

FINAL

Transportation *nt*
Report



*California Department of Transportation
District 7
Office of Advance Planning
System Planning Unit*



JULY, 2005

TRANSPORTATION CONCEPT REPORT

STATE ROUTE 60

07 - LA .0.00-LA R30.46

PREPARED BY DISTRICT 7 DIVISION OF PLANNING

JULY, 2005



CALTRANS DISTRICT 07 APPROVAL

Recommended for Approval by:

Approved by:

A handwritten signature in cursive script, appearing to read "Rose A. Casey", written over a horizontal line.

ROSE CASEY
Deputy District Director
Division of Planning, Public
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A handwritten signature in cursive script, appearing to read "D. Failing", written over a horizontal line.

DOUG FAILING
District Director
District 7

Date 8/16/05

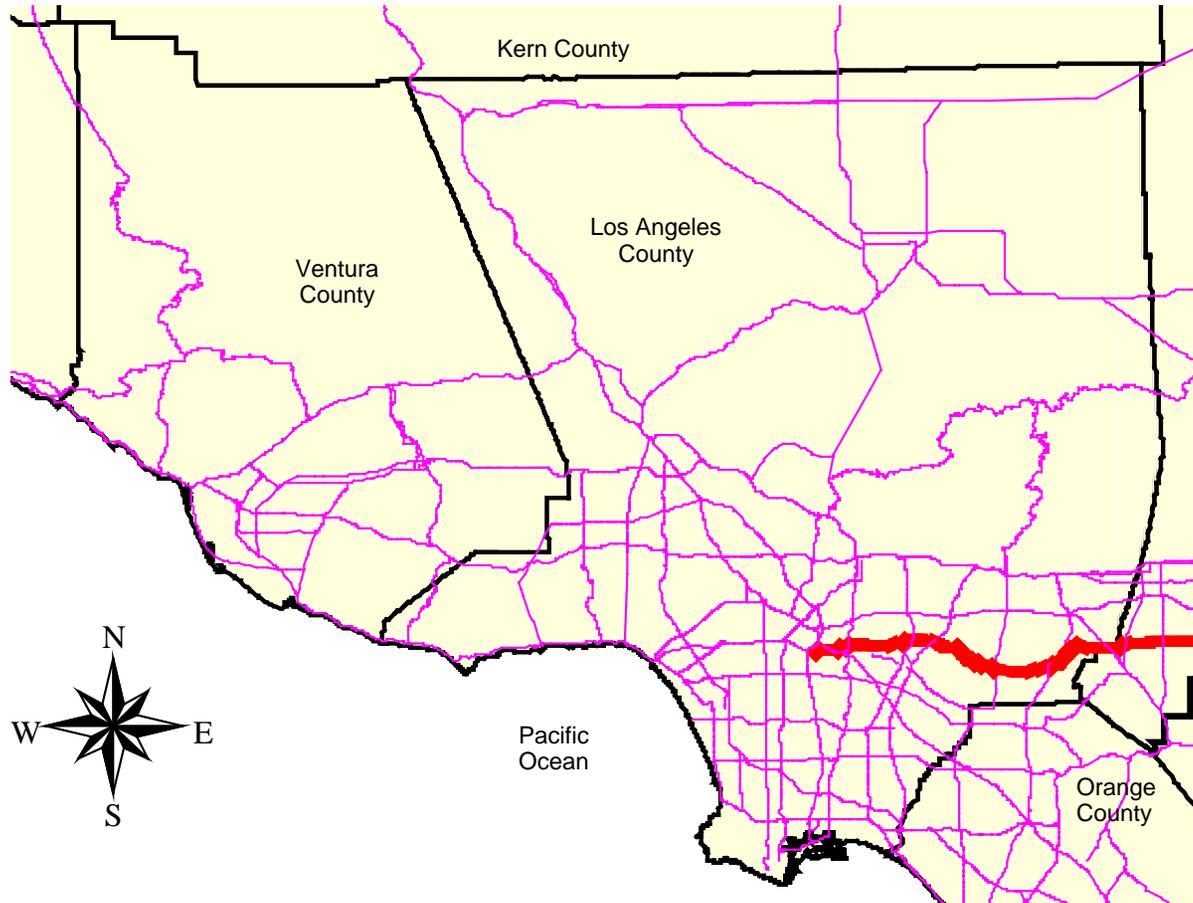
Date 9/9/05

TRANSPORTATION CONCEPT REPORT STATE ROUTE 60

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State Route 60 Transportation Concept Report



I. DISCLAIMER

This Transportation Concept Report (TCR) is a planning document prepared by the California Department of Transportation (Caltrans) based on the data available up to the date of its publication.

This TCR identifies the present geometric and operational characteristics of the transportation facility for which it was prepared, the anticipated demand in 20 years, and the suggested improvements to satisfy the future demand.

The future improvements to the transportation facility identified in this TCR are recommendations for study purposes and shall not be binding upon the State of California and/or Caltrans for implementation. Caltrans, in collaboration with local and regional transportation agencies, and upon conduct of further studies and availability of funds, may proceed with implementation of any or all of the identified future improvements or may select improvements in lieu of those identified in this document. Any identified improvements should not be construed as being 100% publicly funded.

II. Document Summary

While this Transportation Concept Report is divided into twelve major sections, three of the sections VIII, X and XI are the core of the document. They include detailed Segment Summaries (Section VIII), lists of suggested improvements (Section X) and the Transportation Concept and Conclusion (Section XI). All of the other sections provide a context for analyzing the State Route 60 corridor and document the data resources studied.

The basic aim of this document is to suggest a configuration for SR-60 that will meet projected demands within a framework of programming and implementation constraints and regional policy.

The recommended concept for SR-60 is Alternative Concept number 2, which recommends the following:

Adding two HOV lanes in each direction for segments 1 and 2. Adding one mixed flow lane, two HOV lanes and two truck lanes in each direction for segment three. Adding two HOV lanes and two truck lanes in each direction for segment 4. Adding 1 HOV lane and 2 truck lanes in each direction for segments 5 through 7.

The table on page 3 shows a summary of the existing facility and its operating conditions, alternatives one and two, maintaining current Demand/Capacity ratios, Level Of Service (LOS) "D" and the Ultimate Transportation Corridor (UTC). The Ultimate transportation corridor for SR-60 calls for five to ten lanes in each direction including HOV and truck lanes.

Interstate 60 - Summary of Concept Improvements

Segment	Limits	Existing Facility	Alternative Concept #1	Alternative Concept #2	Maintain Current D/C	LOS "D" Attainment	UTC
1	ELA I/C to I-5	3MF	3MF + 1HOV	3MF + 2HOV	3MF + 1HOV	4MF + 1HOV	3MF + 2HOV
2	I-5 to I-710	5MF	5MF + 1HOV	5MF + 2HOV	6MF + 1HOV	6MF + 1HOV	5MF + 2HOV
3	I-710 to I-605	4MF	5MF + 1HOV + 1TL	5MF + 2HOV + 2TL	6MF + 1HOV	8MF + 2HOV	5MF + 2HOV + 2TL
4	I-605 to SR-57 South	4MF	4MF + 1HOV + 1TL	4MF + 2HOV + 2TL	6MF + 1HOV	7MF + 2HOV	4MF + 2HOV + 2TL
5	SR-57 South to SR-57 North	6MF + 1HOV	6MF + 1HOV + 1TL	6MF + 2HOV + 2TL	9MF + 2HOV	10MF + 2HOV	6MF + 2HOV + 2TL
6	SR-57 North to SR-71	4MF + 1HOV	4MF + 1HOV + 1TL	4MF + 2HOV + 2TL	6MF + 2HOV	7MF + 2HOV	4MF + 2HOV + 2TL
7	SR-71 to San Bernardino County Line	4MF + 1HOV	4MF + 1HOV + 1TL	4MF + 2HOV + 2TL	6MF + 2HOV	7MF + 2HOV	4MF + 2HOV + 2TL

MF	Mixed Flow Lane
HOV	High Occupancy Vehicle Lane
TL	Truck Lane

III. DOCUMENT PURPOSE

This Transportation Concept Report (TCR) is an internal Caltrans planning tool intended to provide an initial look at developments within the SR-60 corridor over the next twenty years. Its primary focus is on identifying “ need” – defined as the difference between forecast demand and capacity. It analyzes this need in three primary ways: 1) it documents current conditions; 2) it contrasts projected future demand with planned facilities (capacity); and (3) it proposes future development alternatives to address the shortfalls between demand and capacity.

As an initial step in the planning process, observations and conclusions stated in this document serve as reference for more complex and specific reports such as Feasibility Studies, Major Investment Studies (within the SCAG region, these studies are now referred to as “Regionally Significant Transportation Investment Studies” {TSTIS} and Project Studies).

This TCR is composed of a series of proposed alternatives for the development of State Route 60 (SR-60). The alternatives are included in the Segment Summaries, Section VIII. The recommended alternative is based on existing plans –primarily the Southern California Association of Governments Regional Transportation Plan (SCAG RTP), the Los Angeles County Metropolitan Transportation Authority (LACMTA) Long Range and High Occupancy Vehicle (HOV) Plans, and the Caltrans District System Management Plan (DSMP). The Attain LOS “D” Alternative is based on the number of “lane equivalents” necessary to reach LOS “D” by definition, the lowest adequate level of service rating¹. It is provided as a way to illustrate future congestion and capacity needs. The Ultimate Transportation Corridor (UTC) alternative is considered the maximum reasonable development of a highway facility within the corridor. The UTC is intended to identify potential right of way needs. The UTC for SR-60 ranges from five to ten lanes in each direction.

¹ Please note: The Attain LOS “D” alternative is provided as a way to illustrate future congestion and capacity needs **and not as a suggestion for programming.**

SYSTEM PLANNING: An Overview

PURPOSE:

System Planning provides the basis for an effective transportation decision-making process, which is responsive to the public demand for mobility of people and goods.

OBJECTIVE:

- Identify, analyze and display transportation problems on a consistent statewide basis to enable fully informed decisions on the programming of system improvements and on system operations and maintenance.
- Allow department management to make short-term decisions that are consistent with long-term objectives.
- Communicate with the public on the levels of transportation service, which the state can or cannot provide.

PRODUCTS:

1) District System Management Plan (DSMP)

The DSMP is a strategic and policy-planning document that presents how the district envisions the transportation system will be maintained, managed and developed over the next twenty years and beyond. It is developed in partnership with regional and local transportation planning agencies, congestion management agencies, transit districts and air quality planning agencies. It considers the entire transportation infrastructure, regardless of jurisdiction, and addresses all modes and services that move people, services, and goods. As a management tool, it informs federal, state, regional and local agencies, the public and the private sector of the district's plan for developing, managing and maintaining the transportation system.

