarily during peak periods. These routes serve as an alternative to the single-occupant vehicle home to work trip, and are provided on both an intra-county and inter-county basis.

- **Rail Feeder Service** is designed to provide a link between commuter rail stations in Orange County and major employment centers. These routes operate during peak periods, with some routes operated by contractors. There are 13 rail feeder routes, serving seven commuter rail stations in Orange County.

- **Paratransit Service** provides door-to-door pickup and delivery for senior citizens and persons with disabilities who are unable to use fixed route bus service.

- **Commuter Rail Service** provides weekday service between Orange County and the counties of Los Angeles, Riverside and San Diego during peak commute hours.

Local Bus Service

OCTA is the predominate fixed route bus provider serving Orange County. The only other provider of local fixed route service within the county is Laguna Beach Municipal Transit Line, which operates five routes in the city of Laguna Beach and the adjacent south coastal region of the county. As of September 2003, OCTA operated 54 local fixed route lines in Orange County. Local Fixed Route service, which serves more than 900 route miles, comprises the largest portion of the agency's transit service. Service is generally operated between the hours of 5:00 a.m. and 9:00 p.m.

Accessibility Measure

The goal is for 70 percent of all county residents, places of work, schools, shopping centers and medical facilities to be within a walking distance of not more than one quarter of a mile from a bus stop. Currently, about 65 percent of the residents are within a quarter mile air line of a route. Because of the circuitous nature of many residential streets, however, only about 47 percent are within actual walking distance of a bus stop.

Span of Service Measure

Local routes should provide a minimum span of service of 16 hours on weekdays and 11 hours on Saturdays and Sundays, except for routes used exclusively for commuter service. Commuter routes should provide a minimum service of 3 hours during the morning peak periods and 3 hours during the afternoon peak period on weekdays. The hours of service and frequency of service for all OCTA bus routes are shown in Table 1. Approximately 27 percent of the local routes have a span of service less than the goal. This is primarily due to limitations in funding which require resources to be

allocated to routes with the highest demand. In addition, many of these routes failed to meet productivity standards during early morning or late evening periods. As a result, service is adjusted to more closely match demand.

Frequency Measure

All local service should provide a maximum interval between buses of 30 minutes or better during peak periods and 60 minutes or better at all other times. Table 1 shows how all local routes compare to this measure. Approximately 23 percent of all local routes have peak frequencies longer than 30 minutes. Again, this is due primarily to the need to allocate limited resources to services with the greatest demand.

Table 1:
Summary of Service Characteristics
All FY 2003 Bus Service

OCTA LOCAL FIXED ROUTES

Line	HEADWAY (Minutes) Peak	Base	Sat	Sun	Weekday Span	Boardings/ Revenue Hour
1	30	30	60	60	430a -- 1030p	23.1
20	45	45	--	--	545a -- 815p	13.2
21	45	45	--	--	500a -- 1100p	12.5
24	30	60	60	60	500a -- 1100p	22.4
25	30	30	60	60	500a -- 1100p	35.8
26	30	30	50	50	600a -- 1045p	32.2
29	12	20	15	15	400a -- 100a	42.9
30	30	30	60	60	415a -- 1100p	35.7
33	30	30	45	60	500a -- 845p	38.7
35	20	30	35	60	445a -- 945p	38
37	20	30	30	60	430a -- 930p	45
38	8	20	45	45	415a -- 1200a	40.8
42	15	20	20	30	130a -- 1200a	36.2
43	8	15	15	15	24-hour	54.8
46	20	30	60	60	430a -- 1145p	38.1
47	15	20	20	20	100a -- 1115p	46.2
50	20	30	30	45	24-hour	41.8
51	30	30	25	25	500a -- 1115p	26.9
53	12	12	12	15	415a -- 1200a	41.8
54	20	30	30	40	445a -- 1130p	42
55	15	20	20	20	430a -- 1145p	44.1
56	30	30	60	60	430a -- 1115p	37.5
57	8	12	12	12	24-hour	51.1
59	20	30	60	60	430a -- 1145p	28.1
60	16	20	15	15	24-hour	46.7
62	20	20	--	--	530a -- 900p	19.1
64	12	15	12	12	445a -- 1145p	55.5
66	12	15	15	15	430a -- 1115p	51.7
70	15	20	20	20	430a -- 1215a	38.5
71	30	30	30	40	445a -- 1100p	31.2
72	20	30	45	60	500a -- 900p	37.1
74	45	45	--	--	500a -- 715p	14.8
75	45	45	--	--	600a -- 645p	5.5
76	30	30	60	60	515a -- 1045p	23.1
79	30	45	70	70	500a -- 1100p	22.1
82	30	45	60	60	530a -- 745p	17.6
85	30	30	45	45	500a -- 1100p	16.7
86	55	55	50	--	530a -- 900p	18.4
87	45	45	45	--	545a -- 730p	20.7
89	30	30	30	30	430a -- 1115p	31.8
91	30	30	45	45	500a -- 1100p	30.4

OCTA COMMUNITY ROUTES

Line	HEADWAY (Minutes) Peak	Base	Sat	Sun	Weekday Span	Boardings/ Revenue Hour
131	--	50	--	--	845a -- 600p	6.5
145	30	60	45	45	500a -- 1030p	23
147	--	--	--	--	Peak only	9.2
164	70	70	--	--	515a -- 630p	6.1
167	45	60	45	45	500a -- 1030p	17.3
172	30	30	60	60	500a -- 1030p	10.6
173	45	45	--	--	530a -- 815p	9.2
175	60	60	--	--	630a -- 1100p	8.3
177	45	45	45	45	530a -- 730p	24.3
178	30	60	45	--	600a -- 1115p	14.3
187	30	--	--	--	545a -- 630p	17.4
188	45	--	--	--	530a -- 745p	9.1
191	30	60	60	60	500a -- 945p	9.3

OCTA EXPRESS ROUTES

Line	HEADWAY (Minutes) Peak	Base	Sat	Sun	Weekday Span	Boardings/ Revenue Hour
205	8*	30	30	30	445a -- 1215a	31.4
206	--	--	--	--	Peak only	38.7
211	30	30	--	--	Peak only	12.7
212	--	--	--	--	Peak only	7.5
213	30	30	--	--	Peak only	16.6
216	--	--	--	--	Peak only	10
701	30	30	--	--	Peak only	12.3
721	30	30	--	--	Peak only	15
757	30	30	--	--	Peak only	9.5

OCTA RAIL FEEDER ROUTES

Line	HEADWAY (Minutes) Peak	Base	Sat	Sun	Weekday Span	Boardings/ Revenue Hour
410	--	--	--	--	Peak only	34.6
411	--	--	--	--	Peak only	15
430	--	--	--	--	Peak only	10.2
453	--	--	--	--	Peak only	24.3
454	--	--	--	--	Peak only	19.5
462	--	--	--	--	Peak only	15.2
463	--	--	--	--	Peak only	7.9
464	--	--	--	--	Peak only	8.9
480	--	--	--	--	Peak only	14.5
470	--	--	--	--	Peak only	11.2
471	--	--	--	--	Peak only	11.9
482	--	--	--	--	Peak only	10.8
490	--	--	--	--	Peak only	5.1

HEADWAY STANDARD:
All routes should have at least 30-minute peak, 60-minute base, and 60-minute weekend headway except Express and Rail Feeder routes.
73.2% fall within standards
26.8% are not within standards
* = Headway of predominate direction.

Loading Measures

This measure is used as an index of system use versus system capacity in much the same way that the volume/capacity (V/C) ratio is used to measure roadway use. Fixed routes are operated so the maximum passenger loads per bus do not exceed 150 percent of the seating capacity per trip and 125 percent seating capacity per hour.

Productivity Measures

This measure provides an index of how efficiently bus transit resources are being utilized. The minimum productivity measure for local service provided with large buses is 10 boardings per revenue vehicle hour (B/RVH). Table 1 provides a summary of the productivity data for all OCTA bus routes. Over the last two years, OCTA has expanded service at a faster rate than ridership growth. Consequently, the local system averaged approximately 37.2 B/RVH in 2003 compared to 39.3 B/RVH in 2000.

Express Service

In addition to local fixed route service, OCTA also provides express service which operates primarily during weekday peak hour periods. These routes operate predominately on freeways within Orange County. OCTA operates nine such lines. There are two types of Express services. The first are routes structured to exclusively meet commuter needs. These are designed to provide direct connections between residential areas and transportation centers and employment centers, both within and outside the county, and operate during commute hours only. The other type of Express service is provided by route 205 along the I-5 corridor, which not only operates during peak hours to serve the home to work commute but also provides service during base periods, weekends and holidays to connect major parts of the county via the freeway.

Service measures for Express service are very similar to those of Fixed Route services:

Accessibility Measure

There is no accessibility standard for Express routes because service is tailored to specific markets, and is usually centered on transit and employment centers.

Span of Service Measure

Except for route 205, which provides all day service seven days a week, span of service for Express routes is dependent on demand, which is concentrated in the weekday peak commute hours.

Headway Measure

Except for route 205, which has clock-face headways every day of the week, commute service headways are based on demand with a minimum of one trips in each direction per peak weekday period.

Loading Measures

Express routes should adhere to the same loading standards as fixed route service.

Productivity Measures

Express Routes should average 10 boardings per revenue vehicle hour (B/RVH).

Rail Feeder Routes

These routes operate to meet the needs of commuters using the Metrolink commuter rail system. Thirteen such routes are currently operated by OCTA. The routes are typically employment-based services connecting businesses to local rail stations.

Performance measures are the same as for express service, which has a productivity standard of 10 boardings/RVH. Those routes shown as not meeting the performance measure in Table 1 are expected to improve as ridership on commuter rail services continues to grow. These routes will be closely monitored over the next several months. Routes failing to meet this measure will be considered for remedial action or elimination.

Other Bus Service Measures

General Service Expansion Measures

OCTA considers a service expansion of any of its family of bus services by determining its potential to achieve a specific minimum productivity level for that type of service within one year of operation. New lines or major extensions of established lines usually are associated with the development of major employment locations, large new residential centers or increased residential density, large retail centers or educational centers, or major medical facilities. A major consideration of service expansion to serve new markets is to insure that the benefit of the new service will outweigh that of the established service that may have to be deleted to provide resources for it.

General Service Contraction Measures

Routes or parts of routes that perform consistently below performance measures are candidates for service reduction or deletion to provide resources to (1) maintain measures on more productive routes, and (2) provide new services. A major consideration of service reduction is to insure that the benefits of re-deployed resources outweigh that of retaining the service. Other considerations to be taken into account include service area coverage and service span.

Connection with Other Carriers

In addition to OCTA, several other transportation operators serve Orange County. They include Laguna Beach Transit, Riverside Transit Agency, Norwalk Transit System, Los Angeles County Metropolitan Transportation Authority, Long Beach Public Transportation Company, and the North County Transit District in San Clemente, various specialized charter bus services, and commuter rail services. Except for charter services, OCTA accepts and gives transfers to other public transportation agencies. In addition, OCTA coordinates schedules and bus stops with neighboring agencies and commuter rail service.

Paratransit Service

In addition to the fixed route services described above, OCTA also provides paratransit services for senior citizens and persons with disabilities who are unable to use standard bus service. These services include both the complementary service required under the provisions of the Americans with Disabilities Act (ADA) as well as group services providing pre-arranged trips to eligible groups of eight or more.

Since paratransit service, as operated by OCTA, is not considered a congestion management tool, performance measures have not been included in this report.

Commuter Rail Service

In May 1990 legislation (SB 1402) was signed by the Governor of California requiring the Los Angeles, Orange, Riverside, and San Bernardino County Transportation Commissions to develop a coordinated regional transit plan, including commuter rail and bus service. To implement Senate Bill 1402, the participating agencies worked under a two-tiered organizational structure consisting of the Regional Commuter Rail Coordinating Council and an interim Joint Powers Agency. In 1991, the interim agencies evolved into the Southern California Regional Rail Authority (SCRRA), a joint powers agency composed of the Orange County Transportation Authority, the Los Angeles County Metropolitan Transportation Authority, the Riverside County Transportation Commission, the San Bernardino Association of Governments and the Ventura County Transportation Commission. The purpose of the agency is to develop, operate, and maintain the regional commuter rail system known as Metrolink.

Current Service

Currently, Metrolink service in the region includes seven rail lines, with 143 weekday trains operating throughout the 400-mile Metrolink system, which serves 53 stations, carries nearly 36,000 riders each weekday. Service on Saturdays is provided on the Antelope Valley and San

Bernardino Lines. The San Bernardino Line also offers limited Sunday service.

Presently, three routes serve Orange County, the Orange County Line, the Inland Empire – Orange County Line (IEOC), and the 91 Line. Throughout the past year, the ridership on both the Orange County and the Inland Empire-Orange County routes continued to grow. The most significant growth though has been on the new 91 Line, which started service in May 2002.

Each weekday, the Orange County Line including the Metrolink riders on Amtrak trains, serves an average of 6,500 riders with the IEOC Line serving 2,900. The new 91 Line has been carrying 1,500 riders. By June 2003, it is projected that the combined ridership on the IEOC and Orange County Lines will surpass 2.6 million passengers for the year.

Since the opening of the 91 Line in May 2002, ridership has almost doubled to over 1,500 average daily boardings. A recent intercept survey shows that almost one-third on the 91 riders are new to Metrolink system. The remaining riders were previously using the Orange County Line (64 percent), and 25 percent are former Riverside Line riders who now enjoy more convenient service. While half of all 91 Line trips originate in the Inland Empire, the other half ride the 91 Line from Fullerton to Los Angeles Union Station.

The continued growth of the Metrolink customer base has strained the existing system infrastructure. With parking lots at stations full and train cars packed, plans are underway to build more stations and add more train cars to help ease the overcrowding. In the next two years, two other stations are scheduled to open: Buena Park in spring 2004 and Yorba Linda in fall 2004. New parking structures at both the Irvine and Fullerton stations are also being planned. To address overcrowding, and to expand the existing service, Metrolink also anticipates the purchase of 31 new rail cars over the next few years. OCTA has programmed $13.5 million in 2004 for OCTA's share of these cars.

Future Transit Improvements

While the average congestion level showed improvements throughout the county since the previous CMP monitoring effort, several intersections are exhibiting levels of service approaching a critical level. Unfortunately, opportunities for roadway expansion are limited in the older central portion of the county due to built-out land use patterns, higher development density and narrower rights-of-way for streets.

A Major Investment Study completed by OCTA in 1997 recommended a package of transit improvements to be implemented throughout the county, but concentrated more in the more densely developed central section where there was the highest

demand. Recommended transit improvements included increasing the level of bus service, as well as the option of constructing an urban rail system.

The urban rail system is part of an 87-mile Master Transit Plan for Orange County. The first segment of the system, known as The CenterLine, is a proposed 8.5 mile advanced light rail system to serve Orange County's central area through the cities of Santa Ana, Costa Mesa, and Irvine, plus an 0.8 plus mile segment extension to Santa Ana College. The proposed system will connect to John Wayne Airport, Irvine Business Complex, South Coast Metro's retail, employment, and cultural centers; the Santa Ana civic center; and the Depot at Santa Ana for Amtrak and Metrolink. In response to community input and enhance competitiveness for Federal funds, OCTA has replaced the 18-mile segment identified in the 2001 CMP for this 8.5-mile starter segment, along with increased commuter rail and bus service.

Bus service expansion is being accelerated and will reach the 50 percent level by the end of the fiscal year 2004 (approximately 1.8 million annual vehicle service hours). Future expansion will reach 2.1 million annual hours, resulting in ten-minute headways in high demand areas by the end of fiscal year 2011. Future service expansion efforts will also be targeted at providing express buses in congested highway corridors. In particular, this service would make use of the completed system of transitways in the SR-57, I-5, and SR-55 corridors. Plans also include express bus service for SR-91 and the Orange County toll road network.

Continuing with OCTA's commitment to explore new transportation alternatives, Bus Rapid Transit (BRT) is also being investigated as yet another means of improving mobility in Orange County. By combining the flexibility of a bus system with some of the features that are typical of rail transit, BRT can provide increase travel speed, passenger comfort and convenience. A BRT demonstration plan was completed in 2003, which considered BRT service deployment on several corridors including Harbor Boulevard, Beach Boulevard, Katella Avenue, La Palma Avenue, and Edinger Avenue.

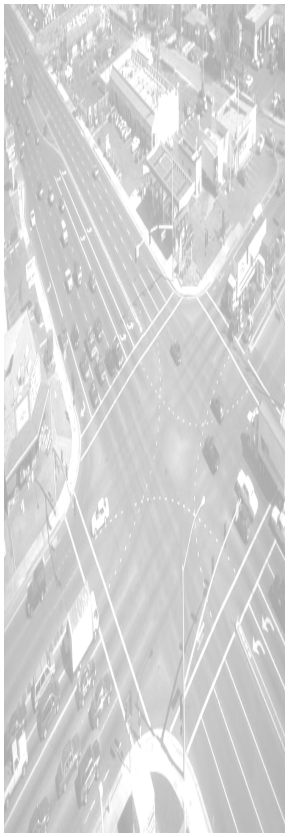
Compliance

Bus and rail transit are essential components of Orange County's transportation system, and are considered important tools for reducing overall traffic congestion. OCTA's transit service performance measures insure that the level of bus and rail service is sufficient to meet demand and is coordinated within and between counties. As the transit provider for Orange County, OCTA continually monitors the frequency and routing of its transit services. The current service expansion program is designed to bring all transit services up to adopted standards.

Transportation Modeling and Planning

Legislative Text

Government Code Section 65089 (c) established important provisions for transportation models, which require consistency between transportation models, as well as consistency in databases used in transportation modeling efforts. Key provisions include:



- The development of "a uniform data base on traffic impacts for use in a countywide transportation computer model."
- The approval of "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."
- Consistency between subarea models, the County's model, and the regional (SCAG) model, both in terms of methodology and in terms of databases.

Background

In September 2001, OCTA adopted the Orange County Transportation Analysis Model (OCTAM 3.1) modeling methodology as the regional model for transportation planning in Orange County. OCTAM 3.1 is a “state-of-the-practice” multi-modal transportation model, which incorporates Orange County Projections 2000 (OCP-2000) and the Southern California Association of Governments (SCAG) RTP 2001 demographic growth projections.

Compliance

In 1993, OCTA adopted an approach to ensure consistency between the various traffic modeling efforts that occur at local and regional levels. Accordingly, traffic studies must compare data in local models with data from the Orange County Projections (OCP) database. The process applies in cases where a traffic model is used to perform a CMP-related traffic study. Any major differences found in the

comparison between the two databases must be reconciled.

The reconciliation must demonstrate how the data used in the local model compares to the current OCP database. The intent of the demonstration is to ensure that the data assumptions employed in the local models are consistent with countywide data, resulting in CMP traffic studies that reflect anticipated levels of future land use. All jurisdictions in Orange County have complied with the transportation modeling and planning requirements of the previous CMP.

Subarea Modeling Guidelines

Adopted in January 1999 and updated in June 2001 in concert with the OCTAM 3.1 Model, the Orange County Subarea Modeling Guidelines Manual provides a uniform set of guidelines for agencies to use in developing local subarea models (Appendix F). The guidelines ensure that subarea models conform to CMP requirements and are consistent at both regional and county levels. Local subarea models must conform to the most current guidelines when utilized for CMP purposes and OCTA funding.

An update of the Subarea Modeling Guidelines is anticipated in early 2004. The update would reflect revisions to the Orange County Projections that are currently in progress. Once completed, the Subarea Modeling Guidelines will reflect the new projections and provide the guidance needed to implement them.

Highway Level of Service

Legislative Text

Government Code Section 65089 (b)(1)(A) and (B) sets forth responsibilities and requirements involved in establishing highway levels of service. These provisions include, but are not limited to, the following items.

Traffic Level of Service (LOS) standards are to be established for a system of highways and roadways designated by the agency. The system shall include at a minimum all state highways and principal arterials[1]. No highway or roadway designated as 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 if within an infill opportunity zone. Level of Service shall be measured by Circular 212, (or by the most recent version of the Highway Capacity Manual), or by a uniform methodology adopted by the agency which is consistent with the Highway Capacity Manual (HCM). 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 shall make this determination instead 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.

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 where a segment or intersection is within an infill opportunity zone, or has been designated as deficient and a deficiency plan has been adopted pursuant to Section 65089.4.

[1] Principal arterials as cited in the Government Code are not to be confused with the principal arterials functional classification of the Master Plan of Arterial Highways (MPAH).

Level of Service Monitoring

In 1991, a method of determining and monitoring traffic Level of Service (LOS) for CMP Highway System (CMPHS) intersections was established. To fulfill its responsibility as the Congestion Management Agency, the Orange County Transportation Authority conducts traffic counts and calculates LOS for the CMPHS intersections. Caltrans collects the necessary data and performs calculations for freeway level of service.

Methodology

The Orange County CMP uses the Intersection Capacity Utilization (ICU) methodology for determining LOS at intersections. This methodology is generally compatible with the current Highway Capacity Manual. LOS is calculated using data collected in the field.

Saturation Flow Rate: A saturation flow rate value of 1,700 vehicles per lane per hour is used to determine the saturation flow rate at intersections. This is increased by 15 percent for unrestricted right turns. In all other cases, no adjustments are made for protected movements with dedicated lanes (including right and left turns).

Lost Time: A lost time factor of 5 percent (.05) is added to the ICU calculation.

LOS	Capacity
A	0 - .60
B	.61 - .70
C	.71 - .80
D	.81 - .90
E	.91 - 1.00
F	> 1.00

Level of Service Ranges: The thresholds listed in the following table are used in assigning a letter value to the resulting LOS.

Peak Periods: Weekday peak periods are defined as 6:00 to 9:00 a.m. and from 3:00 to 7:00 p.m. All peak-hour studies are contained within these periods.

Peak-Hour: The highest one-hour period in both the am and pm peak periods, as determined by four consecutive 15-minute count intervals, is used in the LOS calculations. Both am and pm peak-hours are studied.

Peak-Hour Data Consistency: Because daily variations in peak-hour volumes can affect LOS calculations, no counts are taken on Mondays, Fridays, holidays, weekends, days of inclement weather or during construction activities that reduce the number of travel lanes. Counts are taken on at least three separate days. An average of three daily counts is used in the LOS calculation with completed counts sent to each local jurisdiction for review and approval. Traffic counts are adjusted by

the local jurisdiction for to reflect legislative requirements, as appropriate, and returns that information to OCTA.

Geometric Features: Data collection for intersections includes a determination of the number of lanes, width of curb lanes at intersections, signal phasing, and pedestrian activity. The determination is made through field observation or other reliable means. This information is submitted to local jurisdictions for review and approval concurrently with the volume data.

Pedestrians: If field observation indicates the presence of more than 100 pedestrians per hour, then actual pedestrian counts are conducted simultaneously with intersection vehicle counts. Impacts of pedestrian activity are then factored in the ICU calculation using standard reductions in saturation flow rates for affected lanes in accordance with Chapter 16 of the Highway Capacity Manual.

Lane Distribution: In most cases, approaching traffic is assumed evenly distributed among all lanes serving a given movement (left, through, or right). An exception to this may occur in the case of split signal phasing. Additionally, atypical distributions of traffic may occur in locations where unusual attractions exist, such as a freeway ramp entrance or entrance to a shopping center. In such cases, volume distributions are indicated on the ICU form.

Signal Phasing: At some intersections, split signal phasing exists where optional through/left or through/right lanes may be present. Analysis done for these situations reflects the true distribution of the approach traffic into these optional lanes.

Right Turn Movements: If the distance from the inside edge of the outside through travel lane is at least 19 feet and parking is prohibited during the peak period, right turning vehicles are assumed to utilize this "unofficial" right turn lane. Otherwise, all right turn traffic is assigned to the outside through lane. If a right turn lane exists, right turn on red, if not prohibited at that location, is assumed. If a

free right turn exists, where right turns do not have to stop for the signal, a flow rate of 1955 vehicles per hour is assumed for it. The volume capacity (V/C) ratio of the right turn lane is reported, but not included in the sum of the critical V/C ratios.

Arterial Class: All arterials on the Smart Street network are "principal arterials" (i.e., Arterial Class I) with LOS as defined in Table 3, "Arterial Levels of Service," from Table 11-1 of the HCM Application. Working in consultation with local jurisdictions, OCTA determines level of service for intersections on the Orange County CMP Highway System. The Congestion Management Program Highway System map (Figure 1) identifies intersections within each of the jurisdictions in Orange County. The CMPHS includes a consideration of the state-owned and operated freeway network elements that lie within a particular local jurisdiction's boundaries.

Freeway LOS: Caltrans collects the necessary data and performs any required calculations for freeway LOS as part of their ongoing system monitoring efforts. Freeway LOS data is presented in a Countywide format in the CMP. Individual cities are not responsible for freeway mainline volume data collection. OCTA incorporates Caltrans' figures into the final countywide CMP (Appendix A).

CMHS Evaluation

The CMP Highway System (CMPHS) consists of the Orange County smart street network plus the state highway system (Figure 1). The CMP monitors the level of service (LOS) at all CMPHS intersections, including intersections between smart streets and freeways (including toll corridors). In addition, levels of service on freeways and toll corridors themselves are monitored (see “Freeway LOS” section above).

Intersection LOS

Intersection LOS is calculated using ICU from field data collected for intersections shown in the CMPHS map

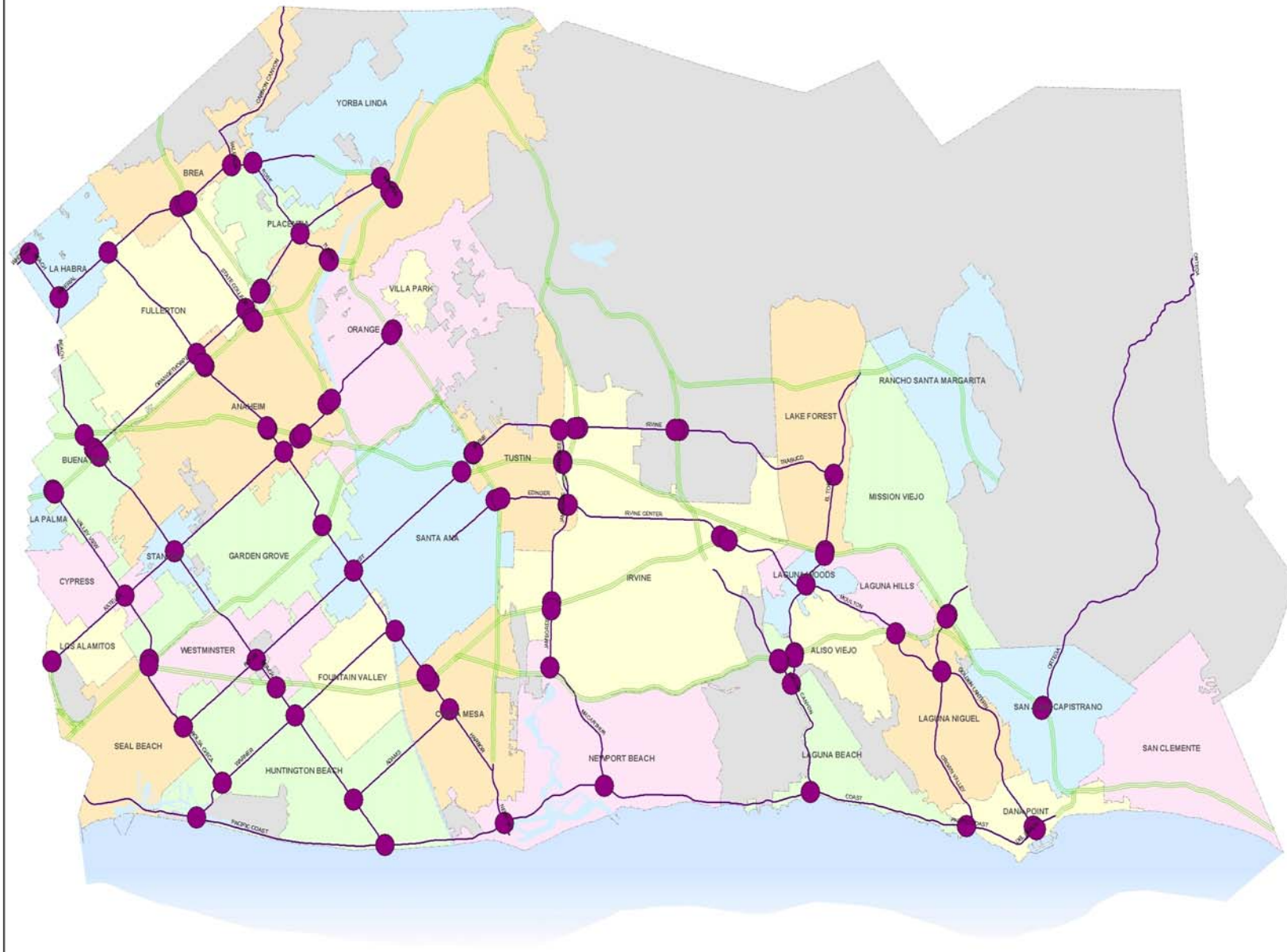
(Figure 2). The LOS figures for 2003 for each intersection are shown in Table 4.

LOS Criteria

Within the defined CMP highway network, intersections and freeway segments are not allowed to deteriorate to a condition which is worse than LOS E, or the base year LOS if worse than E, without mitigation being prescribed in an acceptable deficiency plan. In the case of base conditions reflecting a LOS worse than E, "existing LOS" is defined as any increase in V/C ratio of up to 0.10 over the base condition. V/C ratio increases beyond 0.10 above the base condition are considered not to comply with CMP LOS objectives and shall require mitigation or a deficiency plan.

2003 Congestion Management Program Highway System

Orange County, California



LEGEND

- CMP Intersection
- Freeways
- CMP Highway System

Nov. 3, 2003

0 1 2 3 4 5 6

Miles

OCTA

2003 CMP Intersection Level of Service

Orange County, California

LEGEND

Intersection Level of Service
During Peak Hour
AM and PM Time Periods

Symbol Key:

AM LOS / PM LOS

Color Key:

- A
- B
- C
- D
- E
- F

Nov. 3, 2003

0 1 2 3 4 5 6

Miles

OCTA

Orange County Congestion Management Program
LEVEL OF SERVICE 2003

Intersection/Interchange	Jurisdiction	Baseline AM		2003 AM		Baseline PM		2003 PM		Percent Change	
		LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	AM ICU	PM ICU
Harbor Blvd./Katella Avenue	Anaheim	A	0.53	A	0.54	B	0.67	B	0.65	1.89%	-2.99%
Imperial Highway/Orangethorpe Avenue	Anaheim	B	0.67	D	0.85	D	0.89	D	0.84	26.87%	-5.62%
I-5 NB Ramp/Harbor Boulevard	Anaheim	A	0.52	A	0.43	A	0.54	A	0.58	-17.31%	7.41%
I-5 SB Ramp\Harbor Boulevard	Anaheim	A	0.29	A	0.26	A	0.31	A	0.28	-10.34%	-9.68%
Anaheim Blvd-I-5 NB Ramp/Katella Avenue	Anaheim	A	0.49	A	0.52	D	0.82	A	0.58	6.12%	-29.27%
SR-57 NB Ramps/Katella Avenue	Anaheim	A	0.51	A	0.38	A	0.41	A	0.49	-25.49%	19.51%
SR-57 SB Ramps/Katella Avenue	Anaheim	A	0.52	A	0.43	A	0.51	A	0.57	-17.31%	11.76%
SR-91 WB Ramp/Harbor Boulevard	Anaheim	B	0.61	A	0.58	C	0.77	B	0.61	-4.92%	-20.78%
SR-91 EB Ramp/Harbor Boulevard	Anaheim	A	0.46	A	0.39	A	0.52	A	0.54	-15.22%	3.85%
SR-91 WB Ramp/Imperial Highway	Anaheim	C	0.71	A	0.56	B	0.63	A	0.58	-21.13%	-7.94%
SR-91 EB Ramp/Imperial Highway	Anaheim	C	0.73	A	0.60	C	0.79	B	0.61	-17.81%	-22.78%
SR-91 WB Ramp/State College Boulevard	Anaheim	A	0.55	A	0.46	B	0.63	A	0.55	-16.36%	-12.70%
SR-91 EB Ramps/State College Boulevard	Anaheim	B	0.69	A	0.51	D	0.82	B	0.61	-26.09%	-25.61%
SR-91 WB Ramps/Tustin Avenue	Anaheim	B	0.64	E	0.97	A	0.60	E	0.90	51.56%	50.00%
SR-91 EB Ramps/Tustin Avenue	Anaheim	B	0.66	D	0.83	D	0.84	C	0.80	25.76%	-4.76%
I-5 SB Ramp/Katella Avenue	Anaheim	A	0.48	A	0.57	A	0.41	A	0.50	18.75%	21.95%
CITY AVERAGE	**ANAHEIM**		**0.57**		**0.56**		**0.64**		**0.61**	**-1.99%**	**-4.63%**
State College Boulevard/Imperial Highway	Brea	C	0.73	B	0.64	E	0.93	C	0.75	-12.33%	-19.35%
Valencia Avenue/Imperial Highway	Brea	A	0.56	A	0.56	A	0.59	B	0.66	0.00%	11.86%
SR-57 SB Ramps/Imperial Highway	Brea	B	0.68	B	0.63	B	0.70	D	0.81	-7.35%	15.71%
SR-57 NB Ramps/Imperial Highway	Brea	C	0.78	B	0.65	E	0.91	B	0.64	-16.67%	-29.67%
CITY AVERAGE	**BREA**		**0.69**		**0.62**		**0.78**		**0.72**	**-9.82%**	**-8.63%**
SR-91 EB Ramp/Beach Boulevard	Buena Park	C	0.74	A	0.58	D	0.84	B	0.68	-21.62%	-19.05%
SR-91 WB Ramp/Beach Boulevard	Buena Park	A	0.58	C	0.74	A	0.59	D	0.88	27.59%	49.15%
SR-91 EB Ramp/Valley View Street	Buena Park	A	0.58	A	0.48	D	0.86	B	0.64	-17.24%	-25.58%
SR-91 WB Ramp/Valley View Street	Buena Park	C	0.80	B	0.66	E	0.94	C	0.74	-17.50%	-21.28%
Beach Boulevard/Orangethorpe Avenue	Buena Park	C	0.76	A	0.60	D	0.87	C	0.71	-21.05%	-18.39%
I-5 SB Ramps/Beach Boulevard	Buena Park	C	0.72	C	0.79	C	0.78	C	0.74	9.72%	-5.13%
CITY AVERAGE	**BUENA PARK**		**0.70**		**0.64**		**0.81**		**0.73**	**-7.89%**	**-10.04%**
Harbor Boulevard/Adams Avenue	Costa Mesa	E	0.99	C	0.77	F	1.09	E	0.91	-22.22%	-16.51%
I-405 NB Ramps/Harbor Boulevard	Costa Mesa	A	0.53	A	0.43	B	0.63	A	0.55	-18.87%	-12.70%
I-405 SB Ramps/Harbor Boulevard	Costa Mesa	A	0.53	C	0.71	B	0.63	D	0.89	33.96%	41.27%
CITY AVERAGE	**COSTA MESA**		**0.68**		**0.64**		**0.78**		**0.78**	**-6.83%**	**0.00%**
SR-133 NB Ramps/Irvine Boulevard	County of Orange	A	0.37	A	0.43	A	0.33	A	0.40	16.22%	21.21%
SR-133 SB Ramps/Irvine Boulevard	County of Orange	A	0.37	A	0.43	A	0.29	A	0.36	16.22%	24.14%
CITY AVERAGE	**COUNTY OF ORANGE**		**0.37**		**0.43**		**0.31**		**0.38**	**16.22%**	**22.58%**
Valley View Street/Katella Avenue	Cypress	B	0.63	B	0.61	D	0.87	C	0.74	-3.17%	-14.94%
CITY AVERAGE	**CYPRESS**		**0.63**		**0.61**		**0.87**		**0.74**	**-3.17%**	**-14.94%**
Crown Valley Parkway/Bay Drive/PCH	Dana Point	F	1.41	C	0.79	F	1.62	C	0.73	-43.97%	-54.94%
Street of the Golden Lantern/PCH	Dana Point	A	0.42	A	0.43	A	0.55	A	0.52	2.38%	-5.45%
Street of the Golden Lantern/Del Prado Avenue	Dana Point	A	0.32	A	0.37	A	0.53	A	0.47	15.63%	-11.32%
CITY AVERAGE	**DANA POINT**		**0.72**		**0.53**		**0.90**		**0.57**	**-26.05%**	**-36.30%**
Harbor Boulevard/Orangethrope Avenue	Fullerton	A	0.60	B	0.63	E	0.94	D	0.81	5.00%	-13.83%
State College Boulevard/Orangethorpe Avenue	Fullerton	C	0.80	B	0.67	D	0.86	C	0.77	-16.25%	-10.47%
CITY AVERAGE	**FULLERTON**		**0.70**		**0.65**		**0.90**		**0.79**	**-7.14%**	**-12.22%**