2) Route Concept Report (RCR) or Transportation Concept Report (TCR).

RCRs or TCRs analyze a route and establish a twenty-year transportation-planning concept. They identify modal options and various needs to accomplish the twenty-year concept. The concept analysis considers operating Level Of Service (LOS), modal facility type, vehicle occupancy of all modes and capacity needs. The studies identify "unconstrained" needs.

3) Transportation System Development Plan (TSDP)

The TSDP identifies transportation system improvements for the various options analyzed in the DSMP and TCRs. It covers the four-years immediately following the five-year STIP period and uses high and low funding scenarios. It provides a priority list for use in programming on- and off-system improvements.

Document Schedule: DSMP	Generally the same as the SCAG Regional Transportation Plan. The anticipated completion date is September 2005
TCRs	Ongoing; updated as conditions change.
TSDP	Generally precedes STIP priority list; due from the District by March 15 th of odd numbered years. The anticipated completion date is September 2005

System Planning:

The Legislative Mandate

Long-Term System Planning

Government Code Statutes of 1999, Section 65086 states:

(a) The Department of Transportation shall carry out long-term state highway system planning to identify future highway improvements and new transportation corridors through route concept reports.

(b) The department, in conjunction with transportation planning agencies, shall develop specific project listing for the initiation of project studies reports resulting in project candidates for inclusion in regional transportation plans and the state transportation improvement program as required by Section 14529.

IV. REGIONAL THRESHOLD CRITERIA AND POLICIES

I. CALTRANS: California Transportation Plan 2025 Goals (Draft):

- 1) Enhance public safety and security
- 2) Preserve the transportation system
- 3) Improve mobility and accessibility
- 4) Support the economy
- 5) Enhance the environment
- 6) Reflect community values

II. CALTRANS: District System Management Plan (DSMP):

The following goals underlie the DSMP's vision for development of a regional, multimodal system:

- 1) Maintain and manage the existing transportation system.
- 2) Improve partnerships with other transportation providers.
- 3) Prioritize and manage projects and maximize transportation funding options
- 4) Link transportation to land use and the environment including air quality.
- 5) Ensure development of a state of the art transportation system.
- 6) Provide leadership in the development of new transportation innovation.

District System Management Plan Criteria:

- 1) District 7 has established **LOS F0** with freeway speeds of approximately 25 mph lasting from 15 minutes to 1 hour as the minimum acceptable LOS for the Freeway System.
- 2) HOV Criteria for implementing HOV lanes:
 - a. High Demand Congested Corridors not served by urban or commuter rail
 - b. System connectivity
 - c. Cost effectiveness
 - d. Safety

- e. Public agency input
-
- 3) SR-60 is identified as a Primary goods movement corridor.

Transportation Management System Master Plan (TMS) Goals

- 1) Prepare for and support aggressive TMS implementation
- 2) Restore lost capacity by 20 percent
- 3) Reduce projected freeway congestion by 20 percent
- 4) Improve travel time reliability by 10 percent

III. Los Angeles County Metropolitan Transportation Authority: (LACMTA) 2001 Long Range Plan Goals:

- 1) Mobility – improve traffic flow, relieve congestion and enable residents, workers and visitors to travel freely and quickly through Los Angeles County.

- 2) Air Quality – improve air quality by reducing mobile source emissions, increasing the number and percentage of people using transit or ridesharing, and improving the efficiency of the transportation system.

- 3) Access – pursue activities and make investments that enable all residents, workers, and visitors, to access the many economic, educational, social, medical, recreational, and governmental opportunities and resources in Los Angeles County.

IV. SCAG: 2004 Regional Transportation Plan Goals:

- 1) Maximize mobility and accessibility for all people and goods in the region.
- 2) Ensure travel safety and reliability for all people and goods in the region.

- 3) Preserve and ensure sustainable regional transportation system.
- 4) Maximize the productivity of our transportation system.
- 5) Protect the environment, improve air quality and promote energy efficiency.
- 6) Encourage land use and growth patterns that complement our transportation investments.

V. Safe, Accountable, Flexible and Efficient Transportation Act: Legacy for Users (SAFETEA-LU)--Generally:

- 1) Maintain TDM
- 2) Provide for Intelligent Transportation Systems (ITS)
- 3) Expands funding to include intermodal terminals at seaports

V. ROUTE DESCRIPTION

Pursuant to statutes relating to the California Department of Transportation, State Route 60 (SR-60) serves as a major urban freeway providing service parallel to and south of Interstate 10 (San Bernardino Freeway). Within District 7, SR-60, also known as the Pomona Freeway originates in the City and County of Los Angeles west of the East Los Angeles Interchange and terminates at the Los Angeles/San Bernardino County Line (P.M. 0.00 to R30.46) It spans a distance of approximately 31 miles.

The terrain is almost entirely under three percent grade, except for a short stretch of three to six percent from State Route 57 north junction to Golden Springs Drive (P.M. R25.46 to R26.5) in Diamond Bar.

PURPOSE OF ROUTE

SR-60 is used primarily for interregional travel carrying people and goods throughout the San Gabriel Valley, Los Angeles, San Bernardino, and Riverside Counties. It provides an important access link to the LACBD. The secondary purpose of SR-60 is for intra-regional travel and commute travel. The Eastern Gateway Freeway Corridor Improvement Study and the Global Gateways Development Program enlist SR-60 as a major highway for goods movement in California.

FUNCTIONAL CLASSIFICATION

The functional classification coding for State Route 60 is P1P, an extension of a rural principal arterial into an urban area. It is also part of the national network created by the Federal Surface Transportation Assistance Act (STAA) to provide freeway access for oversized trucks.

Pomona Freeway

<u>Seq.</u>	<u>P.M.</u>	<u>Limits</u>	<u>Functional Class</u>
1-7	R0.00 – R30.46	West E. LA Inc. to San Bernardino County Line	P1P – Urban Principal Arterial
1-7	R0.00 – R30.46	West E. LA Inc to San Bernardino County Line	STAA Truck Route / Global Gateway / Eastern Gateway Route

SR-60 is classified as a **Gateway Route** in the Caltrans Interregional Transportation Strategic Plan (ITSP) of 1998. Global Gateways are designated as Goods Movement Corridors connecting with other major urban highways, i.e.; I-5, I-10, I-15, I-105, I-110, I-215, I-405, I-605, I-710 and US 101. In Southern California, these facilities connect three seaports: Port Hueneme, Long Beach and Los Angeles, two international airports: Los Angeles and Ontario and two regional airports: Long Beach and Burbank. These facilities also provide access to major rail corridors such as the Alameda Corridor and Alameda Corridor East.

Recently SCAG embarked on a new study called the **Multi-County Goods Movement Plan** which is a major comprehensive, multi-modal corridor study for goods movement throughout the SCAG region which includes Ventura, Los Angeles, Orange, Riverside and San Bernardino Counties. Previous goods movement studies involving SR-60 include the SR-60 Truck Lane Feasibility Study and the Eastern Gateway Freeway Corridor Improvement Study.

Additionally, phase one of the **National I-10 Freight Corridor Study** was completed in April 2003. Phase two of the National I-10 Freight Corridor Study is ongoing and anticipates the deployment of new technologies, capacity enhancement and safety. Included in this consortium are the states along the corridor, with Texas as the lead, FHWA, and auto and truck manufacturers. This deployment of Intelligent Transportation Systems will include intelligent vehicles, advanced information systems, safety systems, and vehicle and incident management. Among the anticipated benefits are increased

safety and efficiency, reduced congestion and pollution, and enhanced economic vitality.

Global Gateways Development Program

A strategy developed in cooperation with goods movement industry representatives and other stakeholders for improving the flow of national and international trade to and through California's seaports, airports, international ports of entry, intermodal transfer facilities and major highways and rail corridors. SR-60 has been identified as a major highway for the global gateways. (Refer to the Business Transportation and Housing web site <http://.bth.ca.gov/globalgateways/.htm> for the report.) These facilities include I-10, Port of Long Beach, Port of Los Angeles, Los Angeles International Airport, Ontario International Airport, Burlington Northern Santa Fe Railroad, and Union Pacific Railroad. Projects include dedicated truck lanes, bypass lanes, climbing lanes, interchange improvements, highway capacity improvements, access improvements, ITS, rail grade separations, and extended hours of operation at ports and distribution centers.

Statewide Goods Movement Strategy

The Statewide Goods Movement Strategy is a strategic policy and action blueprint for improving the goods movement transportation system. This strategy focuses on improving existing system efficiency, through new technology and other means, to maximize system capacity and reliability, and minimize long-term transportation system costs. It has been prepared to ensure that the quality of life in California is maintained and improved in the future. This is a joint effort by the California Business, Transportation and Housing Agency.

Maintenance Service Level (MSL)

SR-60 is classified as Maintenance Service Level 1 (MSL1). The MSL classification is intended to promote consistent maintenance practices statewide while recognizing the differences in traffic types, volumes and differing needs of rural and urban areas. MSL1 highways receive the highest funding priority for resurfacing, restoration, rehabilitation and maintenance projects.