Orange County Congestion Management Program
LEVEL OF SERVICE 2003

Intersection/Interchange	Jurisdiction	Baseline AM		2003 AM		Baseline PM		2003 PM		Percent Change	
		LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	AM ICU	PM ICU
SR-22 WB Ramps/Harbor Boulevard	Garden Grove	F	1.10	B	0.65	F	1.16	D	0.83	-40.91%	-28.45%
SR-22 WB Ramp/Valley View Street	Garden Grove	C	0.76	C	0.71	D	0.87	C	0.75	-6.58%	-13.79%
CITY AVERAGE	**GARDEN GROVE**		**0.93**		**0.68**		**1.02**		**0.79**	**-26.88%**	**-22.17%**
Bolsa Chica Street/Bolsa Avenue	Huntington Beach	B	0.66	C	0.74	A	0.53	B	0.62	12.12%	16.98%
Bolsa Chica Street/Warner Avenue	Huntington Beach	A	0.57	A	0.60	D	0.81	B	0.65	5.26%	-19.75%
Beach Boulevard/Warner Avenue	Huntington Beach	C	0.78	B	0.69	E	0.93	B	0.70	-11.54%	-24.73%
Beach Boulevard/Adams Avenue	Huntington Beach	A	0.55	A	0.49	C	0.67	A	0.60	-10.91%	-10.45%
Beach Boulevard/Pacific Coast Highway	Huntington Beach	A	0.45	B	0.63	A	0.47	B	0.62	40.00%	31.91%
Beach Boulevard/405 SB Ramp/Edinger Avenue	Huntington Beach	B	0.63	B	0.69	E	1.03	B	0.70	9.52%	-32.04%
Pacific Coast Highway/Warner Avenue	Huntington Beach	D	0.81	D	0.81	B	0.72	C	0.73	0.00%	1.39%
CITY AVERAGE	**HUNTINGTON BEACH**		**0.64**		**0.66**		**0.74**		**0.66**	**4.49%**	**-10.47%**
MacArthur Boulevard/Jamboree Road	Irvine	B	0.61	C	0.71	B	0.69	E	0.96	16.39%	39.13%
I-5 NB Ramps/Jamboree Road	Irvine	A	0.54	B	0.70	C	0.75	D	0.83	29.63%	10.67%
I-5 SB Ramps/Jamboree Road	Irvine	A	0.40	C	0.79	A	0.35	D	0.84	97.50%	140.00%
I-405 NB Ramps/Enterprise/Irvine Center Drive	Irvine	E	0.95	B	0.67	A	0.39	A	0.48	-29.47%	23.08%
I-405 SB Ramps/Irvine Center Drive	Irvine	E	1.00	B	0.70	A	0.57	A	0.60	-30.00%	5.26%
I-405 NB Ramps/Jamboree Road	Irvine	F	1.03	C	0.76	C	0.78	C	0.79	-26.21%	1.28%
I-405 SB Ramps/Jamboree Road	Irvine	E	0.92	D	0.88	B	0.66	D	0.83	-4.35%	25.76%
SR-261 NB Ramps/Irvine Boulevard	Irvine	A	0.38	A	0.50	A	0.53	A	0.59	31.58%	11.32%
SR-261 SB Ramps/Irvine Boulevard	Irvine	A	0.42	A	0.49	A	0.40	A	0.49	16.67%	22.50%
CITY AVERAGE	**IRVINE**		**0.69**		**0.69**		**0.57**		**0.71**	**-0.80%**	**25.20%**
Laguna Canyon Road/El Toro Road	Laguna Beach	F	1.54	F	1.02	F	1.16	D	0.83	-33.77%	-28.45%
Laguna Canyon Road/Pacific Coast Highway	Laguna Beach	D	0.84	D	0.89	C	0.74	C	0.78	5.95%	5.41%
Laguna Canyon Rd/SR-73 SB Ramps	Laguna Beach	A	0.32	A	0.33	A	0.33	A	0.35	3.13%	6.06%
Laguna Canyon Rd/SR-73 NB Ramps	Laguna Beach	C	0.73	C	0.77	C	0.72	C	0.77	5.48%	6.94%
El Toro Road/SR-73 SB Ramps	Laguna Beach	A	0.41	A	0.45	B	0.67	B	0.68	9.76%	1.49%
El Toro Road/SR-73 NB Ramps	Laguna Beach	E	0.91	A	0.53	A	0.59	B	0.61	-41.76%	3.39%
CITY AVERAGE	**LAGUNA BEACH**		**0.79**		**0.67**		**0.70**		**0.67**	**-16.00%**	**-4.51%**
I-5 SB Ramp/Avenue de la Carlotta/El Toro Road	Laguna Hills	F	1.18	A	0.49	F	1.13	B	0.64	-58.47%	-43.36%
CITY AVERAGE	**LAGUNA HILLS**		**1.18**		**0.49**		**1.13**		**0.64**	**-58.47%**	**-43.36%**
Moulton Parkway/Crown Valley Parkway	Laguna Niguel	A	0.56	B	0.66	B	0.65	C	0.71	17.86%	9.23%
Moulton Parkway/SR-73 SB Ramps	Laguna Niguel	A	0.45	A	0.39	A	0.38	A	0.43	-13.33%	13.16%
CITY AVERAGE	**LAGUNA NIGUEL**		**0.51**		**0.53**		**0.52**		**0.57**	**3.96%**	**10.68%**
Moulton Parkway/El Toro Road	Laguna Woods	E	0.94	E	0.90	F	1.26	E	0.93	-4.26%	-26.19%
CITY AVERAGE	**LAGUNA WOODS**		**0.94**		**0.90**		**1.26**		**0.93**	**-4.26%**	**-26.19%**
Harbor Boulevard/Imperial Highway	La Habra	D	0.81	B	0.65	D	0.86	C	0.79	-19.75%	-8.14%
Beach Boulevard/Imperial Highway	La Habra	D	0.85	C	0.74	D	0.87	E	0.93	-12.94%	6.90%
Beach Boulevard/Whittier Boulevard	La Habra	A	0.33	A	0.47	A	0.29	A	0.50	42.42%	72.41%
CITY AVERAGE	**LA HABRA**		**0.66**		**0.62**		**0.67**		**0.74**	**-6.53%**	**9.90%**
Trabuco Road/El Toro Road	Lake Forest	F	1.03	C	0.70	C	0.80	B	0.70	-32.04%	-12.50%
I-5 NB/Bridger/El Toro Road	Lake Forest	A	0.56	B	0.61	D	0.81	C	0.74	8.93%	-8.64%
CITY AVERAGE	**LAKE FOREST**		**0.80**		**0.66**		**0.81**		**0.72**	**-17.61%**	**-10.56%**
I-605 NB Ramps/Katella Avenue	Los Alamitos	B	0.69	A	0.59	B	0.65	B	0.70	-14.49%	7.69%
CITY AVERAGE	**LOS ALAMITOS**		**0.69**		**0.59**		**0.65**		**0.70**	**-14.49%**	**7.69%**

Orange County Congestion Management Program
LEVEL OF SERVICE 2003

Intersection/Interchange	Jurisdiction	Baseline AM		2003 AM		Baseline PM		2003 PM		Percent Change	
		LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	AM ICU	PM ICU
I-5 NB Ramps/Crown Valley Parkway	Mission Viejo	B	0.68	A	0.59	B	0.69	C	0.77	-13.24%	11.59%
I-5 SB Ramps/Crown Valley Parkway	Mission Viejo	D	0.86	B	0.68	F	1.01	E	0.94	-20.93%	-6.93%
CITY AVERAGE	MISSION VIEJO		0.77		0.64		0.85		0.86	-17.53%	0.59%
Newport Boulevard/Pacific Coast Highway	Newport Beach	A	0.56	D	0.83	A	0.49	B	0.65	48.21%	32.65%
MacArthur Boulevard/Pacific Coast Highway	Newport Beach	A	0.51	A	0.54	B	0.70	B	0.64	5.88%	-8.57%
CITY AVERAGE	NEWPORT BEACH		0.54		0.69		0.60		0.65	28.04%	8.40%
SR-55 NB Ramps/Sacramento/Katella Avenue	Orange	C	0.75	A	0.51	D	0.85	C	0.72	-32.00%	-15.29%
SR-55 SB Ramps/Katella Avenue	Orange	C	0.73	D	0.86	E	0.95	C	0.77	17.81%	-18.95%
CITY AVERAGE	ORANGE		0.74		0.69		0.90		0.75	-7.43%	-17.22%
Rose Drive/Tustin Avenue/Orangethorpe Avenue	Placentia	C	0.76	B	0.70	F	1.03	C	0.72	-7.89%	-30.10%
SR-57 NB Ramps/Orangethorpe Avenue	Placentia	B	0.67	A	0.53	C	0.80	B	0.67	-20.90%	-16.25%
SR-57 SB Ramps/Iowa Place/Orangethrope Avenue	Placentia	C	0.74	A	0.42	B	0.69	A	0.41	-43.24%	-40.58%
Rose Drive/Imperial Highway	Placentia	E	0.95	B	0.62	E	0.99	D	0.84	-34.74%	-15.15%
CITY AVERAGE	PLACENTIA		0.78		0.57		0.88		0.66	-27.24%	-24.79%
I-5 NB Ramps/Ortega Highway	San Juan Capistrano	A	0.52	E	0.98	A	0.58	D	0.85	88.46%	46.55%
I-5 SB Ramps/Ortega Highway	San Juan Capistrano	B	0.61	C	0.77	C	0.77	E	0.91	26.23%	18.18%
CITY AVERAGE	SAN JUAN CAPISTRANO		0.57		0.88		0.68		0.88	54.87%	30.37%
Harbor Boulevard/1st Street	Santa Ana	A	0.48	D	0.88	D	0.81	E	0.94	83.33%	16.05%
Harbor Boulevard/Warner Avenue	Santa Ana	E	0.93	C	0.76	E	0.98	D	0.82	-18.28%	-16.33%
I-5 SB Ramps/1st Street	Santa Ana	A	0.29	A	0.46	A	0.46	A	0.55	58.62%	19.57%
SR-55 SB Ramp/Auto Mall/Edinger Avenue	Santa Ana	D	0.90	C	0.76	F	1.06	C	0.77	-15.56%	-27.36%
SR-55 SB Ramps/Irvine Boulevard (Fourth Street)	Santa Ana	B	0.68	A	0.57	D	0.83	C	0.75	-16.18%	-9.64%
CITY AVERAGE	SANTA ANA		0.66		0.69		0.83		0.77	4.57%	-7.49%
Beach Boulevard/Katella Avenue	Stanton	D	0.89	D*	0.81	F	1.02	D*	0.85	-8.99%	-16.67%
CITY AVERAGE	STANTON		0.89		0.81		1.02		0.85	1.02	-0.17
Jamboree Road/Edinger Avenue-NB Ramp	Tustin	A	0.28	A	0.26	A	0.32	A	0.43	-7.14%	34.38%
Jamboree Road/Edinger Avenue-SB Ramp	Tustin	D	0.81	B	0.66	A	0.41	A	0.36	-18.52%	-12.20%
Jamboree Road/Irvine Boulevard	Tustin	B	0.65	B	0.63	A	0.59	B	0.66	-3.08%	11.86%
SR-55 NB Ramps/Edinger Avenue	Tustin	C	0.72	A	0.56	B	0.65	B	0.64	-22.22%	-1.54%
SR-55 NB Ramps/Irvine Boulevard	Tustin	A	0.59	E	0.93	A	0.45	C	0.80	57.63%	77.78%
CITY AVERAGE	TUSTIN		0.61		0.61		0.48		0.58	-0.33%	19.42%
Beach Boulevard/Bolsa Avenue	Westminster	F	1.09	C	0.72	F	1.11	D	0.82	-33.94%	-26.13%
Bolsa Chica Road/Garden Grove Boulevard	Westminster	E	0.91	E	0.91	E	0.97	D	0.90	0.00%	-7.22%
CITY AVERAGE	WESTMINSTER		1.00		0.82		1.04		0.86	-18.50%	-17.31%
COUNTY AVERAGE			0.71		0.64		0.78		0.71	-9.84%	-9.16%

**1998 figures shown and to be updated during the next CMP cycle.*

= Level of Service F (ICU value of over 1.00)

= Not Applicable/Not Available

Deficiency plans are not required if a deficient intersection is brought into compliance within eighteen (18) months of its initial detection through improvements which have been previously planned and programmed in the CMP Capital Improvement Program. In addition, CMP legislation specifies that facilities meeting the following criteria may be exempted from a deficiency finding:

- Interregional travel (trip origin outside the Orange County CMP area);
- Construction or maintenance that impact the facility;
- Freeway ramp metering;
- Traffic signal coordination by the State or multi-jurisdictional agencies;
- Traffic generated by the provision of low and very low income housing;
- Improvements contained in the CIP or other prior development approvals constructed in the next Fiscal Year that will address the potential deficiency.

Implementation and Monitoring

The Level of Service for intersections on the CMP Highway System is determined by OCTA in consultation with local jurisdictions. For each CMPHS intersection, OCTA submits information on intersection geometry and level of service traffic count data to the appropriate local agencies for review. Data for each intersection is assessed by the local agency for accuracy. Any errors are promptly reported to OCTA. The procedure is monitored and updated as necessary to ensure that the methods are efficient and the results are accurate.

Compliance

For the 2003 update of the CMP, all local jurisdictions were found in compliance with LOS requirements. Based on the data exhibited in Table 4, approximately 54 percent of the CMP intersections show improvements during the P.M. peak hours when compared with base year figures with 56 percent improving for the A.M. peak period. The average level of service for Orange County improved over the base year by nearly 10 percent during morning peak hours and by 9 percent during the evening peak.

However, comparisons made to the previous CMP monitoring effort show more modest improvements. While slightly more than half of the intersections in the CMP Highway System improved during the A.M. peak period, 42 percent showed improvements during the P.M. peak. Average levels of service improved by only

two percent in the A.M., with only a slight improvement exhibited for the P.M. peak period. As a result, local jurisdictions with intersections exhibiting levels of service approaching the minimum acceptable level of service are urged to continue monitoring those intersections carefully to ensure that they do not fall into a deficient status during the next CMP cycle.

Level of Service (LOS) Deficiency Plans

Legislative Text

The CMP legislation provides a procedure for dealing with LOS deficiencies that occur on the CMP Highway System. Government Code Section 65089.4 states that a local jurisdiction must prepare a deficiency plan when highway or roadway level of service standards are not maintained. The deficiency plan must be adopted by the city or county at a noticed public hearing and include, but not limited to, all of the following:

- An analysis of the causes and impacts of the deficiency;

- A list of improvements necessary for the deficient road or intersection to maintain the minimum level of service otherwise required and the estimated costs of the improvements;

- A list of improvements, programs, or actions, and estimates of costs, that will measurably improve the level of service of the system, and contribute to significant improvements in air quality, such as improved public transit service and facilities, improved non-motorized 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 establishes and periodically revises a list of approved improvements, programs, and actions. If an improvement, program, or action is on the approved list and has not yet been fully implemented, it will be deemed to contribute to significant improvements in air quality. If an improvement, program, or action is not on the approved list, it can not be implemented unless approved by the local air quality management district or air pollution control district.

- An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000) of Division 1 of Title 7, that must be implemented, consisting of the improvements discussed in the previous paragraphs and found by the agency to be in the interest of the public's

health, safety and welfare. The action plan must also include a specific implementation schedule.

The adopted deficiency plan must be forwarded to the congestion management agency with 12 months of the identification of the deficiency. The agency must hold a noticed public hearing within 60 days of receiving the deficiency plan and determine whether the plan should be accepted or rejected. If the plan is rejected, the city will be notified of the reasons for the rejection.

Background

Although deficiency plans have not yet been required for Orange County's CMP preparation effort, a deficiency plan process was developed by the CMP Technical Advisory Committee and its deficiency plan subcommittee to assist local jurisdictions in understanding and planning for future CMP requirements.

The CMP establishes a process that allows local jurisdictions to designate as "deficient" those roads or intersections that do not meet the established traffic Level of Service (LOS) standards (i.e., LOS E or better, unless the baseline was LOS F). The local jurisdiction must then develop and adopt a deficiency plan to bring the road up to the established LOS standard. The deficiency plan identifies the cause of congestion, the improvements needed to solve the problem, and the cost and timing of the proposed improvements. The deficiency plan process provides local jurisdictions with a framework for maintaining compliance with the CMP when a portion of the CMP Highway System fails to meet its established LOS standard.

Through the Directions 2030 long-range planning process, OCTA identifies potential deficiencies before they occur. As funding becomes available, projects are programmed to allow them to be included in the Capital Improvement Plan in sufficient time to prevent deficiencies in the roadway system.

Deficiency Plan Process

The Orange County deficiency plan process has been fully developed and defined. A flow chart summarizing the deficiency plan process is provided in Appendix C-1. The flow chart illustrates the basic components of the deficiency plan process and shows some of its inter-relationships with other CMP components. The established deficiency plan process is designed to identify both existing and projected CMP Highway System deficiencies. The Deficiency Plan Decision Tree (Appendix C-2) illustrates the individual steps that must be taken in order for a local jurisdiction to meet CMP deficiency plan requirements.

Deficiency plans are only required when a location on the CMP Highway System has been identified as not conforming with its LOS standard, as defined in the LOS Component.

Cities with deficient intersections must prepare deficiency plans that describe how conditions at an identified deficient location will be improved to an acceptable LOS, or describe how other actions will achieve an overall improvement of the system. Deficiency plans are not required if a deficient intersection will be brought into compliance within eighteen (18) months of its initial detection through improvements which have been previously planned and programmed in the CMP Capital Improvement Program.

Compliance

Level of service data was collected for all intersections on the CMP Highway System between February and May 2003. To ensure validity, data collection was suspended temporarily to avoid the disruption of travel patterns during Easter/Spring Break holidays. No deficiency plans are required for the 2003 CMP.

Capital Improvement Program

Legislative Text

Government Code Section 65089(b)(5) requires development of a seven-year capital improvement program to maintain or improve the performance of the multimodal system for the movement of people and goods, and to mitigate regional transportation impacts. traffic level of service and transit performance standards and to mitigate regional transportation impacts. The capital improvement program must conform to transportation-related vehicle emissions and air quality mitigation measures, and include projects that will increase the capacity of the multimodal system.

Background

The CMP capital improvement program (CIP) includes projects that will help to maintain or improve traffic conditions on the Congestion Management Program Highway System (CMPHS) and adjacent facilities. In addition to traditional capital projects such as street improvements, the CMP CIP can also include projects that provide transit and air quality benefits. Consistency with statewide standards is emphasized in order for projects in the CMP CIP to adequately compete for state funding.

The capital improvement programs prepared by local jurisdictions for inclusion in the Orange County CMP contain projects that mitigate regional transportation impacts identified in the Land Use Coordination Component of the CMP.

Several types of projects were submitted by local jurisdictions for inclusion in the CMP. Freeway ramp widenings, transportation systems management projects such as bus turnouts, intersection improvements, roadway widenings, and signal coordination projects are among the types of projects found there. Each of Orange County jurisdiction's CMP CIP is included in Appendix E, published separately.

In addition, projects in the CIP that are federal or state funded, as well as locally funded projects of regional significance, are also included in the Orange County portion of the Regional Transportation Improvement Program (RTIP), and are consistent with the Regional Transportation Plan (RTP).

Compliance

In preparing their 7-year Capital Improvement Programs, all Orange County jurisdictions have met the CIP requirements of Government Code Section 65089(b)(5) of CMP legislation.

Monitoring and Conformance

Legislative Text

The Congestion Management Program requires that the Congestion Management Agency (in Orange County, the Orange County Transportation Authority) monitor the implementation of all elements of the Congestion Management Program and biennially determine conformance. Section 65089.4 of the Government Code provides that the conformity determination include, but not be limited to, the following:

- Consistency with levels of service and performance standards;
- Adoption and implementation of a program to analyze the impacts of land use decisions, including an estimate of costs associated with mitigating these impacts;
- Adoption and implementation of a deficiency plan when highway and roadway level of service standards are not maintained.

If, based on this biennial monitoring, the Congestion Management Agency determines, after a noticed public hearing, that a city or county is not conforming with the CMP requirements, the Agency shall notify the city or county in writing of the specific areas of non-conformance. If within 90 days of the written notice the city or county has not come into conformance, the governing body of the Agency shall make a finding of non-conformance and shall submit the finding to the California Transportation Commission and to the State Controller. Upon receiving the notice of non-conformance from the Agency, the Controller shall withhold apportionments of Proposition 111 gas tax funds from the non-conforming jurisdiction.

Background

In Orange County, conformity with the Congestion Management Program is based on the following criteria:

- Local jurisdictions' consistency with the Level of Service (LOS) standards;
- Transit operators' consistency with transit performance measures;
- Local jurisdictions' adoption of Capital Improvement Programs;
- Local jurisdictions' adoption and implementation of a program to analyze the impacts of land use decisions, including an estimate of the costs associated with mitigating those impacts and;
- When necessary, preparation and adoption of deficiency plans which list specific actions and implementation dates.

Monitoring Process

To fulfill the monitoring requirements for the CMP, OCTA developed a set of monitoring checklists to guide local jurisdictions through the CMP conformity process (see Appendix D). All jurisdictions completed these checklists and included them with their agency's 2003 CMP submittal to OCTA.

The checklists provide OCTA with information essential for determining if the goals of the CMP are being met. Of primary interest are indications of declining levels of service on the CMPHS since they point to the need for improvements to the system. OCTA also seeks confirmation from local jurisdictions that development impacts are being evaluated and mitigated as needed. Taken together, these can help local jurisdictions avoid having to prepare deficiency plans by identifying and responding to trouble spots early on.

Based on the CMP checklists completed by the local jurisdictions, the following was determined:

Level of Service

OCTA collected Level of Service (LOS) information for all the CMPHS intersections and provided this information to local jurisdictions for verification. A few discrepancies in LOS reporting occurred as a result of slight variations in the data collection methodology used by the cities and OCTA, or due to erroneously reported intersection geometry. Through an interactive, cooperative process, the cities and

OCTA reached a consensus on all LOS counts, and corrections were made to reported lane configurations and signal phasing. All local jurisdictions were found in compliance with the LOS requirement.

Transit Performance Measures

OCTA Operations staff completed the transit performance measures checklist. It was determined that the transit service performance had been met.

Transportation Demand Management (TDM)

All local jurisdictions indicated that they had applied the TDM ordinance to development projects that met the thresholds specified in the ordinance.

Capital Improvement Program

All local jurisdictions submitted adopted seven-year capital improvement programs that included projects to maintain or improve the traffic LOS on the CMPHS or adjacent facilities, which benefit the CMPHS.

Land Use Coordination

All local jurisdictions adopted CMP Traffic Impact Analysis (TIA) processes for analyzing the impacts of land use decisions on the CMP Highway System. Most Orange County local jurisdictions chose to use the CMP TIA process adopted by the CMP Policy Task Force. Two jurisdictions adjusted their existing processes to incorporate CMP TIA requirements.

All local jurisdictions applied their selected TIA process to development projects that met the CMP minimum threshold of 2,400 or more daily trips. (The threshold is 1,600 or more trips per day for development projects that will directly access the CMPHS.) The CMP TIA process was applied to over 139 development projects. The TIA process identified four locations on the CMPHS where level of service may be measurably impacted by a proposed development project.

Deficiency plans

Based on the data exhibited in Table 4, all intersections on the CMP highway system were found in compliance with level of service requirements. Therefore, no deficiency plans were required for the 2003 CMP.

Consistency with Other Counties

To ensure consistency between Congestion Management Programs within the Southern California region, OCTA submits each biennial update of the Orange County Congestion Management Program to the Southern California Association of Governments. SCAG, as the regional agency, evaluates consistency with the regional transportation plans and with the CMPs of adjoining counties, and incorporates the program into the Regional Transportation Improvement Program (RTIP) once consistency is determined. Cooperative efforts undertaken by OCTA for projects that go beyond jurisdictional boundaries also ensure consistency among agencies. Examples include ride-share services, bus and rail service, and freeway corridor improvements. The previous update of the Orange County CMP was submitted in December 2001 and was found consistent by SCAG.

Summary of Compliance

Jurisdiction	LOS Counts	TDM Element	Capital Improvemt Program	Deficiency Plan	Land Use	2003 Compliance
Aliso Viejo	yes*	yes	yes	n/a	yes	yes
Anaheim	yes	yes	yes	n/a	yes	yes
Brea	yes	yes	yes	n/a	yes	yes
Buena Park	yes	yes	yes	n/a	yes	yes
Costa Mesa	yes	yes	yes	n/a	yes	yes
Cypress	yes	yes	yes	n/a	yes	yes
Dana Point	yes	yes	yes	n/a	yes	yes
Fountain Valley	yes*	yes	yes	n/a	yes	yes
Fullerton	yes	yes	yes	n/a	yes	yes
Garden Grove	yes	yes	yes	n/a	yes	yes
Huntington Beach	yes	yes	yes	n/a	yes	yes
Irvine	yes	yes	yes	n/a	yes	yes
Laguna Beach	yes	yes	yes	n/a	yes	yes
Laguna Hills	yes	yes	yes	n/a	yes	yes
Laguna Niguel	yes	yes	yes	n/a	yes	yes
Laguna Woods	yes*	yes	yes	n/a	yes	yes
Lake Forest	yes	yes	yes	n/a	yes	yes
La Habra	yes	yes	yes	n/a	yes	yes
La Palma	yes	yes	yes	n/a	yes	yes
Los Alamitos	yes	yes	yes	n/a	yes	yes
Mission Viejo	yes	yes	yes	n/a	yes	yes
Newport Beach	yes	yes	yes	n/a	yes	yes
Orange	yes	yes	yes	n/a	yes	yes
Placentia	yes	yes	yes	n/a	yes	yes
Rancho Santa Margarita	yes*	yes	yes	n/a	yes	yes
San Clemente	yes*	yes	yes	n/a	yes	yes
San Juan Capistrano	yes	yes	yes	n/a	yes	yes
Santa Ana	yes	yes	yes	n/a	yes	yes
Seal Beach	yes*	yes	yes	n/a	yes	yes
Stanton	yes	yes	yes	n/a	yes	yes
Tustin	yes	yes	yes	n/a	yes	yes
Villa Park	yes*	yes	yes	n/a	yes	yes
Westminster	yes	yes	yes	n/a	yes	yes
Yorba Linda	yes*	yes	yes	n/a	yes	yes
County	yes	yes	yes	n/a	yes	yes

* These cities do not have intersections on the CMPHS

APPENDIX A
Freeway Level of Service Tables

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
5	0.00	SAN DIEGO-ORANGE COUNTY LINE AT CHRISTIANITOS					
			146,000	C	C	C	C
5	1.00	AVENIDA CALIFIA					
			152,000	C	C	C	D
5	1.63	EL CAMINO REAL					
			160,000	C	C	C	D
5	2.31	AVENIDA PRESIDIO					
			160,000	C	C	C	D
5	2.66	AVENIDA PALIZADA					
			180,000	D	D	D	D
5	3.39	AVENIDA PICO					
			192,000	E	E	E	E
5	5.80	CAMINO ESTRELLA					
			212,000	E	D	D	E
5	6.78	JCT. RTE. 1, PACIFIC COAST HIGHWAY					
			200,000	E	D	D	D
5	7.34	CAMINO CAPISTRANO On-Ramp					
			212,000	E	D	D	E
5	8.80	SAN JUAN CREEK ROAD					
			214,000	F0	D	D	E
5	9.60	JCT. RTE. 74, ORTEGA HIGHWAY EAST					
			232,000	E	D	D	E
5	10.91	JUNIPERO SERRA ROAD					
			238,000	E	D	D	E
5	12.94	AVERY PARKWAY					
			244,000	F0	E	E	F0
5	13.78	CROWN VALLEY PARKWAY					
			281,000	F2	E	E	F2
5	15.22	OSO PARKWAY					
			295,000	F3	E	E	F3
5	16.53	LA PAZ ROAD					
			305,000	F3	E	E	F3
5	17.47	ALICIA PARKWAY					
			339,000	F3	E	E	F3
5	18.69	EL TORO ROAD					
			356,000	F0	E	E	F3
5	19.89	LAKE FOREST DRIVE					
			296,000	F0	E	E	F2
5	21.30	JCT. RTE. 405, SANTA ANA FREEWAY					
			202,000	E	E	E	F1
5	22.21	ALTON PARKWAY					
			222,000	E	D	E	F1
5	23.12	JCT. RTE. 133					
			232,000	E	E	E	F1
5	23.94	SAND CANYON AVENUE					
			238,000	F0	E	F0	F1
5	24.99	JEFFREY ROAD					
			244,000	F0	F0	F0	F1
5	26.58	CULVER DRIVE					
			273,000	F1	F1	F0	F1
5	27.58	JAMBOREE ROAD					
			274,000	F2	F1	F0	E
5	28.25	TUSTIN RANCH ROAD					
			288,000	F2	F1	F0	E
5	29.09	RED HILL AVENUE					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
			291,000	F2	F1	F0	E
5	29.62	NEWPORT AVENUE					
			308,000	F2	F2	E	E
5	30.26	JCT. RTE. 55, COSTA MESA FREEWAY					
			310,000	F3	F2	E	E
5	30.90	FIRST/FOURTH STREETS					
			314,000	F3	F2	F2	F1
5	31.76	GRAND AVENUE					
			314,000	F3	F2	F2	F1
5	32.46	17TH STREET					
			307,000	F3	F2	F2	F1
5	33.09	MAIN STREET					
			232,000	F3	F2	F2	F1
5	34.00	FREEWAYS					
			200,000	F3	F2	F2	F1
5	34.83	CHAPMAN AVENUE					
			189,000	F1	F3	F3	F3
5	35.20	STATE COLLEGE BOULEVARD					
			193,000	F1	F3	F3	F3
5	36.37	KATELLA AVENUE					
			182,000	F1	F3	F3	F3
5	36.61	HASTER STREET					
			193,000	F1	F3	F3	F3
5	37.40	HARBOR BOULEVARD					
			193,000	F1	F3	F3	F3
5	37.67	BALL ROAD					
			213,000	F1	F3	F3	F3
5	38.95	LINCOLN AVENUE					
			210,000	F2	F3	F3	F3
5	39.49	EUCLID AVENUE					
			221,000	F2	F3	F3	F2
5	40.71	BROOKHURST STREET					
			223,000	F3	F3	F3	F2
5	42.10	JCT. RTE. 91, RIVERSIDE/ARTESIA FREEWAYS					
			170,000	F0	F3	F3	F0
5	43.13	STANTON AVENUE					
			170,000	F0	F3	F3	F0
5	43.43	JCT. RTE. 39 (BEACH BOULEVARD OVERCROSS					
			163,000	F1	F3	F3	F0
5	44.26	ARTESIA AVENUE					
			180,000	F2	F3	F3	F0
5	44.38	ORA-LA COUNTY LINE (BUENA PARK CITY LIMITS)					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
22	0.34	BEGIN GARDEN GROVE FREEWAY					
			97,000	F0	F0	F2	F2
22	0.37	JCT. RTE. 605 NORTH					
			93,000	F0	F0	F3	F3
22	0.65	WEST JCT. RTE. 405					
			93,000	F0	F0	F3	F3
22	0.66	EAST JCT. RTE. 405, SAN DIEG FREEWAY AT BOLSA					
			132,000	D	D	F2	F3
22	2.65	KNOTT AVENUE/ GOLDEN WEST STREET					
			136,000	D	D	F1	F3
22	3.59	BEACH BOULEVARD					
			156,000	E	E	F0	F2
22	4.81	MAGNOLIA STREET					
			168,000	E	E	E	F2
22	5.82	BROOKHURST STREET					
			174,000	F0	E	F0	F1
22	6.81	EUCLID STREET					
			183,000	F1	F0	F0	F1
22	7.83	HARBOR BOULEVARD					
			188,000	F2	F1	F0	F3
22	8.82	GARDEN GROVE BOULEVARD					
			198,000	F3	F2	F1	F3
22	9.73	ORANGE, MANCHESTER AVENUE/CITY DRIVE					
			206,000	F3	F3	F1	F3
22	10.48	JCT. RTES. 5 AND 57; SANTA ANA/ORANGE FREEWAYS					
			159,000	F0	E	F0	F1
22	10.99	SANTA ANA, MAIN STREET					
			157,000	F1	F1	F1	F2
22	11.83	ORANGE, GLASSELL STREET					
			146,000	F2	F2	F1	F2
22	12.87	ORANGE, TUSTIN AVENUE					
			120,000	F3	F3	F1	F2
22	13.16	JCT. RTE. 55, COSTA MESA FREEWAY					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
55	0.00	FINLEY AVENUE					
			42,000	F0	F0	F0	F0
55	0.27	JCT. RTE. 1, PACIFIC COAST HIGHWAY					
			53,000	F0	F0	F0	F0
55	1.51	EAST 17TH STREET					
			84,000	F0	F0	F0	F0
55	1.82	HARBOR BOULEVARD					
			69,000	F0	F0	F0	F0
55	2.02	19TH STREET					
			94,000	F0	F0	F0	F0
55	2.77	VICTORIA/22ND STREETS					
			130,000	F0	F0	F0	F0
55	4.02	MESA DRIVE					
			153,000	F1	F0	F0	F0
55	4.74	JCT. RTE. 73, CORONA DEL MAR FREEWAY					
			155,000	F2	F2	F0	F3
55	5.99	JCT. RTE. 405, SAN DIEGO FREEWAY					
			237,000	F2	F3	F3	F3
55	6.99	MAC ARTHUR BOULEVARD INTERCHANGE					
			244,000	F2	F3	F3	F3
55	7.85	DYER ROAD					
			267,000	F2	F3	F3	F3
55	9.44	EDINGER AVENUE					
			284,000	F2	F3	F3	F3
55	9.96	MC FADDEN STREET					
			284,000	F2	F3	F3	F3
55	10.45	JCT. RTE. 5, SANTA ANA FREEWAY					
			194,000	F3	F3	F3	F3
55	10.98	FOURTH STREET					
			197,000	F3	F3	F3	F3
55	11.79	SEVENTEENTH STREET					
			197,000	F3	F3	F3	F3
55	12.97	JCT. RTE. 22 WEST, GARDEN GROVE FREEWAY					
			206,000	E	F3	F3	F2
55	13.70	CHAPMAN AVENUE					
			190,000	E	F3	F3	F2
55	15.24	KATELLA AVENUE					
			183,000	F0	F3	F3	F2
55	16.98	LINCOLN AVENUE					
			169,000	F1	F3	F3	F2
55	17.83	JCT. RTE. 91, RIVERSIDE FREEWAY					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
57	10.83	JCT. RTES. 5 AND 22, SANTA ANA/GARDEN GROVE					
			228,000	F3	F3	F3	F3
57	11.24	CHAPMAN AVENUE					
			240,000	F2	F3	F3	F3
57	11.80	ORANGEWOOD AVENUE					
			248,000	F2	F3	F3	F3
57	12.53	KATELLA AVENUE					
			254,000	F1	F3	F3	F3
57	13.42	BALL ROAD					
			272,000	F1	F3	F3	F3
57	14.78	LINCOLN AVENUE					
			276,000	F0	F3	F2	F2
57	15.60	JCT. RTE. 91, RIVERSIDE FREEWAY					
			296,000	F0	F3	F2	F2
57	16.39	ORANGETHORPE AVENUE					
			279,000	F0	F3	F3	F3
57	17.30	CHAPMAN AVENUE					
			275,000	F0	F3	F3	F3
57	17.57	NUTWOOD AVENUE					
			269,000	F0	F3	F3	F2
57	18.34	YORBA LINDA BOULEVARD					
			246,000	F1	F3	F3	F2
57	19.86	JCT. RTE. 90, IMPERIAL HIGHWAY					
			220,000	F1	F3	F2	F0
57	20.88	LAMBERT ROAD					
			214,000	F1	F3	F2	F0
57	21.78	TONNER CANYON ROAD					
			209,000	F1	F3	F2	F0
57	22.55	ORANGE-LOS ANGELES COUNTY LINE					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
73	0.00	ORANGE COUNTY					
			48,000	B	B	A	B
73	10.00	JCT. INTERSTATE 5					
			48,000	B	B	A	B
73	11.76	GREENFIELD ROAD					
			48,000	D	B	B	D
73	13.40	LA PAZ ROAD					
			53,000	E	B	B	D
73	14.39	ALISO CREEK ROAD					
			62,000	E	B	B	D
73	16.25	EL TORO ROAD					
			64,000	E	B	B	D
73	18.69	TOLL PLAZA					
			64,000	E	B	B	D
73	21.43	NEWPORT COAST DRIVE					
			69,000	E	D	D	D
73	22.45	BONITA CANYON DRIVE/FORD ROAD					
			64,000	E	E	E	E
73	24.78	JAMBOREE ROAD					
			119,000	F0	F2	F1	F2
73	26.58	JCT. RTE. 55					
			101,000	F0	F3	F1	F2
73	27.28	BEAR STREET					
			85,000	F2	F3	F1	F2
73	27.81	JCT. RTE. 405, SAN DIEGO FREEWAY					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
91	0.00	LOS ANGELES-ORANGE COUNTY LINE					
			237,000	F2	F0	F2	F0
91	0.49	LA PALMA, ORANGETHORPE AVENUE					
			227,000	F2	F0	F2	F0
91	0.85	BUENA PARK, VALLEY VIEW STREET					
			246,000	F3	F0	F2	F0
91	1.84	BUENA PARK, KNOTT AVENUE					
			250,000	F3	F1	F2	F0
91	2.62	BUENA PARK, JCT. RTE. 39, BEACH BOULEVARD					
			250,000	F2	F1	F2	F0
91	3.64	FULLERTON, JCT. RTE. 5, SANTA ANA FREEWAY					
			228,000	F1	F1	F3	F3
91	1.23	ANAHEIM, BROOKHURST AVENUE					
			237,000	F1	F2	F3	F3
91	2.23	ANAHEIM, EUCLID AVENUE					
			243,000	F1	F3	F3	F3
91	3.26	FULLERTON, HARBOR BOULEVARD					
			256,000	F1	F3	F3	F3
91	3.51	ANAHEIM, LEMON STREET/HARVARD AVENUE					
			250,000	F1	F3	F3	F3
91	4.26	ANAHEIM, EAST STREET					
			242,000	F1	F3	F3	F3
91	5.26	ANAHEIM, STATE COLLEGE BOULEVARD					
			234,000	F1	F3	F3	F1
91	6.12	ANAHEIM, JCT. RTE. 57, ORANGE FREEWAY					
			234,000	F1	F3	F3	F3
91	7.35	ANAHEIM, KRAEMER BOULE= VARD/GLASSELL STREET					
			228,000	F1	F3	F3	F3
91	8.40	ANAHEIM, TUSTIN AVENUE					
			229,000	F1	F3	F3	F1
91	9.19	FREEWAY					
			298,000	F0	F3	F3	F1
91	10.09	ANAHEIM, LAKEVIEW AVENUE					
			282,000	F0	F2	F2	F1
91	11.54	ANAHEIM, JCT. RTE. 90 WEST, IMPERIAL HIGHWAY					
			278,000	F0	F3	F0	F0
91	14.43	WEIR CANYON ROAD					
			263,000	F0	F3	F0	F0
91	15.93	JCT. RTE 241					
			260,000	F0	F3	F0	F0
91	16.40	GYPSUM CANYON ROAD					
			263,000	F0	F3	F3	F0
91	17.95	COAL CANYON ROAD					
			264,000	F0	F3	F3	F0
91	18.91	ORANGE-RIVERSIDE COUNTY LINE, GREEN RIVER ROAD					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
133	8.08	BEGIN FREEWAY	30,000	E	E	D	E
133	8.38	IRVINE, JCT. RTE. 405, SAN DIEGO FREEWAY	30,000	E	E	D	E
133	8.93	BARRANCA PARKWAY	26,000	D	D	E	D
133	9.52	IRVINE, JCT. RTE. 5, SANTA ANA FREEWAY	41,000	D	D	F0	D