VI. SOCIO-ECONOMICS

In Caltrans District 7 State Route 60 traverses four of the Southern California Association of Governments (SCAG) Regional Statistical Areas (RSA), which are East Central Los Angeles, West San Gabriel, East San Gabriel, and Pomona. According to SCAG, population projections for 2025 will amount to 22.6 million

LAND USE: State Route 60 is congested in certain areas, highly developed, and land use varies from residential, industrial to commercial. The many significant trip generators along this corridor include:

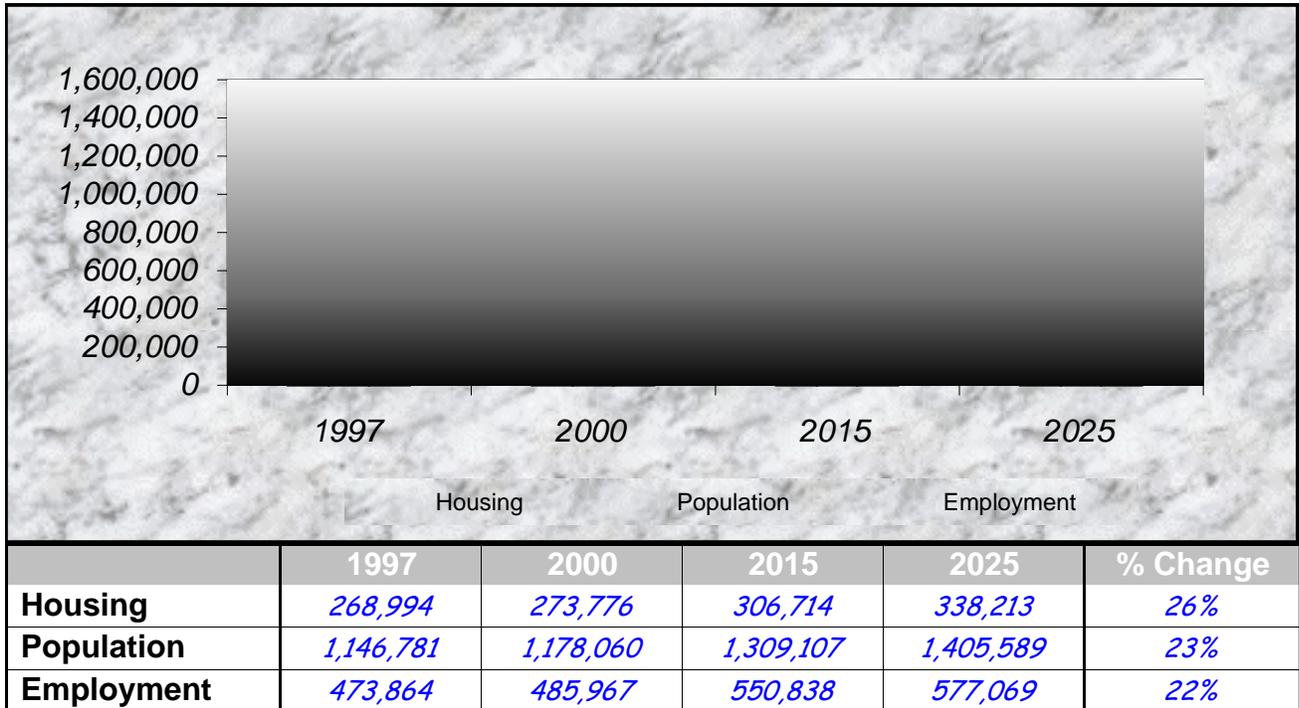
- Schabarum Regional Park
- Carlton Peterson Park
- Dr. Martin Luther King Memorial Park
- California Polytechnic University, Pomona
- Holy Cross Cemetery
- Ontario International Airport
- Puente Hills Mall
- Montebello Town Center
- Montebello Golf Course
- Diamond Bar Golf Course
- East Los Angeles College
- Rio Hondo College
- Whittier Narrows Recreation Area
- Whittier Narrows Golf Course
- Industry Hills Recreation Center
- Mount San Antonio College

Significant growth in housing, population, and employment are generally projected through out the SR-60 corridor. This growth is expected to occur through infill and recycling of existing land uses.

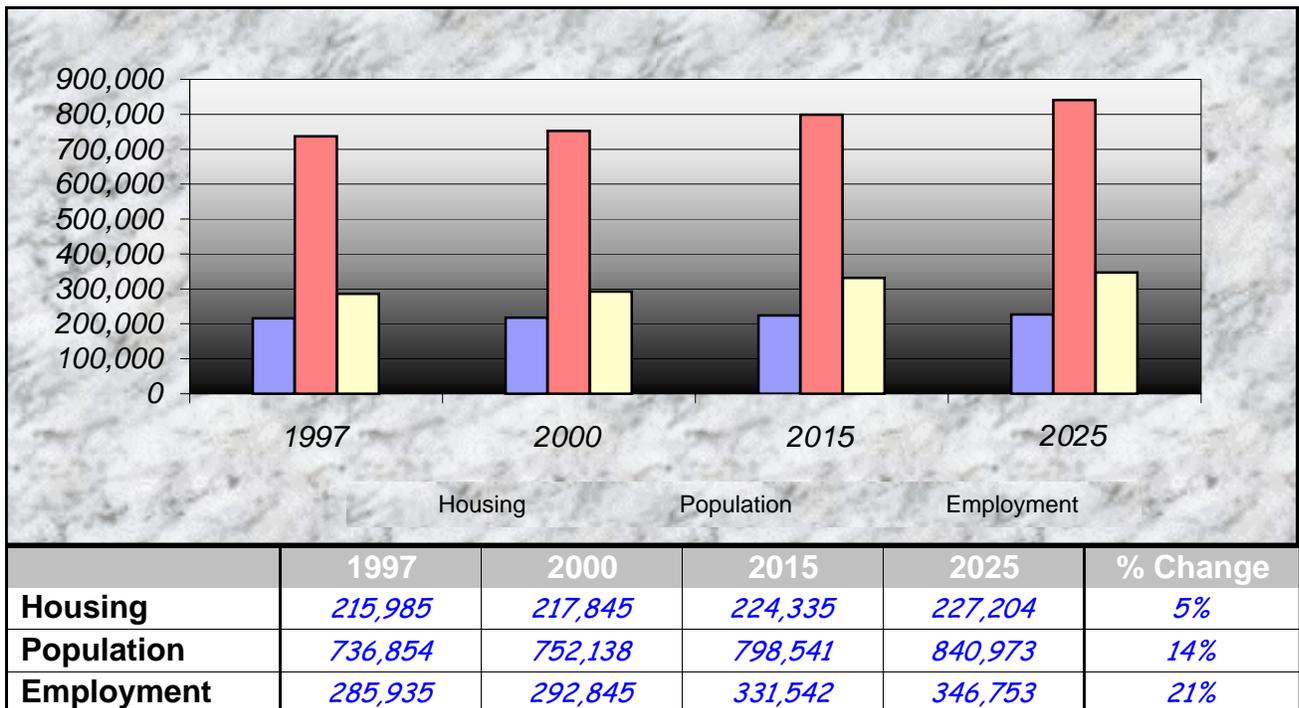
The following graphs illustrate projected growth in these areas between 1997 and 2025, and are provided to give perspective to the socio-economic conditions in the SR-60 corridor. Included are data on housing, population, and employment.

STATE ROUTE 60 SOCIO-ECONOMIC DATA

East Central (LA) Regional Statistical Area (RSA) Demographics

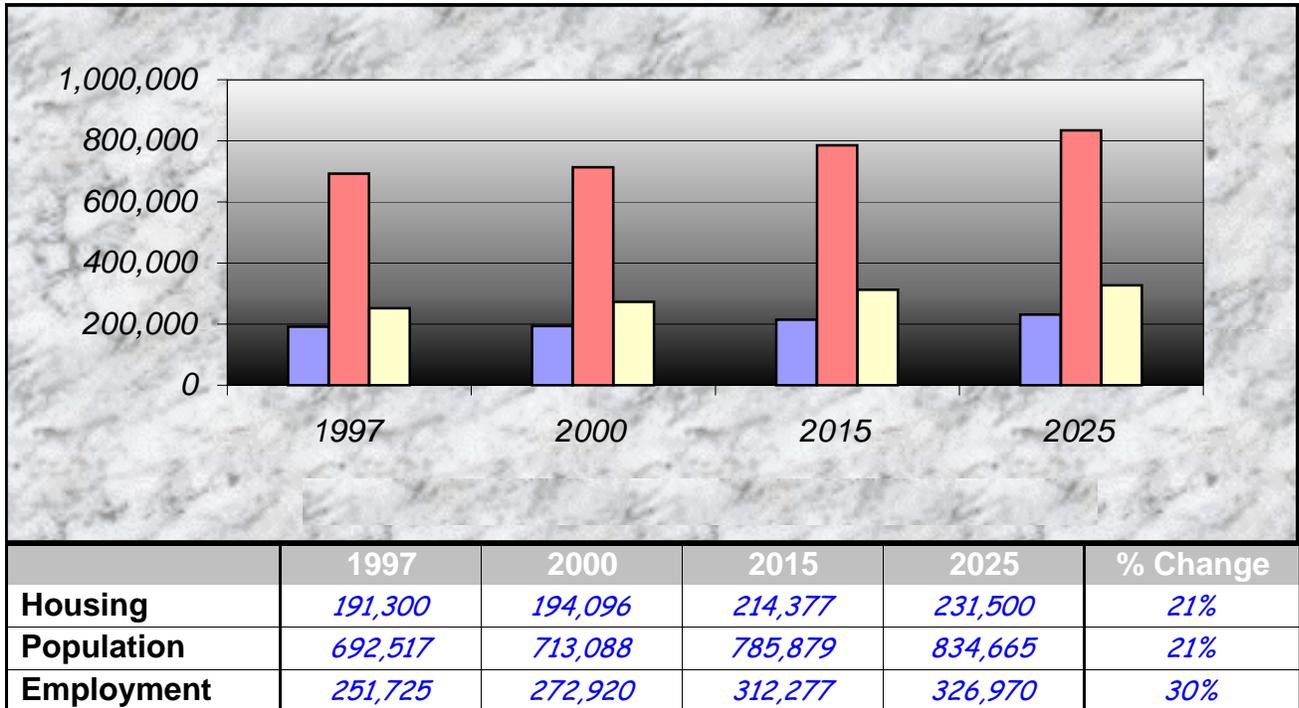


West San Gabriel Valley Regional Statistical Area (RSA) Demographics

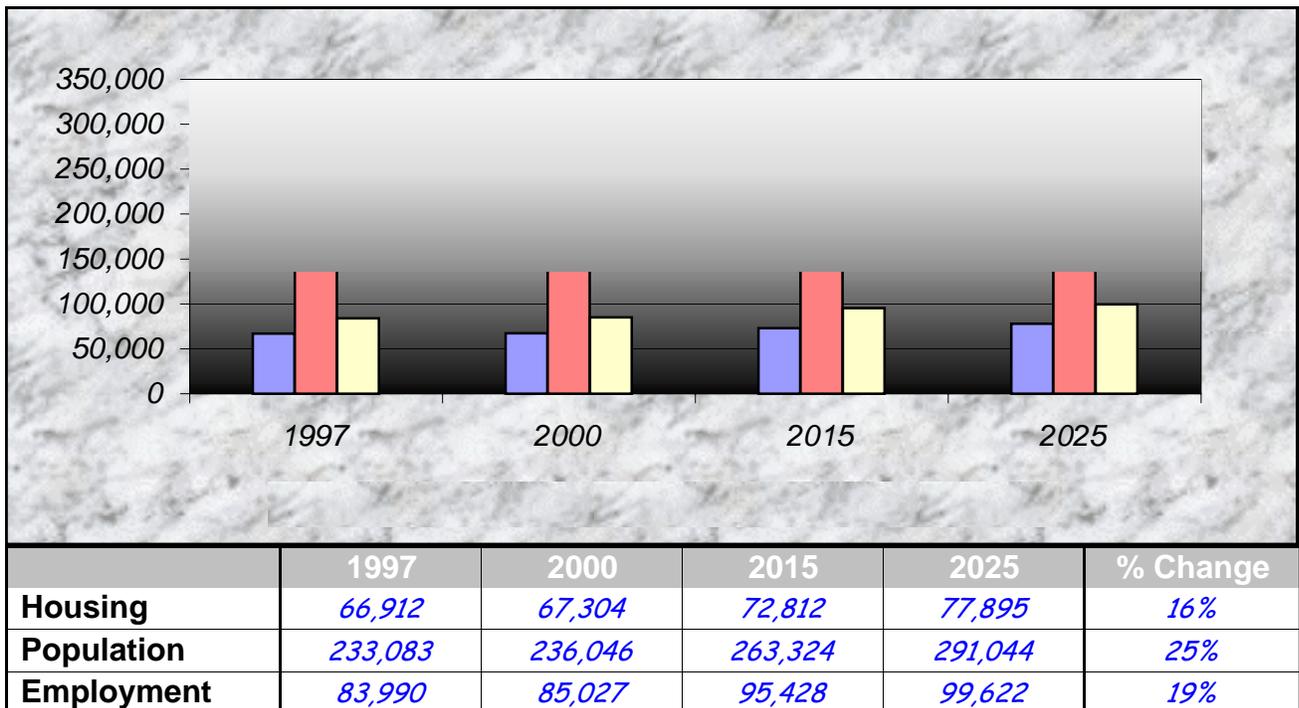


STATE ROUTE 60 SOCIO-ECONOMIC DATA

East San Gabriel Valley Regional Statistical Area (RSA) Demographics



Pomona Regional Statistical Area (RSA) Demographics



VII. ACCIDENT RATES AND SAFETY INTRODUCTION

Accident Data

District traffic safety and accident data are based on the Traffic Accident Surveillance and Analysis System (TASAS). This data base provides accident rates using a three-year average along selected routes. The TASAS data, that is displayed graphically on the following pages, covers the period of January 1, 2000 through December 31, 2003.

First Graph: Fatal Plus Injury Per Million Vehicle Miles

The first graph, "Fatal Plus Injury Per Million Vehicle Miles" (F+I/MVM), shows the rate of fatal and non-fatal injuries on SR-60 during the coverage period. This graph has two graph lines, "Average" and "Actual". The "Actual" is based on specific data for accidents on SR-60. The "Average" line represents a Statewide Average Accident Rate (SWA) for highway segments of the same type with similar characteristics in the state.

Second Graph: Total Accidents Per Million Vehicles Miles

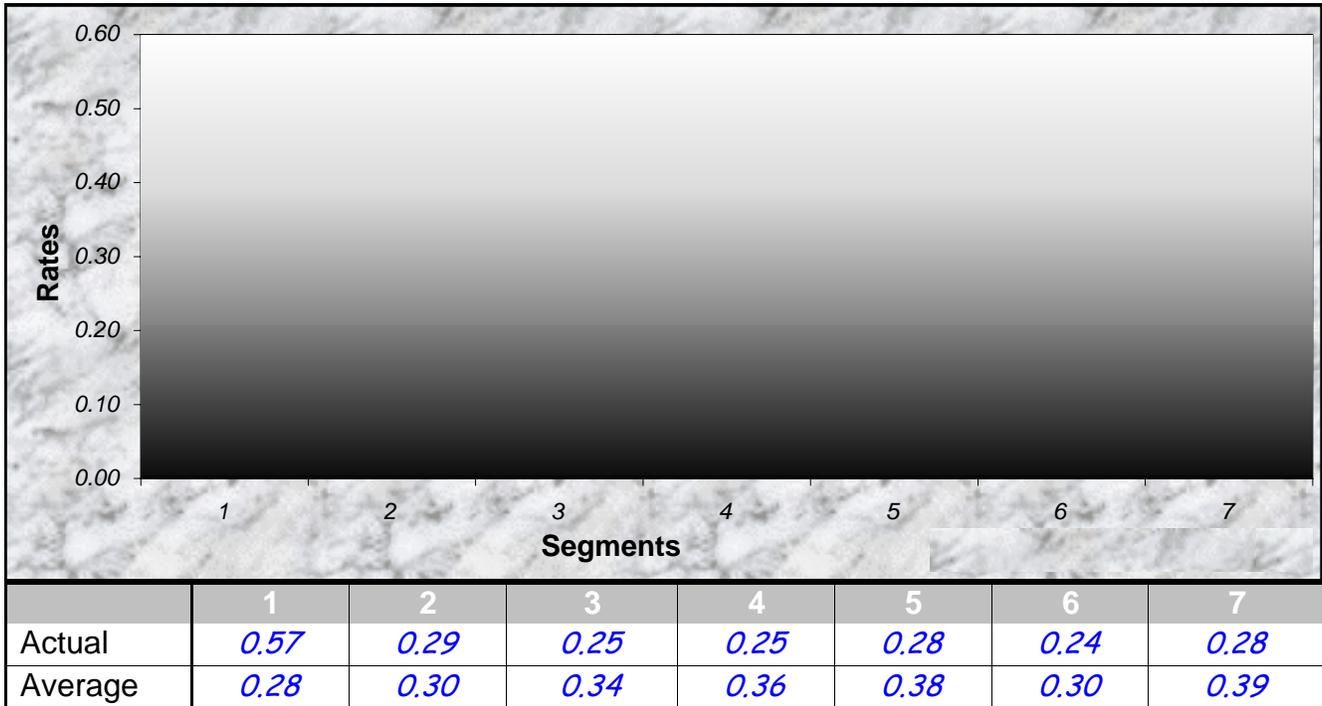
The second graph, "Total Accidents Per Million Vehicle Miles" (Tot/MVM) includes all accidents (fatal, non-fatal injury and accidents without injuries) within the coverage period. As in the first graph, the "Actual" is based on specific SR-60 data and "Average" represents a statewide average for comparable road segments.

Safety

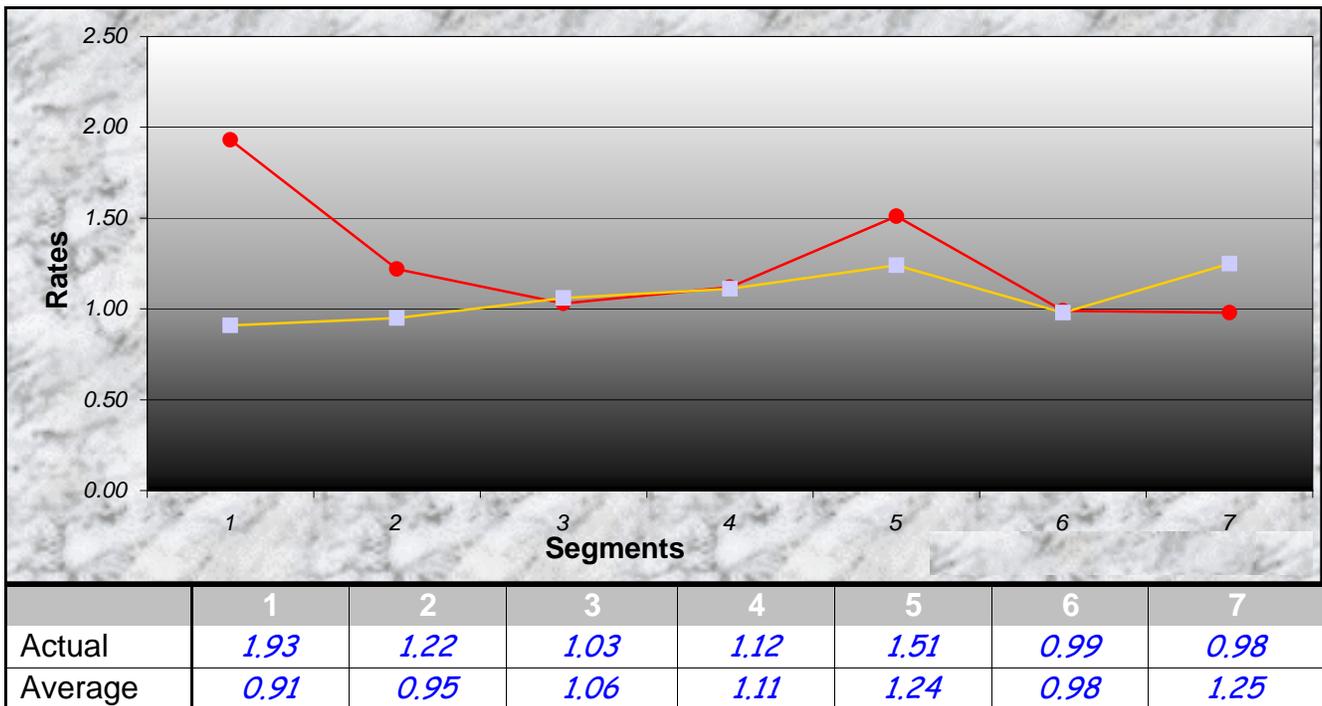
The accident data provided in this TCR is intended to support informed and responsible decision-making by transportation planners and programmers. Research into the connection between congestion and safety is being performed by Caltrans and within the national and international transportation communities. Future TCRs will document the state of that research.