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
241	0.00	ORANGE COUNTY					
241	14.55	OSO PARKWAY					
			7,300	A	A	A	B
241	17.54	ANTONIO PARKWAY					
			15,800	B	A	A	B
241	18.49	SANTA MARGARITA PARKWAY					
			39,000	C	A	B	D
241	20.08	LOS ALISOS BOULEVARD					
			39,000	D	B	B	D
241	21.80	PORTOLA PARKWAY SOUTH					
			37,000	D	B	B	D
241	23.42	ALTON PARKWAY					
			44,000	E	B	B	D
241	24.97	PORTOLA PARKWAY					
			43,000	B	D	D	B
241	27.38	JCT. ROUTE 133					
			35,000	B	E	D	B
241	32.54	CHAPMAN-SANTIAGO ROAD					
			41,000	B	F0	D	B
241	36.10	WINDY RIDGE TOLL PLAZA					
			35,000	B	F0	D	B
241	39.08	JCT. ROUTE 91					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
261	0.00	WALNUT AVENUE					
			12,700	A	A	A	A
261	2.85	PORTOLA PARKWAY					
			12,700	A	A	A	A
261	6.21	JCT. ROUTE 241					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
405	0.23	IRVINE, JCT. RTE. 5, SAN DIEGO FREEWAY CONTINUES					
			171,000	F2	F0	F0	F3
405	0.95	IRVINE, IRVINE CENTER DRIVE					
			217,000	F2	F0	F0	F3
405	1.80	IRVINE, JCT. RTE. 133, LAGUNA FREEWAY					
			237,000	F2	F0	F0	F3
405	2.88	IRVINE, SAND CANYON AVENUE					
			247,000	F2	F0	F0	F3
405	3.95	IRVINE, JEFFREY ROAD/UNIVERSITY DRIVE					
			240,000	F2	F2	F0	F3
405	5.62	IRVINE, CULVER DRIVE					
			260,000	F2	F2	F0	F3
405	6.92	IRVINE, JAMBOREE BOULEVARD					
			275,000	F2	F2	F2	F3
405	7.80	IRVINE, MAC ARTHUR BOULEVARD					
			250,000	F2	F3	F2	F3
405	8.74	JCT. RTE. 55, COSTA MESA FREEWAY					
			274,000	F2	F3	F2	F2
405	9.51	COSTA MESA, BRISTOL STREET					
			265,000	F2	F2	F2	F2
405	10.28	FREEWAY, FAIRVIEW ROAD					
			320,000	F2	F2	F3	F3
405	11.45	COSTA MESA, HARBOR BOULEVARD					
			305,000	F2	F3	F3	F3
405	12.64	FOUNTAIN VALLEY, EUCLID STREET					
			257,000	F3	F3	F3	F3
405	13.78	FOUNTAIN VALLEY, BROOKHURST STREET					
			250,000	F3	F3	F3	F3
405	14.82	FOUNTAIN VALLEY, WARNER AVENUE					
			280,000	F3	F3	F3	F3
405	15.21	HUNTINGTON BEACH, MAGNOLIA STREET					
			281,000	F2	F3	F3	F3
405	16.54	BOULEVARD					
			246,000	F2	F3	F1	F2
405	17.75	STREET					
			282,000	F1	F3	F0	F1
405	19.16	WESTMINSTER, WESTMINSTER AVENUE					
			287,000	F1	F3	F0	F1
405	20.75	JCT. RTE. 22 EAST, GARDEN GROVE FREEWAY					
			380,000	F3	F3	F3	F3
405	22.64	SEAL BEACH, SEAL BEACH BOULEVARD					
			377,000	F3	F3	F3	F3
405	23.28	SEAL BEACH, JCT. RTE. 22 WEST					
			318,000	F3	F3	F3	F3
405	23.98	SEAL BEACH, JCT. RTE. 605					
			255,000	F3	F3	F3	F3
405	24.18	ORANGE-LOS ANGELES COUNTY LINE					

Caltrans District 12 CMP DATA

Orange Route	Post Mile	Description	2002 AADT	NB LOS		SB LOS	
				AM	PM	AM	PM
605	3.09	SEAL BEACH, JCT. RTE. 22; BEGIN FREEWAY					
			42,000	F0	F3	F2	F3
605	3.50	SEAL BEACH, JCT. RTE. 405, SAN DIEGO FREEWAY					
			183,000	F0	F3	F2	F3
605	1.41	LOS ALAMITOS, KATELLA AVENUE					
			190,000	F0	F3	F2	F3
605	1.64	ORANGE-LOS ANGELES COUNTY LINE					

APPENDIX B-1
CMP Traffic Impact Analysis Guidelines

MEETING CMP TRAFFIC IMPACT ANALYSIS REQUIREMENTS

AN OPTIONAL GUIDANCE FOR LOCAL JURISDICTIONS

Prepared for:

Orange County Environmental Management Agency
Orange County Transportation Commission
Orange County Transit District
League of Cities, Orange County Division
Transportation Corridor Agencies

Prepared by:

Kimley-Horn and Associates, Inc.
and
The Planning Center

June 11, 1991

CMP-TIA REQUIREMENTS

Requirements of CMP legislation

- Analyze impacts of land use decisions on CMP Highway System.
- Estimate costs associated with mitigation of impacts on CMP Highway System.
- Exclude costs associated with mitigating the impacts of interregional travel.
- Allow credits against mitigation costs for local public and private contributions to improvements to the CMP Highway System.
    - For toll road facilities, allow credits only for local public and private contributions which will not be reimbursed from toll revenues or other state or federal sources.
- Report annually on actions taken to adopt and implement a program to analyze the impacts of land use decisions on the CMP Highway System and to estimate the costs of mitigating those impacts.

Year One Goal

- Identify the impacts of development anticipated to occur over the next 7 years on the CMP Highway System and the projected costs of mitigating those impacts.

Actions Required of Local Jurisdictions

- A TIA will be required for CMP purposes for all proposed developments generating 2,400 or more daily trips. For developments which will directly access a CMP Highway System link, the threshold for requiring a TIA should be reduced to 1,600 or more trips per day.
- Document procedures used to identify and analyze traffic impacts of new development on CMP Highway System. This documentation should include the following:
    - Identification of type of development proposals which are subject to a traffic impact analyses (TIA).
    - Description of required or acceptable TIA methodology
    - Description of inter-jurisdictional coordination process used when impacts cross local agency boundaries
- Document procedures/standards used to determine the costs of mitigation requirements for impacts of new development on CMP Highway System.
- Document methodology and procedures for determining applicable credits against mitigation costs including allowable credits associated with contributions to toll road facilities.

SECTION 1 – INTRODUCTION

PURPOSE

State legislation creating the Congestion Management Program (CMP) requires that the program contain a process to analyze the impacts of land use decisions by local governments on the regional transportation system. Once impacts of a land use decision are identified, the CMP also requires that the costs to mitigate the impacts be determined.

For CMP purposes, the regional transportation system is defined by the legislation as all state highways and principal arterials at a minimum. This system is referred to as the CMP Highway System. The identification and analysis of impacts along with estimated mitigation costs are determined with respect to this CMP Highway System.

The objectives of this report are to:

- Provide guidance to local agencies in conducting traffic impact analyses.
- Assist local agencies in maintaining eligibility for funds through documentation of CMP compliance.
- Make available minimum standards for jurisdictions wishing to use them for identifying and analyzing impacts on CMP Highway System.
- Establish CMP documentation requirements for those jurisdictions which elect to use their own TIA methodology.
- Establish a baseline from which TIA standardization may evolve as experience is gained in the CMP process.
- Cause the analysis of impacts on the CMP Highway System to be integrated into the local agency development review process.
- Provide a method for determining the costs associated with mitigating development impacts.
- Provide a framework for facilitating coordination between agencies when appropriate.

BACKGROUND

Through a coordinated effort among local jurisdictions, public agencies, business and community groups, Orange County has developed a Congestion Management Program framework in response to the requirements of Assembly Bill 1791. This framework is contained in the Congestion Management Program Preparation Manual which was issued in January 1991 as a joint publication

of the following agencies:

County of Orange
Orange County Division, League of California Cities
Orange County Transportation Commission
Orange County Transit District
Transportation Corridor Agencies

The CMP Manual describes the CMP Program requirements for each component prescribed by the CMP provision of AB 1791. The components include one entitled Land Use Coordination, which sets forth the basic requirements for the assessment, mitigation, and monitoring of traffic impacts to the CMP Highway System which are attributable to development projects.

Consolidation of Remaining Issues

This report is intended to present a useful reference in addressing the remaining issues associated with the identification and treatment of development impacts on the CMP Highway System. It is desirable that a standardized approach be utilized for determining which projects require analysis and in carrying out the resulting traffic impact analysis (TIA). It is also desirable that a reasonably uniform approach be utilized in determining appropriate mitigation strategies and estimating the associated costs.

TIA Survey History

In 1989, Kimley-Horn and Associates, Inc. conducted a survey of TIA procedures being used at the time by local jurisdictions within Orange County. The survey revealed that although there were some commonalities, there was considerable variation in approach, scope, evaluation methodology, and project disposition.

As part of the CMP process, it was determined that the identification of TIA elements which can or should be standardized should be accomplished. Additional documentation of cost estimating practices and the development of standardized costs and estimating procedures will be valuable in achieving desired consistency among jurisdictions.

In order to accomplish these objectives, Kimley-Horn's previous TIA survey was updated and additional information was solicited from each local agency within Orange County. The information was obtained through telephone interviews with City Engineers and Planners after they had an opportunity to examine the survey questionnaire which was mailed to them in advance of the interview. The information obtained was used in preparing the methodology recommendations contained in this report. A summary of the update survey results is provided in the Appendix.

Relationships with Other Components

In addition to being an integral part of the Land Use Coordination component of the CMP, the traffic impact analysis requirements also relate to all other CMP components to a greater or lesser degree. These components include the following:

Modeling
Level of Service
Transit Standards
Traffic Demand Management
Deficiency Plans
Capital Improvement Program

The Land Use Coordination section in Chapter 3 of the CMP Preparation Manual dated January, 1991 contains a detailed description of each of the component linkages listed above.

SECTION 2- REQUIREMENTS OF CMP LEGISLATION

The complete text of CMP legislation is contained in Appendix A to the Preparation Manual for the Congestion Management Program for Orange County dated January, 1991. For ease of reference, the requirements of this legislation related to analysis of the impacts of land use decisions made by local jurisdictions are summarized as follows.

- Analyze impacts of land use decisions on CMP Highway System.
- Estimate costs associated with mitigation of impacts on CMP Highway System.
- Exclude costs associated with mitigating the impacts of interregional travel.
- Allow credits against mitigation costs for local public and private contributions to improvements to the CMP Highway System.
  - For toll road facilities, allow credits only for local public and private contributions which will not be reimbursed from toll revenues or other state or federal sources.
- Report annually on actions taken to adopt and implement a program to analyze the impacts of land use decisions on the CMP Highway System and to estimate the costs of mitigating those impacts.

SECTION 3 - ACTIONS REQUIRED OF LOCAL AGENCIES

The provisions of CMP legislation, as summarized in the preceding section, impose a requirement on local jurisdictions to carry out certain actions in order to demonstrate their compliance with the CMP program. This compliance will maintain eligibility to receive state gas tax funds made available by the voter approved Proposition 111. The actions and documentation requirements related to the identification and analysis of traffic impacts include the following:

- A TIA will be required for CMP purposes for all proposed developments generating 2,400 or more daily trips. For developments which will directly access a CMP Highway System link, the threshold for requiring a TIA should be reduced to 1,600 or more trips per day.

- Document procedures used to identify and analyze traffic impacts of new development on CMP Highway System. This documentation should include the following:
  - Identification of type of development proposals which are subject to a traffic impact analyses (TIA).
  - Description of required or acceptable TIA methodology
  - Description of inter-jurisdictional coordination process used when impacts cross local agency boundaries

- Document procedures/standards used to determine the costs of mitigation requirements for impacts of new development on CMP Highway System.

- Document methodology and procedures for determining applicable credits against mitigation costs including allowable credits associated with contributions to toll road facilities.

- Establish annual monitoring and reporting process to summarize activities performed in analyzing the impacts of land use decisions on the CMP Highway System and in estimating the associated mitigation costs. Procedures for incorporating mitigation measures into the Capital Improvement Program should also-be established.

- For the first year, local jurisdictions may assume that all interregional travel occurs on the freeway system or they may develop an analysis methodology to determine the amount of interregional travel occurring on arterials which are part of the CMP Highway System. During the first year, TIAs need to analyze only the impacts to arterial portions of the CMP Highway System.

SECTION 4 - CMP TRAFFIC IMPACT ANALYSIS METHODOLOGY

In order to assure that the CMP Program meets its objectives of linking land use decisions with the adequate evaluation of impacts related to those decisions, traffic impact analyses must often be undertaken. There are a number of essential elements which should be included in traffic impact analyses (TIA) used to support the program. Many local jurisdictions already employ development review processes which will be adequate for addressing CMP requirements. For those jurisdictions wishing technical guidance in carrying out the analysis of traffic impacts on the CMP Highway System, this section offers an appropriate TIA methodology.

PROJECTS REQUIRING TIA ANALYSIS

All development in Orange County will use the CMP Network to a greater or lesser extent from time-to-time. The seven-year capital improvement program, together with deficiency plans to respond to deficiencies which cannot be resolved in the 7-year timeframe, are developed in response to anticipated growth in travel within a jurisdiction. Thus, a certain level of travel growth is addressed in the normal planning process and it is not necessary to evaluate relatively small projects with a TIA or to rely on TIA's as the primary means of identifying needed CMP Highway System improvements. Furthermore, County voters have approved a sales tax increase which will fund major improvements to the transit and highway systems serving the County.

Many jurisdictions will require an EIR for a proposed development project. When required, the EIR should include steps necessary to incorporate the required CMP analysis. Most or all of the TIA elements described in this section would normally be incorporated into the typical EIR traffic analysis.

Certain development projects not requiring an EIR should still be evaluated through a TIA process due to their land use type, intensity, proximity to the CMP network, and/or duration of development timeframe. In other words, developments which will significantly alter the anticipated demand on a CMP roadway should be evaluated through a TIA approach.

At the present time, there is a wide-ranging approach to determining which projects will require a TIA. In some jurisdictions, there are formal guidelines, while in others it depends primarily on the judgement of a member of staff relative to the probable significance of the project's impact on the surrounding road system.

The OCTC TIA guidelines recommended defining three percent of the level of service standard as significant impact. This seems reasonable for application for CMP purposes. Thus, project impacts of three percent or less can be mitigated by impact fees or other revenues. Projects with a potential to create an impact of more than three percent of Level of Service E capacity will require TIA's. On this basis, it is recommended that all development projects which generate more than 2,400 daily trips be subject to a TIA for CMP evaluation. For projects which will directly access or be in close

proximity to a CMP Highway System link a reduced threshold of 1,600 trips/day would be appropriate. Appendix B provides background information of the derivation of these threshold values.

TIA PROCESS

There are a number of essential elements in the TIA process itself. It is desirable that all of these elements be evaluated within an acceptable range of criteria in order to assure the objectives of the CMP process and to maintain a reasonable degree of equity from jurisdiction to jurisdiction. It is recognized, however, that for certain of the elements, some variations relating to professional judgement and local criteria and characteristics are necessary and appropriate to the process. These factors have been fully considered in developing the descriptions of the following elements.

- Evaluation of existing conditions
- Trip generation
- Internal capture and passer-by traffic
- Trip distribution and assignment
- Radius of development influence
- Background traffic
- Capacity analysis methodology
- Impact costs/mitigation

Evaluation of Existing Conditions

In order to evaluate the relative impacts of a proposed development, determine CMP Highway System status and define appropriate mitigation for new impacts, it is necessary to understand the existing conditions on the affected roadway network. Evaluation of existing conditions is common to nearly all jurisdictions in Orange County. Given that most jurisdictions use link and intersection capacity analysis techniques compatible with the techniques identified in the level-of-service component, no changes in existing local jurisdiction procedures should be necessary in connection with the CMP Program.

Trip Generation

At the foundation of traffic impact analyses is the quantification of trip generation. Use of the ITE Trip Generation Manual is common throughout Orange County. In addition, other widely accepted practices are being used when appropriate to supplement the lit data. These practices include use of acceptable rates published by local agencies and surveys conducted at similar sites, subject to approval of the reviewing agency. Given the uniformity of practice in Orange County to date, no major adjustments in this procedure should be required. It would be desirable however to establish a central library for reporting the results of special trip generation studies and making these results

available to all other jurisdictions who wish them.

Internal Capture and Passer-by Traffic

Techniques for identifying the internal relationship of travel within mixed-use developments and the degree to which development captures passer-by trips as opposed to creating new trips are being applied by approximately 2/3 of the local jurisdictions within Orange County. The use of guidelines in the ITE Trip Generation Manual and appropriate professional judgement are the predominant techniques employed. To supplement the guidance available through ITE documentation, local jurisdictions are encouraged to undertake additional studies to document rates applicable within their jurisdiction. The determination of applicable rates should be undertaken by experienced transportation engineering professionals with thorough documentation of the methodology, data, and assumptions used. It is recommended that those jurisdictions which do not currently allow these adjustments establish revised TIA procedures incorporating this element. As with trip generation data, a central library would be desirable for reporting of data and analyses performed locally related to determination of appropriate factors.

Trip Distribution and Assignment

Several appropriate distribution and assignment techniques are used in Orange County, depending on the size of the development and the duration of buildout. Manual and computer modeling approaches are used as appropriate. Manual methods based on the best socio-economic information available to the agency and applicant should be acceptable except when a development's size makes a modeling approach more appropriate. Sources of this information include demographic surveys, market analyses, and previous studies.

Radius of Development Influence

There are numerous ways to identify the study area to be evaluated in a TIA. These include both qualitative and quantitative approaches. One of the most effective ways is through the determination of the quantity of project traffic on CMP roadway links compared to a selected level of impact. The goal of a quantitative approach is to be sure that all elements of the CMP network are addressed in a comparable manner from jurisdiction to jurisdiction. This is important due to the potential for overlapping impacts among jurisdictions. It is also important to maintain flexibility within a quantitative process to allow transportation professionals at local jurisdictions to add areas to the study which are of specific concern. It is not intended that CMP practices should restrict this aspect of each agency's existing TIA process.

It is recommended that the study area for CMP Highway System links be defined by a measure of significant impact on the roadway links. As a starting point, it is proposed that the measure be three percent of existing roadway capacity. Thus, when a traffic impact analysis is being done it would require the inclusion of CMP roadway links that are impacted by 3 percent or more of their LOS E capacity. If a TIA is required only for CMP purposes, the study area would end when traffic falls below three percent of capacity on individual roadway links. If the TIA is also required for other purposes, additional analysis can be required by the local jurisdiction based on engineering judgement or local regulation as applicable.

Background Traffic

In order for a reasonable assessment of the level of service on the CMP network, it is necessary to not only identify the proposed development impact, but also the other traffic which can be expected to occur during the development of the project. There are numerous methods of evaluating background traffic. The implications of these alternative methods are that certain methodologies may result in deficiencies, while other methodologies may find an acceptable operating conditions.

The cost to mitigate impacts of a land use decision is unrelated to background traffic. Rather, it is related to the cost of replacing the capacity which is consumed by the proposed development. However, it is necessary to understand background traffic in order to evaluate level-of-service. Background traffic is composed of existing traffic demands and growth from new development which will occur over a specific period of time. Both the existing and the growth elements of background traffic contain sub-elements. These include traffic which is generated within Orange County, that which begins and/or ends within the County, and interregional traffic which has neither end in Orange County. CMP legislation stipulates that interregional traffic will not be considered in CMP evaluations with respect to LOS compliance or determining costs of mitigation. Given that the CMP process is new, there is no existing practice of separating interregional traffic from locally generated traffic. Until a procedure for identifying interregional traffic is developed, local jurisdictions may assume that all interregional traffic occurs on the freeway system. Initially TIA's required for CMP purposes need only analyze the impacts to arterial portions of the CMP Highway System.

Local governments in Orange County are generally consistent in their approach to background traffic. There are three major approaches used. The first is to use historical growth factors which are applied to existing traffic volumes to project future demands. The second is to aggregate the impacts of specific individual projects which have been approved or planned but not built to identify the total approved background traffic on the study area roadway system. A third method is to use computer modeling to identify total traffic demands which represent both background traffic and project impact traffic. For the present CMP program, it is recommended that the discretion for the appropriate process lie within the local jurisdiction, however, the method to be used in the jurisdiction should be clearly defined in the agency's TIA rules and procedures. In addition, it is recommended that all jurisdictions create a listing of approved development projects and a map showing their locations which would be updated frequently and be available to other jurisdictions on request. The listing should include information related to type and size of land use and phasing for each project.

It is appropriate to periodically update long range forecasts based on development approvals and anticipated development growth in the region and plan a transportation system which will provide the necessary level-of-service for this amount of development. When a development proposal will significantly alter this long-term plan, it will be necessary to address the aggregate of all approved development to assure that there is a long-term solution. However, from a TIA perspective, it is reasonable and practical to consider only that development traffic which can be expected to exist at the time of buildout of a new development proposal. That is to say, for CMP purposes background traffic should be limited to that traffic which is generated by development which will exist at the time of buildout of a proposed development. CEQA requirements may dictate that other background traffic scenarios be analyzed as well.

Capacity Analysis Methodology

Once the projected traffic demands are known, it is necessary to evaluate these demands relative to available and planned roadway capacity. The methodology used in capacity determination in Orange County is relatively uniform. Additionally, the level of service (LOS) component of the CMP Program has identified specific criteria which are to be used in determining level-of-service on the CMP Highway System.

Impact Costs/Mitigation

This element is at the heart of the CMP process; that is to identify the costs of mitigating a land development decision on the CMP System.

The current practice throughout Orange County is to require mitigation only when the level-of-service standard is exceeded. However, some jurisdictions require regular impact mitigation fees and phasing road improvements with development. The growth management requirement of the sales tax Measure M mandates a traffic phasing program. Often, mitigation is equated to construction of roadway improvements to maintain an acceptable level-of-service and/or to maintain the existing level-of-service. In some instances, a pay and go mitigation approach is allowed. This means that new development may pay its fair share and go forward and the provision of improvements remain the responsibility for the local jurisdiction.

In order to assess responsibility for impacts, there are a variety of approaches. One approach is to consider impact traffic as a percent of total traffic. Impact traffic may also be taken as a percentage of existing capacity. Another common approach is to use the net impact of development as a percent of total future traffic demand.

Since CMP legislation requires the identification of costs of land use decisions and impacts across jurisdictional lines, it is desirable that the CMP program have a consistent method for identifying the costs of development impacts. On the other hand, a wide variety of mitigations can occur from jurisdiction to jurisdiction.

It is recommended that the impact costs be calculated as the total of new development traffic on a roadway link requiring improvement divided by the capacity of the improvement times the cost of the improvement. This can be expressed in a formula as follows.

$$\text{Impact Cost} = \frac{\text{development traffic}}{\text{capacity of improvement}} \times \text{improvement cost}$$

Improvements to be included in the cost analysis should be those identified in the jurisdiction's adopted Circulation Element and any additional improvements identified in the development TIA. The total impact cost for a development would be the sum of costs for all significantly impacted links. Funds collected from these assessments could be aggregated and applied to specific projects on an annual basis in accordance with locally established priorities. If project impacts extend across jurisdictional boundaries the impact costs calculated for significantly impacted links in an adjacent jurisdiction should be allocated to that jurisdiction for use in it's program of prioritized improvements.

Through this process, progress can be achieved in implementing system improvements without

having to wait for 100% of the funds being collected for each individual improvement. In theory, all required improvements will be accomplished over time as new developments are approved which will generate traffic to utilize available and planned system capacity. The costs should be based on recent Unit cost experience in Orange County and may include planning, permitting, preliminary engineering, design, right-of-way, construction, landscaping, construction inspection, and, if applicable, financing costs.

There are two approaches to mitigation. One is traffic reduction and the other is to build improvements to accommodate the new traffic. Traffic reduction through transportation demand ordinances or other regulations which will reduce impacts can be calculated in the same way a development impact would be calculated. But in this case, it would be taken as a credit or a reduction in impact. Mitigation techniques such as TDM or phasing or reduction in project intensity merely reduce for a new development the amount of impact which must be mitigated and are changes which should occur prior to the calculation of project impact costs. A monitoring program should be established to confirm that anticipated reductions are realized.

To comply with the CMP process, a local jurisdiction should accomplish two things. First, it should demonstrate that it is analyzing and mitigating the impact of new development on the CMP Highway System. Second, it should maintain the level-of-service standards or adopt a deficiency plan Consistent with CMP legislation. In order to demonstrate the mitigation which has been undertaken, the local jurisdiction should maintain a record of the cumulative impact cost of all development approvals and the cumulative mitigation value of improvements provided by the local jurisdiction. These could be construction programs or credits from a TDM ordinance or other traffic reduction measures. It is then only necessary to show on an annual basis that the total improvement costs plus traffic reduction credits are equal to or greater than the total impact cost of new development approvals to prove mitigation compliance.

The maintenance of level-of-service would come through implementation of improvements contained in the 7-year capital improvements element, Measure M and state-funded improvements, additional improvements which may be made in conjunction with development approvals, and from deficiency plans which may be required from time to time. From a TIA perspective, it would be necessary to document the following:

a. the level-of-service on the CMP network at buildout of the proposed development will be: 1) level—of-service "E or better, or 2) will not result in a cumulative increase of more than 0.10 in v/c ratio if the established LOS standard is worse than LOS E.

b. a deficiency plan exists to address the links for which level-of-service is not provided, and

c. a deficiency plan will be developed for a new link when a deficiency will occur.

DOCUMENTATION OF RULES AND PROCEDURES

To assure a clear understanding of the TIA procedures which are necessary to support a viable CMP program, it is recommended that a set of rules and procedures be established by each local

jurisdiction. Ideally, these rules and procedures would cover the requirements for the full TIA analysis and would include minimum requirements for the CMP process. Local jurisdictions which prefer not to adopt separate CMP TIA standards could implement standards for CMP requirements within a TIA and maintain their existing approach for all other aspects of their existing TIA process. The following is a summary of the elements which should be included in CMP procedures documentation and the methodologies applicable to each element.

1. **Thresholds for Requiring a TIA for CMP** - Projects with the potential to create an impact of more than 3% of LOS "E' capacity on CMP Highway system links should require a TIA. All projects generating 2,400 or more daily trips should require a TM for CMP evaluation. If a project will have direct access to a CMP link this threshold should be reduced to 1,600 or more daily trips. A TIA should not be required again if one has already been performed for the project as part of an earlier development approval which takes the impact on the CMP Highway System into account.

2. **Existing Conditions Evaluation** - Identify current level-of-service on CMP roadways and intersections where the proposed development traffic will contribute to 3 percent of the existing capacity. Use procedures defined in the level-of-service component for evaluation of level—of-service.

3. **Trip Generation** - ITE trip generation rates or studies from other agencies and locally approved studies for specific land uses.

4. **Internal Capture and Passerby Traffic** - Justification for internal capture should be included in the discussion. Passerby traffic should be calculated based upon ITE data or approved special studies.

5. **Distribution and Assignment** - Basis for trip distribution should be discussed and should be linked to demographic or market data in the area. Quantitative and/or qualitative information can be used depending on the size of the proposed development. As the size of the project increases, there should be a tendency to use a detailed quantitative approach for trip distribution. Trip assignment should be based on existing and projected travel patterns and the future roadway network and its travel time characteristics.

6. **Radius of Impact/Project Influence** - The analysis should identify the traffic assignment on all CMP roadway links until the impact becomes less than 3 percent of level of service E capacity.

7. **Background Traffic** - Total traffic which is expected to occur at buildout of the proposed development should be identified.

8. **Impact Assessment Period** - This should be the buildout timeframe of the proposed development. -

9. **Capacity Analysis Methodology**- The methodology should be consistent with that specified in the level-of—service component of the CMP Program.

10. **Improvement Costs** - The cost of roadway improvements should include all costs of implementation including studies, design, right-of-way, construction, construction inspection, and financing costs, if applicable.

11. **Impact Costs and Mitigation** - The project impact divided by the capacity of a roadway improvement times the cost of the improvement should be identified for each significantly impacted CMP link and summed for the study area.

12. **Projected Level-of-Service** - The TIA should document that the projected level-of-service on all CMP links in the study area will be at Level-of-Service "E" or the existing level-of-service whichever is less, or that a deficiency plan exists or will be developed to address specific links or intersections.

	QUESTION #3			QUESTION #4				QUESTION #5		QUESTION #6
CITY	MODELING REQUIREMENTS	MODEL PERMISSIBLE OR REQUIRED?	BRAND NAME?	STUDY AREA?	OUTSIDE CITY LIMIT	% LINK OR % TOTAL?	RECOMMEND?	BACKGROUND TRAFFIC	VARIANCE	DEFINE IMPACTS
IRVINE	same as above	required	ITAP model by AFA & OCTAM compatible	minimum is adjacent major intersections	Yes	N/A	1% of ADT	address special generators and add to City Model	No	computer moel differences for proj & no project
LAGUNA BEACH	no requirements; up to person preparing the TIA	N/A	N/A	case by case	Yes	not in use	None	exist+project+approved	No	professional judgement
LAGUNA NIGUEL	developing model now	sufficient scale results in use of model	refer to Austin Foust	professional judgement	Potentially	No	None	no defined methodology	Yes; is phasing	not adopted yet; will likely be LOS
LA HABRA	No	N/A	N/A	adjacent intersections up to 1.5 miles away	Yes	not yet; would consider	3-5% of total traffic	exist+project+approved reg growth is case by case	Yes	% capacity (ICU) case by case
LA PALMA	not required	not required	None	determined by City Engineer	Yes	% of total traffic	None	ambient projected growth	Yes by scale	% total traffic (LOS C)
LOS ALAMITOS	None at this time	N/A	N/A	No answer	form other cities, Yes	No	looking for help	No TIA's	N/A	not quantified; case by case
MISSION VIEJO	no requirements - projects too small	N/A	OCTAM compatible	4 arterials by site min; max as needed	Yes	not using	None	existing+project; existing+project+approved; 5 year protection	No	proj specific with G.P. improvements using 5 yr. Forecast
NEWPORT BEACH	no specific criteria City Atty reviews build-out if G.P. is ammended	required if G.P. amendment, otherwise optional	TRAN PAC (AFA)	case by case based on intersections impacted	No, but sees need to do so	1% of approved volume	same	historical level of growth; continuous update of appr proj; existing+project+ approved	related to phasing	1% of exist traffic >= LOS D. If LOS E/F change in v/c > .01
ORANGE	no spec criteria, but look at area of proj land use and level of intensity	use City model when model is needed by TIA (not doen by county)	TRAN PAC (AFA) OCTAM II window	to beyond 1st major facility encountered	Yes	not used	0.02	existing+project; existing+proj+cum.; existing+2% ambient growth	No	% capacity >= LOS D
PLACENTIA	None now; could require for large projects if model is developed	not required	consider using Brea's model	no guidelines	Yes	% of intersection capacity	- - -	2010 projects in Circ. Elem.	Yes	change in LOS