STATE ROUTE 60 ACCIDENT RATES

Fatal + Injury (Per Million Vehicle Miles)



Total Accidents (Per Million Vehicle Miles)



ACCIDENT LOCATIONS HIGHER THAN AVERAGE
Fatal plus Injury per Million Vehicle Miles (F+IMVM)

Graph 1, page 20

SEGMENT 1 EAST LA INTERCHANGE – JCT. ROUTE 5

ACCIDENT LOCATIONS HIGHER THAN AVERAGE
Total Accidents per Million Vehicle Miles (Tot/MVM)

Graph 2, page 20

SEGMENT 1 EAST LA INTERCHANGE TO ROUTE 5

SEGMENT 2 ROUTE 5-ROUTE 710

SEGMENT 4 ROUTE 605 – ROUTE 57

SEGMENT 5 ROUTE 57 (SOUTH)-ROUTE 57 (NORTH)

SEGMENT 6 ROUTE 57 (NORTH) - ROUTE 71

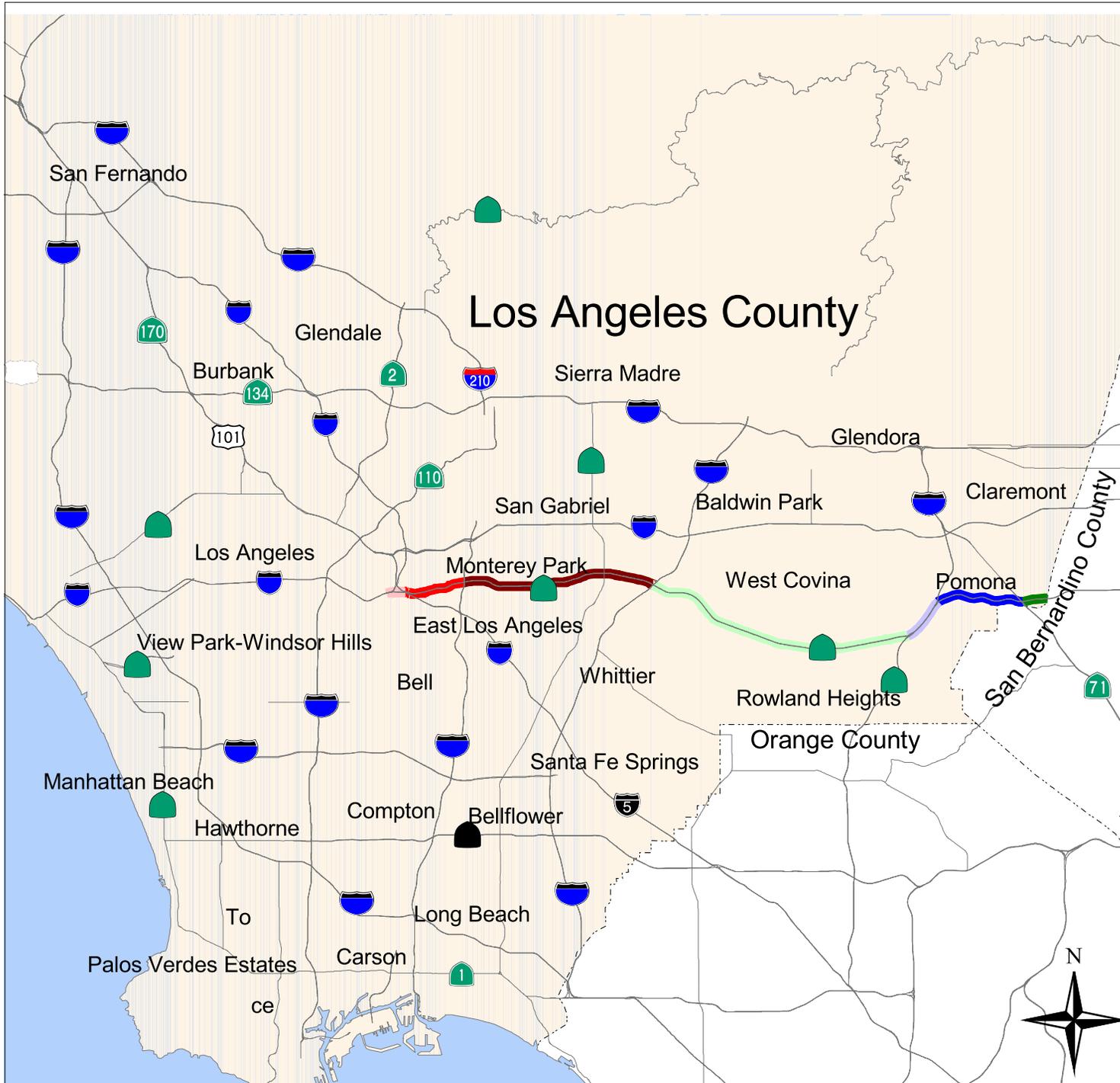
VIII. SEGMENT SUMMARIES INTRODUCTION

This TCR analyzes SR-60 conditions using the “segment” as the study unit. Segments are generally defined as “freeway interchange to freeway interchange”, “county line to freeway interchange”, or “freeway interchange to end of freeway”. The map on the following page illustrates these segments.

Each summary describes the segment’s current and projected operating characteristics, the base year configuration, projected traffic demand and proposed alternatives and improvements.

DISTRICT 7
Los Angeles & Ventura Counties

**State Route 60
TCR Segmentation**



LEGEND

Segment No.	Description
	1 East Los Angeles Interchange to Rte 5
	2 Rte 5 to Rte 710
	3 Rte 710 to Rte 605
	4 Rte 605 to Rte 57 South
	5 Rte 57 South to Rte 57 North, Orange Fwy
	6 Rte 57 North to Rte 71
	7 Rte 71 to San Bernardino County Line

Highways

-  Traversable State Highways
-  State
-  Interstate
-  U.S.



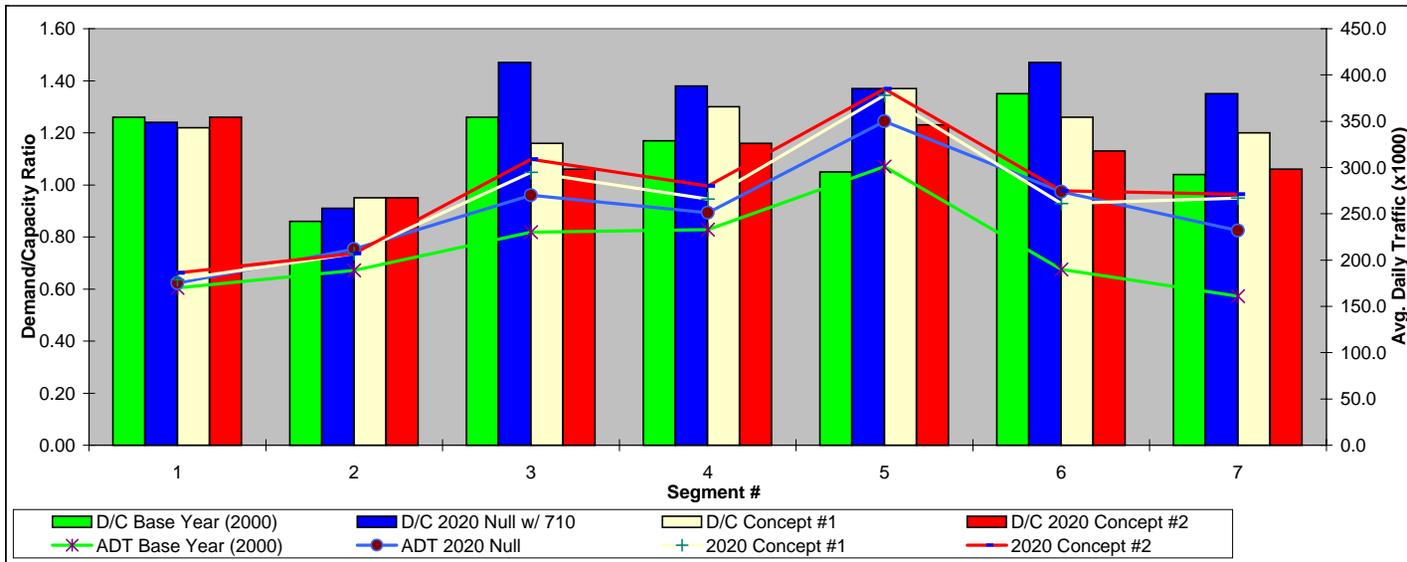
State Route 60 Concept Summary - Segment Configuration



Segment #	1	2	3	4	5	6	7
Existing (2000)							
Demand / Capacity	1.26	0.86	1.26	1.17	1.05	1.35	1.04
Avg. Daily Traffic (x1,000)	170.0	189.0	230.0	233.0	301.0	190.0	161.0
Number of Lanes	3MF	5MF	4MF	4MF	6MF+1HOV	4MF+1HOV	4MF+1HOV
Pk.hour Level Of Service	F1	D	F1	F0	F0	F1	F0
2020 Null With Route 710 (Main Line)							
Demand / Capacity	1.24	0.91	1.47	1.38	1.37	1.47	1.35
Avg. Daily Traffic (x1,000)	175.0	212.0	270.0	251.0	350.0	274.0	232.0
Number of Lanes	3MF	5MF	4MF	4MF	6MF+1HOV	4MF+1HOV	4MF+1HOV
Pk.hour Level Of Service	F0	D	F3	F2	F2	F3	F1
2020 Concept (Alternate #1)							
Demand / Capacity	1.22	0.95	1.16	1.30	1.37	1.26	1.20
Avg. Daily Traffic (x1,000)	179.0	207.0	295.0	266.0	378.0	261.0	267.0
Number of Lanes	3MF+1HOV	5MF+1HOV	5MF+1HOV+1TL	4MF+1HOV+1TL	6MF+1HOV+1TL	4MF+1HOV+1TL	4MF+1HOV+1TL
Pk.hour Level Of Service	F0	E	F0	F1	F2	F1	F0
2020 Concept (Alternate #2)							
Demand / Capacity	1.26	0.95	1.06	1.16	1.23	1.13	1.06
Avg. Daily Traffic (x1,000)	186.0	207.0	309.0	280.0	385.0	275.0	271.0
Number of Lanes	3MF+2HOV	5MF+2HOV	5MF+2HOV+2TL	4MF+2HOV+2TL	6MF+2HOV+2TL	4MF+2HOV+2TL	4MF+2HOV+2TL
Pk.hour Level Of Service	F1	E	F0	F0	F0	F0	F0