			QUESTION #1			QUESTION #2
CITY	EXISTING IMPACT FEES?	INTER-AGENCY AGREEMENTS?	THRESHOLDS?	WHEN APPLIED?	WHY NOT? WHAT ELSE?	PROJECT CRITERIA?
SANTA ANA	Yes	2 - JPA's	No	upon notice of proposed proj.	comfortable with staff judgement (size of project)	project review by staff depts. set the criteria and recommends appropriate actions
SEAL BEACH	- - -	- - -	No	No	Specific Plans - TIA's required	GP and SP; phasing - SP or subdivision Map approvals/ conditional use permit
TUSTIN	Not City - Wide	JPA with Santa Ana	uses OCTC TIA standards	very early; upon first receipt of site plans	likes engr. Judgement	Environmental Review
VILLA PARK	No	unaware of any	No	- - -	98% built-out, bdrm community with no projects	N/A
WESTMINSTER	No	No	No formal one	pre-project planning	City willing to pursue as part of CMP & Measure M	first submittal of site plan
YORBA LINDA	No	not new; Anaheim possible in future	use informal quantitative criteria	project review committee	> = 100 pk hr trips and near busy intersection	up front by project review committee
STANTON	No	No	no established figures	during environmental analysis	professional judgement "fair way"	G.P. - density intensity specific - zoning application review - phasing
ORANGE COUNTY	Specific projects & set programs(6)	No	more than 200 trips per day	at initial project submittal	- - -	proj. review by staff which determines needed actions

	QUESTION #3			QUESTION #4				QUESTION #5		QUESTION #6
CITY	MODELING REQUIREMENTS	MODEL PERMISSIBLE OR REQUIRED?	BRAND NAME?	STUDY AREA?	OUTSIDE CITY LIMIT	% LINK OR % TOTAL?	RECOMMEND?	BACKGROUND TRAFFIC	VARIANCE	DEFINE IMPACTS
SAN CLEMENTE	every TIA uses City model	required	AFA model (OCTAM II)	use model run to determine extent	not needed in past	N/A	N/A	model run does this	No	contribution towards build-out volumes
SAN JUAN CAPISTRANO	no current requirements	unknown; need direction on this	TranPlan by AFA	min 2 inter-sections, max whole city	Yes	5% of existing traffic	- - -	existing+project; existing+proj+cum.	No	LOS C - links ; LOS D - intersections; if ICU change = 1%, no impact
SANTA ANA	when proj is in area covered by existing model but only if proj warrants = TIA	premissable if model replicated Cities model	AFA model (OCTAM modified)	no set limits	Yes	not using	do not like this approach	CEQA requirements	No	CEQA review for impact
SEAL BEACH	no set criteria	N/A	DKS model	case by case	Yes	varies based on links to site relationship	- - -	existing+approved+ growth	No	LOS % capacity
TUSTIN	no rule for use of model	no requirement now - could go to this in future	AFA model they are its keeper	case by case	Yes	not using this	- - -	annual count program for % ; exist+proj+approved+%	Yes	unofficial/ LOS D also uses the road classification
VILLA PARK	N/A	could use County model in future for CMP	OCTAM	N/A	N/A	N/A	N/A	No	N/A	None
WESTMINSTER	no requirements just wants a useable study	- - -	N/A	case by case	Yes	No	not in favor	exist+% anuual growth+project	No	LOS E or worse ; "A to C" is not adverse
YORBA LINDA	none at this time maybe on large projects	not necessary	future model consisten with County	no formal criteria	Yes	None	- - -	short term; exist+proj+cum long term; " " + 2%	No	link LOS; intersection LOS
STANTON	no requirements	permissable	N/A	only 15 signals in City	occassionally	No	looking for guidance	exist+ambient+project	case by case	no criteria now; would like to have some
ORANGE COUNTY	look for regional info but not specifically requiring a model	always permissive	OCTAM II (UTPS)	no specific requirement	Yes	+ 1% in v/c of critical vol.	1% of capacity	CEQA requirements for all but very small projects	No	LOS D

APPENDIX B

DERIVATION OF THRESHOLDS FOR PROJECTS REQUIRING TRAFFIC IMPACT ANALYSIS

The TIA process recommendation is to require a TIA for any project generating 2,400 or more daily trips. This number is based on the desire to analyze any impacts which will be 3% or more of the existing capacity. Since most CMP Highway System will be four lanes or more, the capacity used to derive the threshold is a generalized capacity of 40,000 vehicles/day. The calculations are as follows:

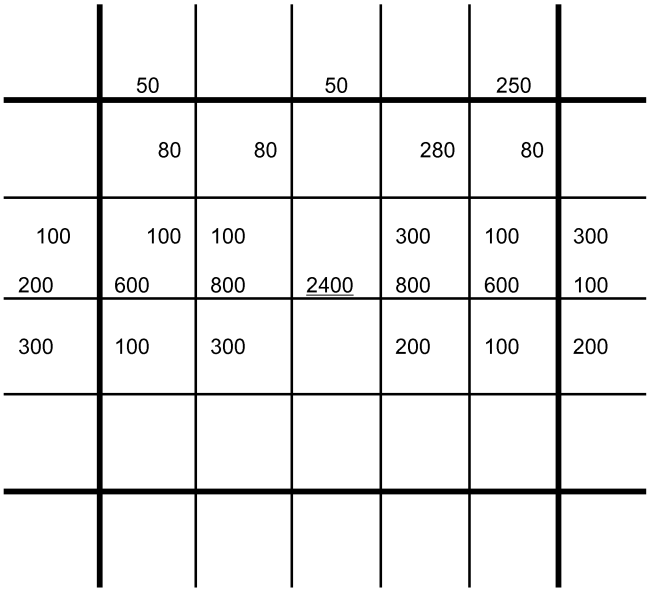
40,000 veh./day x 3% = 1,200 veh./day
Assuming 50/50 distribution of project traffic on a CMP link
1,200 x 2 = 2,400 veh./day total generation

As can be seen, a project which will generate 2,400 trips/day will have an expected maximum link impact on the CMP system of 1,200 trips/day based on a reasonably balanced distribution of project traffic. On a peak-hour basis, the 3% level of impact would be 120 peak-hour trips. For intersections, a 3% level of impact applied to the sum of critical volume (1,700 veh./hr.) would be 51 vehicles per hour.

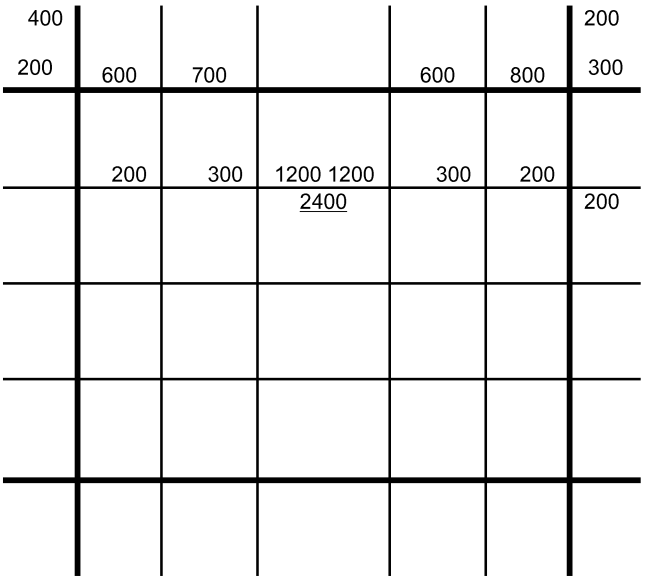
A level of impact below 3% is not recommended because it sets thresholds which are generally too sensitive for the planning and analytical tools available. Minor changes in project assumptions can significantly alter the results of the analysis and the end result can be additional unnecessary cost to the developer and additional review time by staff with little benefit. Additionally, a lower threshold of significance will expand the study area, which also increases effort and costs, and increases the probability that the analysis would extend beyond jurisdictional boundaries.

The following illustration shows that the 2,400 trip/day threshold would be expected to produce a 3% impact on the CMP System only when the project has relatively direct access to a CMP link. As a project location moves further off the CMP System the expected impacts is reduced. With a more directional distribution of project traffic a development with direct CMP System access cold produce a 3% impact with somewhat lower daily trip generation. The table included on the following page illustrates the daily trip generation thresholds which would produce various levels of impact on the CMP System for project locations with and without direct access to the system. Based on a 3% impact the trip generation thresholds for requiring a TIA are 1,600 veh./day with direct CMP System access and 2,400 veh./day if a project does not have direct CMP System access.

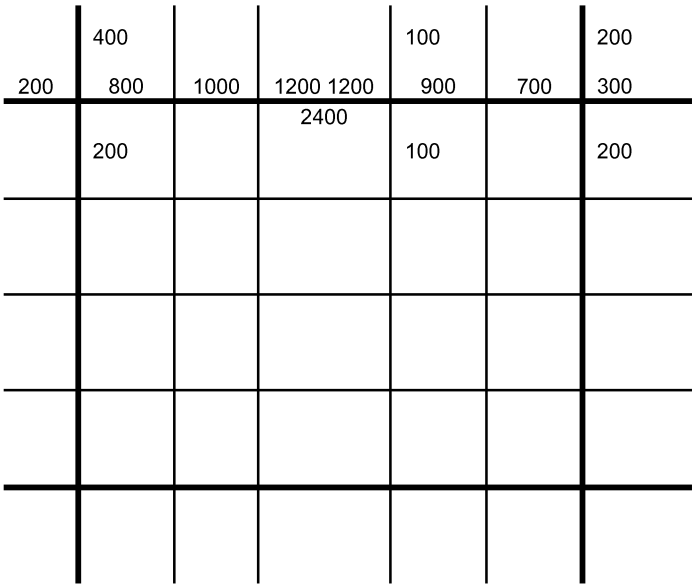
CMP Highway System Impacts for Development Generating 2,400 trips/day
Based on proximity to CMP System



MAXIMUM IMPACT < 1%



MAXIMUM = 1.8%



MAXIMUM = 3%
COULD BE 4.5% WITH 75/25 SPLIT

Alternative Criteria

Assume 75/25 distribution

For direct access to CMP System:
1,200/.75 = 1,600 veh./day

For no direct CMP System Access:
Approximately 1/3 less impact on CMP System
1,600 x 3/2 = 2,400 veh./day

Daily Trip Generation

Significant Impact	Direct Access	No Direct Access
1%	500	800
2%	1,100	1,600
3%	1,600	2,400

APPENDIX B-2
CMP Traffic Impact Analysis Exempt Projects

CMP Traffic Impact Analysis Exempt Projects

Projects exempt from the requirements of a mandatory, CMP Traffic Impact Analysis are listed below. This list is not meant to be all-inclusive. Any inquiries regarding additional exemptions shall be transmitted in writing to the Orange County Transportation Authority, attention CMP Program Manager.

Project Not Requiring a CMP TIA Analysis:

1. Applicants for subsequent development permits (i.e., conditional use permits, subdivision maps, site plans, etc.) for entitlement specified in and granted in a development agreement entered into prior to July 10, 1989. [3]

2. Any development application generating vehicular trips below the Average Daily Trip (ADT) threshold for CMP Traffic Impact Analysis, specifically, any project generating less than 2,400 ADT total, or any project generating less than 1,600 ADT directly onto the CMPHS. [2,3]

3. Final tract and parcel maps. [1,2,3]

4. Issuance of building permits. [1,2,3]

5. Issuance of certificates of use and occupancy. [1,2,3]

6. Minor modifications to approved developments where the location and intensity of project uses have been approved through previous and separate local government actions prior to January 1, 1992. [1,2,3]

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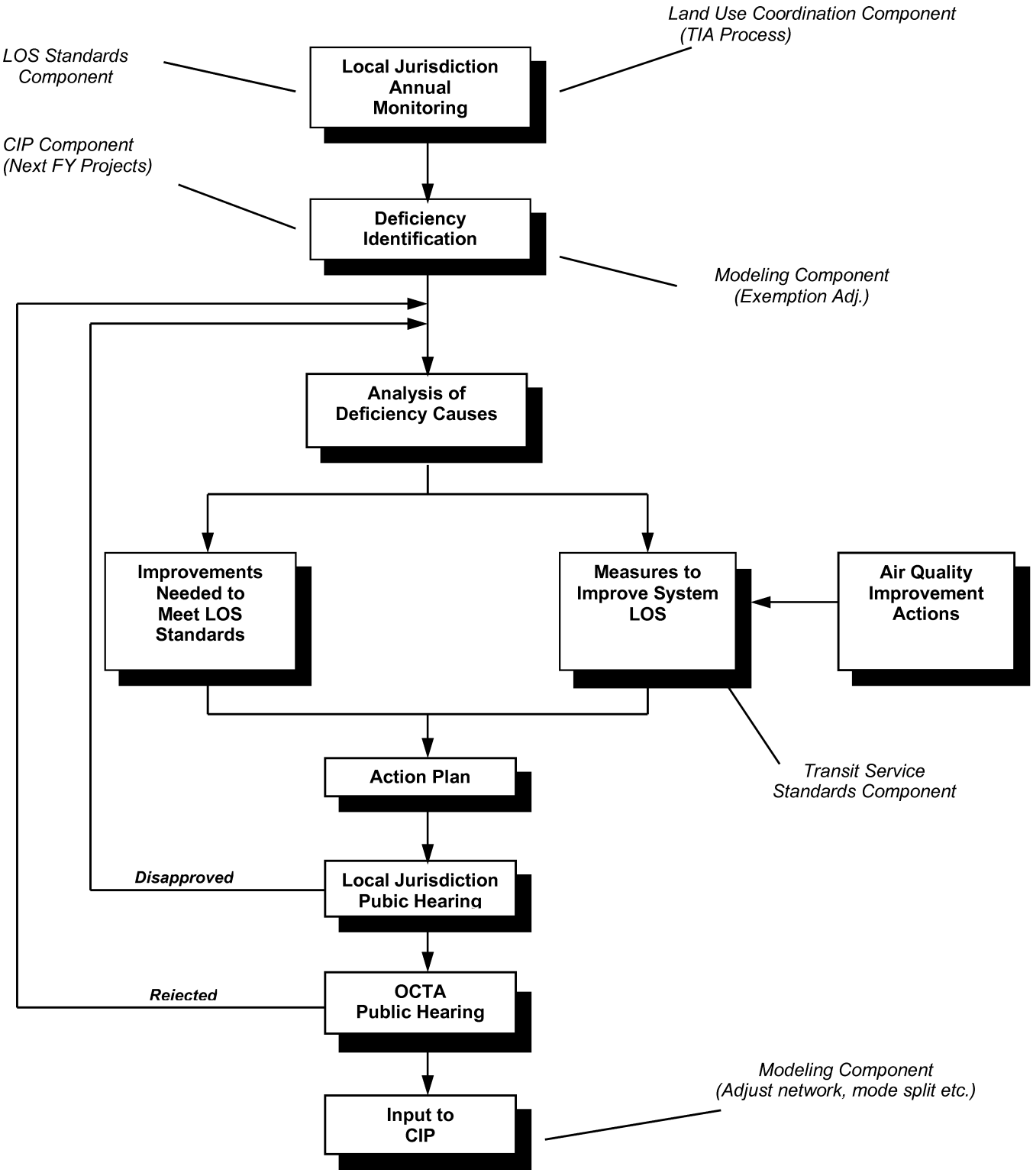
[1] A CMP TIA is not required for these projects only in those instances where development approvals granting entitlement for the project sites were granted prior to the effective date of CMP TIA requirements (i.e., January 1992).

[2]Exemption from conduction a CMP TIA shall not be considered an exemption from such project' participation in approved, transportation fee programs established by the local jurisdiction.

[3]Vehicular trips generated by CMP TIA-exempt development applications shall not be factored out in any traffic analyses or levels of service calculations for the CMPHS.

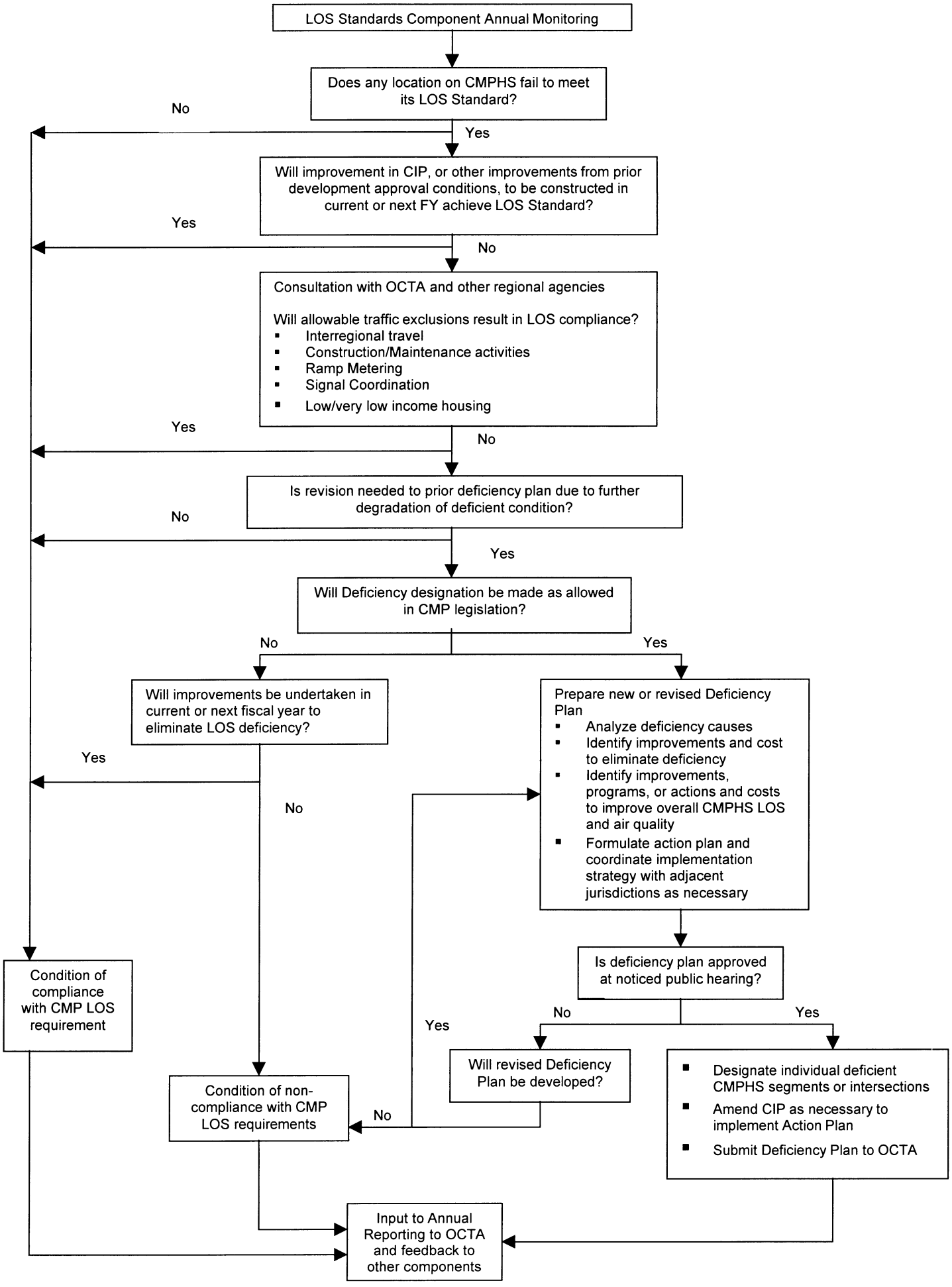
APPENDIX C-1
CMP Deficiency Plan Process Flow Chart

DEFICIENCY PLAN PROCESS



APPENDIX C-2
CMP Deficiency Plan Process Decision Tree

Deficiency Plan Decision Tree Process



APPENDIX D
CMP Monitoring Checklists

CMP MONITORING CHECKLIST
TDM ORDINANCE

Responsibility: Cities, County

2003 CMP CHECKLIST

		YES	NO
1.	Have you made revisions to the TDM ordinance used to satisfy the TDM requirements of the last CMP reporting cycle (i.e. 2001)?	☐	☐
	a. If so, please attach a copy of the revised ordinance and adopting resolution.		
2.	Have you applied your TDM ordinance to development projects?	☐	☐
	a. If not, please provide a brief explanation.		