MF-Mixed Flow Lane
HOV- High Occupancy Vehicle
TL- Truck Lane

State Route 60 Present and Future Operating Conditions



Segment #	1	2	3	4	5	6	7
Existing (2000)							
Demand / Capacity	1.26	0.86	1.26	1.17	1.05	1.35	1.04
Avg. Daily Traffic (x1,000)	170.0	189.0	230.0	233.0	301.0	190.0	161.0
Number of Lanes	3MF	5MF	4MF	4MF	6MF+1HOV	4MF+1HOV	4MF+1HOV
Pk.hour Level Of Service	F1	D	F1	F0	F0	F1	F0
2020 Null With Route 710 (Main Line)							
Demand / Capacity	1.24	0.91	1.47	1.38	1.37	1.47	1.35
Avg. Daily Traffic (x1,000)	175.0	212.0	270.0	251.0	350.0	274.0	232.0
Number of Lanes	3MF	5MF	4MF	4MF	6MF+1HOV	4MF+1HOV	4MF+1HOV
Pk.hour Level Of Service	F0	D	F3	F2	F2	F3	F1
2020 Concept (Alternate #1)							
Demand / Capacity	1.22	0.95	1.16	1.30	1.37	1.26	1.20
Avg. Daily Traffic (x1,000)	179.0	207.0	295.0	266.0	378.0	261.0	267.0
Number of Lanes	3MF+1HOV	5MF+1HOV	5MF+1HOV+1TL	4MF+1HOV+1TL	6MF+1HOV+1TL	4MF+1HOV+1TL	4MF+1HOV+1TL
Pk.hour Level Of Service	F0	E	F0	F1	F2	F1	F0
2020 Concept (Alternate #2)							
Demand / Capacity	1.26	0.95	1.06	1.16	1.23	1.13	1.06
Avg. Daily Traffic (x1,000)	186.0	207.0	309.0	280.0	385.0	275.0	271.0
Number of Lanes	3MF+2HOV	5MF+2HOV	5MF+2HOV+2TL	4MF+2HOV+2TL	6MF+2HOV+2TL	4MF+2HOV+2TL	4MF+2HOV+2TL
Pk.hour Level Of Service	F1	E	F0	F0	F0	F0	F0

MF- Mixed Flow Lane
HOV- High Occupancy Vehicle
TL- Truck Lane

STATE ROUTE 60 - SEGMENT 1 SUMMARY

DESCRIPTION	
Limits:	ELA I/C, Jct. Rte.10 to Jct. Rte. 5
Post Mile	0.00 - R0.55/0.00 - R0.92

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
3	2

Physical Characteristics	
Terrain:	Flat
Mainline R/W	1050' & varies
Median / Outside Shoulder:	6' - 99' (I/C split) / 4' - 8'
Design Speed (MPH)	70
Bridge Structures:	8

Corridor Characteristics	
Trucks (% of ADT):	8%
Express Transit (lines):	None
Operators:	None
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	None

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.5	1.86	0.29	0.94

TRAFFIC DATA										
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line		Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	170,000	0	175,300		173,000	0	178,600	26,400	186,000	28,600
Lanes Configuration (ea. direction)	3	0	3		3	0	3	1	3	2

Volume		EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
AM Peak Hour	E	4,010		6,840		6,570		6,170	1,100	6,660	880
AM Peak Hour	W	7,270		5,940		5,900		6,440	1,150	6,530	1,320
PM Peak Hour	E	7,380		6,440		6,420		7,120	1,490	7,370	2,100
PM Peak Hour	W	5,440		7,240		7,020		6,860	1,310	7,260	1,410

Speed (mph)		EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
AM Average	E	64		49		51		54	64	51	65
AM Average	W	45		56		56		52	64	52	65
PM Average	E	44		52		52		46	63	44	65
PM Average	W	59		45		47		49	64	45	65

Service Characteristics		EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
Level Of Service, AM	E	C		F0		F0		F0	C	F0	A
Level Of Service, AM	W	F0		F0		F0		F0	C	F0	A
Level Of Service, PM	E	F1		F0		F0		F0	C	F1	B
Level Of Service, PM	W	D		F0		F0		F0	C	F0	B
Directional Split (%) AM	E	36%		54%		53%		49%	49%	50%	40%
Directional Split (%) PM	E	58%		47%		48%		51%	53%	50%	60%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

STATE ROUTE 60 - SEGMENT 2 SUMMARY

DESCRIPTION	
Limits:	Rte. 5 to Jct. Rte. 710
Post Mile	R0.55 - R3.27/R0.92 - R5.45

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
5	2

Physical Characteristics	
Terrain:	Flat
Mainline R/W	265' - 315'
Median / Outside Shoulder:	12' - 99' (I/C split) / 4' - 8'
Design Speed (MPH)	70
Bridge Structures:	23

Corridor Characteristics	
Trucks (% of ADT):	8%
Express Transit (lines):	4 lines
Operators:	Montebello
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	None

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.32	1.25	0.3	0.94

TRAFFIC DATA										
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	188,600	0	211,700	0	214,200	0	206,700	28,300	206,700	30,300
Lanes Configuration (ea. direction)	5	0	5	0	5	0	5	1	5	2

Volume											
AM Peak Hour	E	3,840		7,500		7,210		6,780	1,120	6,900	910
AM Peak Hour	W	5,810		7,520		7,700		8,120	1,280	8,060	1,430
PM Peak Hour	E	8,350		8,810		8,930		8,660	1,600	8,450	2,160
PM Peak Hour	W	5,860		8,910		8,740		9,260	1,450	9,230	1,560

Speed (mph)											
AM Average	E	65		62		63		63	64	63	65
AM Average	W	64		62		62		61	64	61	65
PM Average	E	61		60		59		60	62	61	64
PM Average	W	64		59		60		58	63	58	65

Service Characteristics											
Level Of Service, AM	E	B		C		C		C	C	C	A
Level Of Service, AM	W	C		C		D		D	C	D	B
Level Of Service, PM	E	D		D		D		D	D	D	C
Level Of Service, PM	W	C		D		D		E	C	E	B
Directional Split (%) AM	E	40%		50%		48%		46%	47%	46%	39%
Directional Split (%) PM	E	59%		50%		51%		48%	52%	48%	58%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

STATE ROUTE 60 - SEGMENT 3 SUMMARY

DESCRIPTION	
Limits:	Rte. 710 to Jct. Rte. 605
Post Mile	R3.27 - 11.71/R5.45 - 19.52

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
6	2

Physical Characteristics	
Terrain:	Flat
Mainline R/W	201' - 310'
Median / Outside Shoulder:	8' - 24' / 8'
Design Speed (MPH)	70
Bridge Structures:	29

Corridor Characteristics	
Trucks (% of ADT):	12%
Express Transit (lines):	2 lines
Operators:	Foothill
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	#118 (470)

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0	1	0.34	1.06

	TRAFFIC DATA									
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	229,400	0	269,900	0	280,400	0	294,800	39,500	308,700	48,700
Lanes Configuration (ea. direction)	4	0	4	0	4	0	5 + 1 Truck	1	5 + 2 Truck	2

Volume											
AM Peak Hour	E	4,940		8,500		8,900		10,020	1,300	10,350	1,280
AM Peak Hour	W	9,860		10,180		10,420		11,680	1,710	12,700	1,990
PM Peak Hour	E	9,590		11,490		11,770		13,560	2,010	14,420	2,530
PM Peak Hour	W	7,270		10,570		10,950		12,720	1,960	13,140	2,480

Speed (mph)											
AM Average	E	64		53		50		61	64	63	65
AM Average	W	44		41		40		57	60	59	65
PM Average	E	46		32		30		49	55	54	64
PM Average	W	59		39		36		53	56	58	64

Service Characteristics											
Level Of Service, AM	E	C		F0		F0		D	C	C	A
Level Of Service, AM	W	F1		F1		F1		E	D	D	B
Level Of Service, PM	E	F0		F3		F3		F0	F0	F0	C
Level Of Service, PM	W	D		F1		F2		F0	F0	E	C
Directional Split (%) AM	E	33%		46%		46%		46%	43%	45%	39%
Directional Split (%) PM	E	57%		52%		52%		52%	51%	52%	50%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

STATE ROUTE 60 - SEGMENT 4 SUMMARY

DESCRIPTION	
Limits:	Rte. 605 to Jct. Rte. 57
Post Mile	11.71 - R23.56/19.52 - R39.27

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
5	2

Physical Characteristics	
Terrain:	Flat
Mainline R/W	198' - 490'
Median / Outside Shoulder:	15' - 22' / 8' - 10'
Design Speed (MPH)	70
Bridge Structures:	29

Corridor Characteristics	
Trucks (% of ADT):	11%
Express Transit (lines):	3 lines
Operators:	Foothill
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	# 44, #49 (1375)

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0	1	0.35	1.1

	TRAFFIC DATA									
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	233,100	0	251,400	41,000	250,900	40,700	266,500	39,000	280,500	45,300
Lanes Configuration (ea. direction)	4	0	4	1	4	1	4 + 1 Truck	1	4 + 2 Truck	2

Volume											
AM Peak Hour	E	4,170		7,670	1,500	7,790	1,460	7,900	1,320	8,250	1,370
AM Peak Hour	W	9,130		9,390	1,910	9,280	1,910	10,990	1,890	11,800	2,180
PM Peak Hour	E	9,160		10,770	2,260	10,650	2,260	12,710	2,160	13,630	2,990
PM Peak Hour	W	6,620		9,960	2,110	9,960	2,100	11,110	1,930	11,570	2,650

Speed (mph)											
AM Average	E	65		57	62	57	63	62	64	63	65
AM Average	W	49		47	57	48	57	51	58	56	64
PM Average	E	49		37	49	38	49	42	52	49	63
PM Average	W	61		43	53	43	53	50	57	57	64

Service Characteristics											
Level Of Service, AM	E	B		E	C	E	C	D	C	C	A
Level Of Service, AM	W	F0		F0	E	F0	E	F0	E	F0	C
Level Of Service, PM	E	F0		F2	F0	F2	F0	F1	F0	F0	C
Level Of Service, PM	W	D		F1	F0	F1	F0	F0	E	E	C
Directional Split (%) AM	E	31%		45%	44%	46%	43%	42%	41%	41%	39%
Directional Split (%) PM	E	58%		52%	52%	52%	52%	53%	53%	54%	53%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

STATE ROUTE 60 - SEGMENT 5 SUMMARY

DESCRIPTION	
Limits:	Rte. 57 South to Jct.Rte. 57 North
Post Mile	R23.56 - R25.46/R39.27 - R42.43

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
7	2

Physical Characteristics	
Terrain:	Rolling
Mainline R/W	230' - 282'
Median / Outside Shoulder:	22' / 8'
Design Speed (MPH)	70
Bridge Structures:	3

Corridor Characteristics	
Trucks (% of ADT):	11%
Express Transit (lines):	1 line
Operators:	Foothill
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	#22 (110), # 23 (150)

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.33	1.52	0.35	1.16

TRAFFIC DATA										
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	301,700	26,700	349,800	45,700	349,100	45,900	378,400	44,400	384,900	62,800
Lanes Configuration (ea. direction)	6	1	6	1	6	1	6 + 1 Truck	1	6 + 2 Truck	2

Volume											
AM Peak Hour	E	6,170	730	8,510	1,220	8,510	1,230	8,990	1,210	9,480	1,220
AM Peak Hour	W	12,230	1,380	15,470	2,440	15,470	2,450	17,790	2,320	18,080	3,890
PM Peak Hour	E	12,070	1,250	16,050	2,600	15,960	2,610	18,660	2,580	19,150	4,260
PM Peak Hour	W	8,650	1,190	11,800	2,000	11,890	1,990	13,830	1,920	13,830	3,010

Speed (mph)											
AM Average	E	65	65	63	64	63	64	64	64	64	65
AM Average	W	55	63	40	45	40	44	42	48	49	57
PM Average	E	55	64	38	40	38	40	38	40	46	53
PM Average	W	63	64	56	56	56	56	56	57	60	62

Service Characteristics											
Level Of Service, AM	E	B	B	C	C	C	C	C	C	C	A
Level Of Service, AM	W	F0	C	F1	F0	F1	F0	F1	F0	F0	E
Level Of Service, PM	E	F0	C	F2	F1	F2	F1	F2	F1	F0	F0
Level Of Service, PM	W	C	C	F0	F0	F0	F0	F0	E	D	C
Directional Split (%) AM	E	34%	35%	35%	33%	35%	33%	34%	34%	34%	24%
Directional Split (%) PM	E	58%	51%	58%	57%	57%	57%	57%	57%	58%	59%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

STATE ROUTE 60 - SEGMENT 6 SUMMARY

DESCRIPTION	
Limits:	Rte. 57 North to Jct. Rte.71
Post Mile	R25.46 - R29.39/R42.43 - R48.98

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
5	2

Physical Characteristics	
Terrain:	Rolling
Mainline R/W	215' - 550'
Median / Outside Shoulder:	22' - 70' / 8' - 10'
Design Speed (MPH)	70
Bridge Structures:	4

Corridor Characteristics	
Trucks (% of ADT):	12%
Express Transit (lines):	None
Operators:	None
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	None

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.24	1.12	0.27	0.89

	TRAFFIC DATA									
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	190,600	26,800	274,300	47,100	275,900	45,800	261,500	35,200	275,100	48,500
Lanes Configuration (ea. direction)	3	1	4	1	4	1	4 + 1 Truck	1	4 + 2 Truck	2

Volume											
AM Peak Hour	E	3,390	730	7,380	1,400	7,380	1,400	6,660	1,220	7,220	1,230
AM Peak Hour	W	7,930	1,380	9,970	2,240	10,060	2,250	11,100	1,890	11,660	3,000
PM Peak Hour	E	7,740	1,260	11,440	2,460	11,070	2,460	12,320	2,050	13,210	3,260
PM Peak Hour	W	5,100	1,190	9,500	2,100	9,600	2,160	9,770	1,730	10,100	2,480

Speed (mph)											
AM Average	E	65	65	58	63	58	63	64	64	64	65
AM Average	W	56	63	43	50	42	50	51	58	57	62
PM Average	E	57	64	32	44	35	44	44	55	51	61
PM Average	W	64	64	46	53	46	52	56	60	61	64

Service Characteristics											
Level Of Service, AM	E	B	B	E	C	E	C	C	C	C	A
Level Of Service, AM	W	F0	C	F1	F0	F1	F0	F0	E	E	C
Level Of Service, PM	E	F0	C	F3	F1	F2	F1	F1	F0	F0	D
Level Of Service, PM	W	C	C	F0	F0	F0	F0	F0	D	D	C
Directional Split (%) AM	E	30%	35%	43%	38%	42%	38%	38%	39%	38%	29%
Directional Split (%) PM	E	60%	51%	55%	54%	54%	53%	56%	54%	57%	57%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

STATE ROUTE 60 - SEGMENT 7 SUMMARY

DESCRIPTION	
Limits:	Rte. 71 to San Bernardino Co. Line
Post Mile	R29.39 - R30.46/R48.98 - R50.77

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Classification	
Functional Classification:	Urban Principal Arterial - P3
MPAH Designation:	State Freeway
Other Systems:	NHS, STAA, ICES

Ultimate Concept	
Main Line	HOV Lane(s)
5	2

Physical Characteristics	
Terrain:	Flat
Mainline R/W	222' - 383'
Median / Outside Shoulder:	70' / 10'
Design Speed (MPH)	70
Bridge Structures:	2

Corridor Characteristics	
Trucks (% of ADT):	13%
Express Transit (lines):	None
Operators:	None
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	None

Accident Rates			
per Million Vehicle Miles (MVM) (01/00 to 12/03)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.23	1.07	0.29	0.96

TRAFFIC DATA										
	EXISTING (2000)		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)		2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	161,400	26,800	232,000	34,600	231,200	34,000	266,800	34,600	271,400	36,800
Lanes Configuration (ea. direction)	3	1	4	1	4	1	4 + 1 Truck	1	4 + 2 Truck	2

Volume											
AM Peak Hour	E	2,990	730	6,140	900	6,140	900	7,010	1,040	7,100	1,050
AM Peak Hour	W	5,820	1,380	9,120	1,830	9,310	1,820	10,750	1,720	10,950	1,920
PM Peak Hour	E	6,080	1,260	10,560	1,920	10,080	1,980	11,710	1,910	12,390	2,080
PM Peak Hour	W	4,640	1,190	8,450	1,580	8,350	1,620	9,990	1,620	9,990	1,710

Speed (mph)											
AM Average	E	65	65	62	65	62	65	63	65	64	65
AM Average	W	63	63	49	59	48	59	52	60	59	65
PM Average	E	62	64	39	57	42	56	47	57	54	65
PM Average	W	64	64	53	62	54	61	56	61	61	65

Service Characteristics											
Level Of Service, AM	E	B	B	D	B	D	B	C	B	C	A
Level Of Service, AM	W	C	C	F0	D	F0	D	F0	D	D	B
Level Of Service, PM	E	D	C	F1	E	F1	F0	F0	E	F0	B
Level Of Service, PM	W	C	C	F0	D	F0	D	F0	D	D	B
Directional Split (%) AM	E	34%	35%	40%	33%	40%	33%	39%	38%	39%	35%
Directional Split (%) PM	E	57%	51%	56%	55%	55%	55%	54%	54%	55%	55%

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
Speeds are estimated and are for comparative purposes only

IX. ROUTE ANALYSIS

EXISTING FACILITY: State Route 60 is a major freeway providing service parallel to, and south of Interstate 10 (San Bernardino Freeway). It primarily serves as an interregional travel corridor for both commuters and freight transport.

ALTERNATE ROUTES: There are several arterial streets paralleling SR-60 which provide alternative routes to commuters. Currently some of these streets fail to provide effective alternatives due to physical inadequacies, numerous traffic signals, access conflicts, and general congestion. Improvements will be required in order to provide efficient alternatives to commuters. Listed on page 34 are some selected local arterials that parallel SR-60.

ROUTE 60 PARALLEL ARTERIAL DESCRIPTION						
Arterial Name	Segment No.	City or Community	Thomas Guide Page No.	Boundary Streets	Existing Lanes	Future Plans
Cesar Chavez Ave.	2,3	City Terrace East L.A. Monterey Park	635	Lorena St. S. Atlantic Blvd.	2,3	None
W. Riggan St.	3	Monterey Park	635	S. Atlantic Blvd. Garfield St.	2,3	None
Colima Rd.	4	Rowland Heihts City of Industry	678	Azuza Ave. Cal Bourne Dr.	2	None
Golden Springs Dr.	4,5	Diamond Bar	679	Cal Bourne Dr S. Diamond Bar Blvd.	2	None

Transit Component

Current System

The transit component for State Route 60 embodies a multi-modal system including carpooling, Express Transit Service, Commuter Rail (Metrolink), and Intercity Rail (Amtrak).

Two regional transit agencies (Los Angeles County Metropolitan Transportation Authority and Foothill Transit) and one local transit agency (Montebello Municipal Bus Lines) currently serve this route, all of which provide extended service to Downtown Los Angeles. The MTA and Montebello Municipal Bus Line operate within segments two and three, while Foothill Transit maintains jurisdiction in segments four through six. Several local transit agencies, including Monterey Park and Norwalk Transit, either parallel or traverse this route. These provide limited community-based service. Two rail agencies, Southern California Regional Rail Authority (SCRRA) and Amtrak operate along this route, providing inter-city and commuter service.

The agencies and transit lines and daily boarding are listed below.

Agency	Line #	Type
Metropolitan Transportation Authority	471	Commute
Foothill Transit	493, 495, 482,	Commute + Extended
Montebello Municipal Bus Lines	341, 342, 343	Commute
Southern California Regional Railway Authority	Metrolink	Commute
Amtrak	South West Chief, Sunset Limited	Inter-City

MTA Line #	Daily Boardings
471	4,692
Foothill Transit Line #	Daily Boardings
482	4,883
493	N/A
495	1,641
Metrolink (SCRRA) (04/2003)	Daily Boardings
Riverside	4,286
Amtrak	Daily Boardings
South-West Chief & Sunset Limited	N/A
Montebello Municipal Bus Lines	Daily Boardings
341, 342, 343	N/A

Currently, there are four multi-modal facilities servicing this route. The largest is the Metrolink station in the City of Industry, which serves commuter rail, carpools, van pools, local, and express bus transit. Three other facilities (two in Diamond Bar and one in Azusa) provide similar services except for commuter rail. The MTA and Foothill Transit are the primary operators of these facilities. Los Angeles Union Station (located on Alameda St. and E. Cesar E. Chavez Avenue) is the central focal point for transit and commuter rail.

The table on page 37 contains information on each park and ride lot along SR-60.

STATE ROUTE 60
Park and Ride/Bicycle Facilities

Lot Name	#	PM	City	Operator	Bike Lockers	# Stalls	Transit Service
La Puente	49	16.5	La Puente	La Puente	0	110	Foothill Transit, MTA
Puente Hills Mall	44	17.9	Industry	Puente Hills Mall	0	136	Foothill Transit, MTA
Industry Metrolink	45	22.7	Industry	Metrolink	0	1375	Foothill Transit, MTA, Metrolink Service
Walnut United Methodist Church	110	22.8	Walnut	Walnut United Methodist Church	0	21	Foothill Transit
Diamond Bar/East	22	25.6	Diamond Bar	State	10	150	Foothill Transit, MTA, OCTA
Diamond Bar/West	23	25.6	Diamond Bar	State	0	110	Foothill Transit, MTA, OCTA

In October 1992, the Southern California Regional Rail Authority (SCRRA) began operation of the regional commuter rail system "Metrolink". The system is designed to serve the counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura. As of April 2003, Metrolink total system usage was approximately 35,585 riders per day. The Amtrak lines, Southwest Chief (Los Angeles to Chicago) and Sunset Limited (Los Angeles to Orlando, Florida) also utilize this corridor from Union Station on a daily round-trip basis, except for the Sunset Limited which operates three days a week.