_____

_____

_____

_____

CMP MONITORING CHECKLIST
CAPITAL IMPROVEMENT PROGRAM

Responsibility: Cities, County, Caltrans, transit operators

2003 CMP CHECKLIST

		YES	NO
1.	Did you submit a draft seven-year Capital Improvement Program (CIP) to OCTA by June 30, 2003?	☐	☐
	a. Does it include projects that will maintain or improve the traffic LOS on the CMPHS or adjacent facilities which benefit the CMPHS?	☐	☐
	b. Are maintenance, rehabilitation, and reconstruction projects excluded for CMP purposes?	☐	☐
	c. Was the CIP Development Program, distributed with the Measure M eligibility package, used to prepare the CMP CIP?	☐	☐
	e. Have projects included as part of a deficiency plan been identified as such in the CIP?	☐	☐
2.	Has an estimated target date prior to August 10, 2003 been established for submitting your final 2003 CMP CIP to OCTA?	☐	☐

CMP MONITORING CHECKLIST
TRANSIT SERVICE STANDARDS

Responsibility: OCTA

2003 CMP CHECKLIST

		YES	NO
1.	Does the adopted countywide SRTP/TIP include standards for the frequency and routing of bus service, and coordination among service providers?	☐	☐
2.	Does OCTA have cooperative agreements with all the cities and the County to review land use proposals that are at or above the TIA threshold and identify CMP transit mitigation measures?	☐	☐
3.	Does the countywide SRTP/TIP include transit improvements identified in TDM ordinances?	☐	☐
4.	Does the countywide SRTP/TIP include transit improvements identified in deficiency plans?	☐	☐

CMP MONITORING CHECKLIST
LAND USE COORDINATION

Responsibility: Cities, County

2003 CMP CHECKLIST

CMP Traffic Impact Analysis:

		YES	NO*
1.	Have you changed the CMP traffic impact analysis (TIA) process you selected for the 2001 CMP?	☐	☐
2.	If you answered "Yes" to the above question, have you submitted documentation of the revised TIA approach and methodology used to OCTA?	☐	☐
3.	Was your CMP TIA process applied to applicable development projects filed and approved by the local jurisdiction between June 1, 2000 and May 31, 2003?	☐	☐
a.	How many approved development projects were required to conduct a CMP TIA?		
b.	Did the TIA process identify whether any CMPHS links/intersections would exceed their established LOS standard as a result of project related traffic?	☐	☐
c.	If so, which CMPHS links/intersections? _____ _____ _____		
d.	Which, if any, of these impacted CMPHS links/intersections are located outside the boundaries of your jurisdiction? _____ _____ _____		

		YES	NO*
e.	Did your agency participate in inter-jurisdictional discussions with other affected jurisdictions to develop a mitigation strategy for each impacted link/intersection?	☐	☐
4.	Did you use, or do you anticipate using, a local model for your traffic impact analysis on any projects initiated between June 1, 2000 and June 30, 2003?	☐	☐
5.	If you answered "Yes" to the above question, did you follow the modeling consistency process outlined in Attachment 1?	☐	☐

* Submitting jurisdiction is encouraged to provide a brief explanation of those questions answered "No" (with the exception of questions 1 and 4).

CMP MONITORING CHECKLIST
LEVEL OF SERVICE

Responsibility: Cities, County

2003 CMP CHECKLIST

		YES	NO*
1.	In your jurisdiction, are all of the intersections on the CMPHS operating at LOS E (or the baseline level, if worse than E) or better?	☐	☐
	a. If not, have the impacts of traffic which are categorically exempt under the CMP legislation (interregional travel, traffic generated by the provision of low and very low income housing, construction rehabilitation or maintenance of facilities that impact the system, freeway ramp metering, or traffic signal coordination) been factored out of the LOS traffic counts?	☐	☐
2.	After adjustments have been included, which intersections, if any, are operating below LOS E (or the baseline level, if worse than E)?	☐	☐
	_____		
	_____		
	_____		
3.	Will the LOS at those intersections be improved by mitigation measures which will be implemented in the next 18 months or improvements programmed in the first year of any FY 2001/2002 funding program (i.e., local agency CIP, CMP CIP, Measure M CIP)?	☐	☐
	a. If not, has a deficiency plan been developed for each intersection which will be operating below LOS E (or the baseline level, if worse than E)?	☐	☐

* Submitting jurisdiction is encouraged to provide a brief explanation of those questions answered "No."

ATTACHMENT 1

ORANGE COUNTY CONGESTION MANAGEMENT PROGRAM

IMPLEMENTATION OF LAND USE/SOCIOECONOMIC DATA CONSISTENCY REQUIREMENT FOR MODELING IN CMP-REQUIRED TRAFFIC IMPACT ANALYSES

Data Consistency

Data consistency is required under the terms of an agreement reached between OCTA and SCAG, that was incorporated in the County's 1993/1994 CMP Preparation Manual as part of the Modeling Consistency component of the County's CMP. In cases where a traffic model is used to perform a CMP-required traffic impact analysis, the requirement mandates that a reconciliation be performed to show consistency between the land use or socioeconomic data input to the local model and the County's recently adopted OCP-2000 countywide database.

With the approval of OCP-2000 by the County and the incorporation of OCP-2000 data by the Southern California Association of Governments (SCAG) into the regional socioeconomic database, Orange County is obligated to implement this requirement in the interest of data/modeling consistency. A guidance document to aid data reconciliation was prepared and made available through the CMP TAC to provide assistance to local agencies on how to convert land-use based data to socioeconomic data equivalents.

This data consistency requirement has become part of a larger set of ongoing modeling consistency requirements under CMP. Other elements of the modeling consistency requirements have been developed and brought forward with the completion of OCTA's Orange County Transportation Analysis Model (OCTAM), version 3.1.

Model Consistency

OCTAM 3.1 is a "state-of-the-practice" multi-modal transportation model specifically designed to evaluate regional multi-modal transportation systems, such as autos, bus, rail, toll roads, as well as walking and bicycle trips. The model is an "analytical tool" used to estimate transportation impacts based on transportation infrastructure, land use, and demographic input assumptions. OCTAM 3.1 is often supplemented with additional detailed analysis and/or requires judicious interpretation of its results when applied specifically for detailed sub-regional analysis. In order to conduct detailed analysis with OCTAM 3.1 data, OCTA has developed procedures by which "subarea" traffic models could be used to supplement OCTAM 3.1 regional data for project specific and local area analyses. The procedures on how this could be accomplished are documented in the Orange County Subarea Modeling Guidelines Manual, June 2001 (Appendix F).

On January 25, 1999, the OCTA Board of Directors adopted the Orange County Subarea Modeling Guidelines Manual and authorized staff to implement the guidelines' certification

process, effective one year after completion of the Orange County Transportation Analysis Model, Version 3. Since then, the Subarea Modeling Guidelines Manual has been revised to reflect the updated OCTAM 3.1 and the OCP-2000 growth projections. The updated manual requires that the cities' subarea models must be certified by OCTA for consistency with OCTAM 3.1 to satisfy Congestion Management Program (CMP) and OCTA funding program requirements.

Applicability

Consistency requirements will apply in all situations where a CMP-required traffic impact analysis is performed using traffic modeling. This includes situations in which a local agency model or a consultant model is employed. The local agency having jurisdiction over the proposed project will be responsible for assuring that the reconciliation requirement is met through the traffic impact analysis process and through documentation in the traffic impact analysis report itself.

Effective Date

Data Consistency

The requirement is effective on March 1, 1994. Any proposed project for which a CMP-required traffic impact modeling analysis was initiated on or after March 1, 1994, must comply with this requirement. Any proposed project for which such analysis was already underway or completed before March 1, 1994, would not be affected by this requirement.

Model Consistency

Sub-area traffic models used for CMP purposes must be consistent with OCTAM 3.1 by December 31, 2002. This will be a requirement of the 2003 CMP.

Required Data Reconciliation

The following data reconciliation check would need to be performed. The geographic level on which the reconciliation would be required to be performed would be at the citywide level (or equivalent) in the jurisdiction in which the proposed project is located.

1. From the local model database, housing unit totals would be aggregated across all local data base housing categories, and that total would be compared directly to the equivalent dwelling unit total from OCP-2000.

2. All other nonresidential land uses from the local model data base would be converted into an equivalent employment total across all land uses, and that total would be compared directly to the total employment out of OCP-2000.

3. Local agencies who have their own sets of conversion rates for converting land use data into equivalent employment totals would be free to use those conversion

rates for the purposes of this reconciliation. Such agencies would simply be asked to provide a tabulation of the rates used and a brief documentation of how those rates historically have been used or how they were derived by the local agency.

4. For local agencies that would like employment conversion rates provided to them for their use in meeting this requirement, please refer to the Orange County Subarea Modeling Guidelines Manual, June 2001 for applicable land use to socio-economic data conversion rates.

5. Local agencies would be free to include other rates for individual local land use categories where, in their judgment, different rates are justified; provided that the source of those rates is documented and the rationale for using them is explained in the reconciliation.

Timeframes for Which the Data Reconciliation Is to Be Performed

For each CMP-required traffic impact analysis using modeling, the reconciliation will be required to be performed for two different timeframes:

1. **"Base year" timeframe**

For the purposes of this requirement, "base year" will be taken to mean a current or recent year for which the model was calibrated. The local agency will be allowed considerable discretion in selecting the "base year" appropriate to the circumstance of the particular model that was employed in the traffic impact analysis.

The purpose of the "base year" reconciliation is to "benchmark" the local model data against OCP-2000 for "current" conditions. It is important that it be demonstrated that there are not any unexpected or unexplained significant discrepancies between the two databases before moving on to the "future year" reconciliation.

2. **"Future year" timeframe**

For the purposes of this requirement, "future year" will be taken to mean the specific future year (or future scenario) for which the full impacts of the proposed project are analyzed. Any future year within the future time horizon covered by OCP-2000, from the present time out to the Year 2025, could be used as the "future year" (see also the discussion which follows later in this section for "buildout" scenarios). The "future year" should match the "future year" for which the model was employed to forecast the full traffic impacts of the proposed project.

If the "future year" happens to match one of the five-year increment milestones employed by OCP-2000, then the local data can be compared to the OCP-2000 data directly. If the "future year" happens to fall between the five-year increments, the local agency will be free to interpolate between the OCP-2000 data sets for the 5-year timeframe immediately preceding and immediately following the "future year" in question. All source OCP-2000 data required to perform this reconciliation is included in the guidance document that has been produced to assist

local agencies in performing this reconciliation.

In some cases, the "future year" used by local agencies are termed as "buildout", a future scenario at which full general plan land use intensities are assumed to be in place. Such a "buildout" scenario is not necessarily associated with a specific future calendar year. Moreover, it would not be uncommon for "buildout" to occur later than the Year 2025, which is the latest "future" year in the OCP-2000 forecast array. If the local agency uses "buildout" that is understood to be beyond the Year 2025, then the local agency is requested to do the reconciliation exercise comparing local buildout data to the Year 2025 OCP-2000 data, with the understanding that buildout numbers can be substantially higher than the OCP-2000 Year 2025 equivalents.

The purpose of the "future year" reconciliation is to assure that the land use or socioeconomic data on which future project traffic forecasts are based, will adequately account for future project impacts on the CMP highway system. This is key to the purposes of model consistency and data consistency requirements in CMP.

Tolerances for Satisfactory Data Reconciliation

It is the ultimate goal to have models and data bases as consistent with each other as possible. As a practical matter, and for the purposes of meeting this data reconciliation requirement, it will generally be considered that the local data and OCP-2000 data have been satisfactorily reconciled if the two data bases can be shown to come within 5 percent for the "base year" timeframe, and within 10 percent for the "future year" timeframe. (However, it should be noted that a number of example applications have been performed thus far in which matches far closer than 5 percent have been achieved in the reconciliation.) The rationale for having the closer tolerance (5 percent) for the "base year" timeframe is that the "base year" timeframe essentially represents development already existing; and closer convergence between the two data bases should be expected. The rationale for using the 10 percent tolerance for the "future year" timeframe is to recognize that there will be inherent uncertainties in forecasting future development, including differences in assumptions about the timing and phasing of future development, that will enter into numerical differences between the two data bases for future forecast years.

Recognizing that a major purpose of the reconciliation requirement is to assure that project impacts to the CMP highway system are adequately accounted for and adequately mitigated, close attention should be given to any reconciliation that shows the local data totals being less than the comparable totals from OCP-2000.

Particularly for "future year" reconciliation, there may be instances where differences in the assumed timing of future development lead to differences between the local data totals and the comparable OCP-2000 figures. In such cases, the reconciliation should account for those differences in assumptions as explicitly as possible, and should document as well as possible how much of the variance comes from such different assumptions.

In cases where the local agency employs "buildout" as the "future year", and where "buildout" is understood to be beyond the Year 2025, the reconciliation will be considered satisfactorily performed if the buildout data is shown to meet or exceed the equivalent data from the Year 2025 OCP-2000 forecast series. It will be expected that a good faith effort will have been made to assure that the level to which "buildout" exceeds OCP-2000 Year 2025 data has been examined and that its order of magnitude bears some logical relationship to the proportion of future development that the local agency anticipates to extend beyond the Year 2025.

Documentation Requirement for the Reconciliation

For any CMP-required traffic impact analysis in which modeling is used, it will be required that the above-defined data reconciliation be documented in writing and included as a section in the traffic impact analysis report that is ultimately prepared.

The required documentation need not be lengthy, but it should, as a minimum, include the following:

- A tabular accounting showing the conversion of the local model data to OCP-2000 equivalents, for both "base year" and "future year";

- A clear presentation showing the raw numerical comparison and the percentage difference between the local model data totals and the comparable data from OCP-2000, for both "base year" and "future year";

- Brief text accounting for the nature and numerical extent of any significant differences between the two databases, for both "base year" and "future year".

- A statement affirming that the two data bases have been reconciled to within 5 percent tolerance for the "base year", and to within 10 percent tolerance for the "future year"; or otherwise arguing why it is believed that the purposes of the reconciliation requirement have been met.

The local agency having jurisdiction over the proposed project will be responsible for assuring that the required reconciliation documentation is included in each CMP-required traffic impact analysis report where modeling is used.

Once each CMP cycle, each local agency will be required to affirm to OCTA that it has complied with this requirement. The affirmation will be in the form of a CMP compliance checklist response to OCTA, in which the local agency certifies that all CMP-required traffic impact analysis reports using modeling, that have been submitted to the local agency or prepared by the local agency, do indeed include the required reconciliation documentation.

Clarification

The traffic models governed by this particular requirement are only those local traffic models which employ area wide existing and future land use data or socioeconomic data to estimate total

future traffic.

This is to be distinguished from those local "traffic models" which build on current measured traffic volumes, and which use land use data only pertaining to specific proposed projects to estimate increments of traffic that would be added to those measured volumes. Such models do not employ the types of area wide existing or future land use databases that are the subject of this model consistency requirement.

CMP MONITORING CHECKLIST
DEFICIENCY PLANS

Responsibility: Cities, County

2003 CMP CHECKLIST

		YES	NO*
1.	After adjustments, were any locations on the CMPHS identified as failing to meet the LOS standard through the data collection and calculation process?	☐	☐
	a. If so, which? _____ _____ _____		

NOTE: Only those agencies which answered question #1 affirmatively need to answer the remaining questions.

2.	Will the deficiencies at these locations be corrected by improvements scheduled for completion during the next 18 months?	☐	☐
3.	Has a deficiency plan or a schedule for preparing a deficiency plan been submitted to OCTA?	☐	☐
4.	Does the deficiency plan fulfill the statutory requirements:		
	a. include an analysis of the causes of the deficiency?	☐	☐
	b. include a list of improvements necessary to maintain minimum LOS standards on the CMPHS and the estimated costs of the improvements?	☐	☐

		YES	NO*
c.	include a list of improvements, programs, or actions, and estimates of their costs, that will improve LOS on the CMPHS and improve air quality?	☐	☐
1)	do the improvements, programs, or actions meet the criteria established by SCAQMD (see the CMP Preparation Manual)?	☐	☐
d.	include an action plan and implementation schedule?	☐	☐
5.	Are the capital improvements identified in the deficiency plan programmed in your seven-year CMP CIP?	☐	☐
6.	Does the deficiency plan include a monitoring program that will ensure its implementation?	☐	☐
7.	Does the deficiency plan include a process to allow some level of development to proceed pending correction of the deficiency?	☐	☐
8.	Has necessary inter-jurisdictional coordination occurred?	☐	☐
9.	Please describe any innovative programs included in the deficiency plan:		

_____

_____

_____

* Submitting jurisdiction is encouraged to provide a brief explanation of those questions answered "No."

APPENDIX E
Capital Improvement Programs

(Under Separate Cover)

APPENDIX F
Orange County Subarea Modeling Guidelines

(Under Separate Cover)