Future Considerations

Recent county legislation ("LACMTA Reform and Accountability Act of 1998") has given the Los Angeles County Metropolitan Transportation Agency (LACMTA) the opportunity to expand and enhance its transit strategy. The agency has planned to spend \$1 billion to increase its fleet by nearly 2,100 by 2004. In addition, federal rulings to reduce overcrowding during peak periods have required the agency to purchase over 500 additional buses and increase service within the same time frame.

One of the major strategies of LACMTA's long-range Transportation Plan is the preparation of a Bus System Improvement Plan including Bus Rapid Transit (BRT) to improve and augment transit services on overcrowded routes throughout Los Angeles County.

In addition, other projects are in planning stages including extension of El Monte Busway to San Bernardino County line, a distance of approximately twenty miles. Phase I Metro Rail Gold line from Los Angeles Union Station to Pasadena was recently opened. Phase II, extending from Pasadena to Claremont and from Los Angeles Union Station to Eastside via I-710 at Atlantic Blvd. will be operational in 2008. The Expo light rail train to Santa Monica from downtown Los Angeles is in preliminary study stage. High Speed Rail (Magnetic Levitation) traversing east west of the Southern California region will also affect travel patterns.

A universal fare system called EZ-Pass, allows unlimited travel on Metro Rail and Bus Systems and 12 municipal bus operators and introduction of 272 60-foot long

compressed natural gas (CNG) buses with more seats assigned to high ridership lines has been introduced by the LACMTA.

Caltrans is proposing adding 15 miles of a third rail track between the Cities of Commerce and Fullerton (\$85 million), while Metrolink is seeking Federal funds (\$160 million) to add a third rail track along 30 miles of the Route 91 Corridor from Anaheim Canyon to Riverside.

Current/Future Transit Deficiencies

The following tables show the current and future transit deficiencies for SR-60. This information utilizes the “Sketch Plan” (RCR Guidelines, 1987) method to roughly estimate the amount of transit service (if any) would be necessary to achieve the desired route concept. The “sketch plan” formula is based on the following assumptions:

- One way Peak Hour volume = PK
- Maximum Service Flow (MSF) for route concept LOS “D” = 0.93
- 2000 vehicles per lane per hour X 0.93 X Number of lanes = Freeway Capacity @ LOS “D”
- Vehicle Occupancy Factor = 1.3 Passengers Per Vehicle (SCAG is currently using an Average Vehicle Occupancy rate of 1.1 Persons per Vehicle (PPV) in the AM peak and an PPV of 1.3 in the PM peak. These tables utilize the largest peak volume regardless of time or direction and uses the 1.3 PPV value for illustrative purposes only).
- Peak hour volumes are taken from the Segment Summaries found in Section VIII. Neither current nor 2020 deficiencies incorporate HOV lane volumes in the calculations.
- Transit Required = $(PK - MSF @ "D") \times 1.3 (ppv) \div 50 (ppv)$
- Where negative values occur for hourly bus requirements, the value is equal to zero.
- The formula was used to calculate both current and future transit deficiencies.

Even though the information presented in these tables is a rudimentary estimate at best and a more detailed analysis is necessary, it is clear that in order to achieve the future desired route concept, additional freeway capacity is needed. To be sure, apparent demand (congestion and time delay) will not be adequate to divert drivers from their vehicles. Transit and Transportation officials need to make transit use more attractive to its potential customers. Increased service, safety, clean, well-maintained buses and Park-and-Ride facilities, and attractive fare pricing (similar to the Proposition "A" 41% fare reduction from July 1982 to July 1985¹) may induce many drivers out of their vehicles. Obviously, the transit component is just one facet in a multi-modal and multi-agency approach to a long-term solution.

Current Transit Deficiencies

Segment	Highest Peak Hour Volume	# Lanes	Vehicle Capacity Hr/Ln	LOS "D" (0.93) Capacity	LOS "D" 0.93 x # Lanes	Demand Exceeding Capacity @ LOS "D"	Buses per Hour Required to Achieve Concept
1	7380	3	2000	1860	5580	2340	47
2	8350	5	2000	1860	9300	-1235	0
3	9860	4	2000	1860	7440	2420	48
4	9160	4	2000	1860	7440	2420	48
5	12,230	7	2000	1860	13020	-1027	0
6	7926	5	2000	1860	9300	-1786	0
7	6082	5	2000	1860	9300	-4183	0

¹ Jon Hillmer and Stephen t. Perry, *The El Monte Busway: A Twenty-Year Retrospective*, Los Angeles County Metropolitan Transportation Authority, 7th National Conference on High Occupancy Vehicle Systems, June 5-8, 1994, page 16

2020 Transit Deficiencies

Segment	Highest Peak Hour Volume	# Lanes	Vehicle Capacity Hr/Ln	LOS "D" (0.93) Capacity	LOS "D" x # Lanes	Demand Exceeding Capacity @ LOS "D"	Buses per Hour Required to Achieve Concept
1	7370	3	2000	1860	5580	2327	46
2	9230	5	2000	1860	9300	-91	0
3	14420	7	2000	1860	13020	10141	203
4	13630	6	2000	1860	11160	4238	85
5	19150	8	2000	1860	14880	4270	85
6	13210	6	2000	1860	11160	4238	85
7	12390	6	2000	1860	11160	4238	85

Transportation System Management/Travel Demand Management

With the passage of Senate Bill (SB) 45 in 1998, the Transportation System Management program funds were consolidated with other program funds to provide for a broad range of transportation improvements through the Interregional Improvement Program (IIP), which include transportation system and demand management projects.

A major element of the SR-60 concept is an improved utilization of the existing highway system. One aspect of this element is ramp metering. This strategy employs computer-controlled traffic signals to regulate the number of vehicles entering the freeway at one time. This helps alleviate freeway congestion, which occurs when traffic demand exceeds highway capacity.

Ramp Metering

There are 859 ramps that are metered in Los Angeles and Ventura Counties; of which, 320 have separate HOV bypass lanes, where the HOVs do not have to stop at the ramp meter signal. Ramp metering is one of Traffic Management's tools to regulate the flow of traffic entering the freeways during the peak traffic hours. Ramp metering will:

- a. smooth the overall flow of freeway traffic
- b. accommodate more vehicles per hour on the freeway
- c. decrease commuting travel times
- d. and increase safety on the freeway.

Ramp metering reduces traffic congestion on the freeway. This increases the capacity of the mixed flow lane and enables traffic to flow at greater speeds. The number of traffic accidents are reduced as well.

Freeway congestion is most often caused by a bottleneck, where the freeway demand exceeds the freeway capacity. This condition usually occurs during the weekday peak hours, but some freeways experience congestion during the mid-day and some on weekends. When the demand exceeds the capacity, congestion creates queues of stop-and-go traffic, and ramp metering limits the amount of traffic entering the freeway so that the demand at the bottleneck does not exceed the capacity. A free-flowing traffic lane can carry 33% more cars than a congested lane. It is in the public interest to keep the freeways moving freely.

On weekdays, the meters operate 3 to 4 hours during the peak traffic periods. Some ramps are also metered during the mid-day hours, and some are even metered on weekends. The rate at which cars are allowed onto the freeway is determined by the ramp volume as well as the volume on the freeway. The mainline responsive controllers react to the volumes on the freeway, such that if the volumes decrease significantly, then the meter will adjust and allow more cars onto the freeway. If the freeway volumes are very light, the meter may go to continuous green.

Projects within freeway segments identified in the Ramp Meter Development Plan should include provisions for ramp metering. However, there are ramp locations that are not metered, due to the heavy volume of traffic and/or insufficient storage area for the metered vehicles. The average cost for a complete installation of a ramp meter is \$50,000. This cost as a percentage of the freeway construction varies depending on the type of freeway construction.

Currently, there are 62 ramp meters on SR-60 in the Los Angeles County portion of District 7, of which 32 have separate HOV bypass lanes.

In addition to ramp meters, a system of electronic traffic sensors, changeable message signs, and closed-circuit television cameras have been installed district-wide to monitor traffic flow and respond to congestion in a variety of ways. These, plus a Highway Advisory Radio and 24 hour traffic condition cable access “Freeway Vision” are controlled from a state-of-the-art Traffic Management Center (TMC) by Caltrans. The City of Los Angeles Department of Transportation (LADOT) also owns and manages its own Automated Traffic Surveillance and Control System (ATSCS).

Transportation Demand Management

This strategy attempts to divert highway demand before it reaches the highway system by offering alternatives that discourages solo driving. Congestion Measures, such as ridesharing, home or satellite telecommuting, variable work hours, employee transportation allowances, and low-cost parking of cars and vanpools.

CONGESTION MEASURES

The table on page 44 shows the duration of delays, average speeds, demand/capacity ratios, levels of service and hours of delay for each segment.

STATE ROUTE 60 - CONGESTION MEASURES

SPEED										
	AVERAGE SPEEDS (MPH)									
	2000* EXISTING		2020 NULL* (withouth I-710)		2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	HOV	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	44		45		47		46	63	44	65
Segment 2	61		59		59		58	62	58	64
Segment 3	44		32		30		49	55	54	64
Segment 4	49	63	37	49	38	49	42	52	49	63
Segment 5	55	63	38	40	38	40	38	40	46	53
Segment 6	39	63	32	44	35	44	44	55	51	61
Segment 7	55	63	39	57	42	56	47	57	54	65

DEMAND / CAPACITY RATIOS										
	2000* EXISTING		2020 NULL* (without I-710)		2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
	Segment 1	1.26		1.24		1.20		1.22	0.76	1.26
Segment 2	0.86		0.91		0.92		0.95	0.82	0.95	0.55
Segment 3	1.26		1.47		1.51		1.16	1.03	1.06	0.65
Segment 4	1.17		1.38	1.16	1.37	1.16	1.30	1.11	1.16	0.77
Segment 5	1.05	0.71	1.37	1.33	1.36	1.34	1.37	1.32	1.23	1.09
Segment 6	1.02	0.71	1.47	1.26	1.42	1.26	1.26	1.05	1.13	0.84
Segment 7	0.78	0.71	1.35	0.98	1.29	1.02	1.20	0.98	1.06	0.53

LEVEL OF SERVICE										
	2000* EXISTING		2020 NULL* (without I-710)		2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
	Segment 1	F1		F0		F0		F0	C	F1
Segment 2	D		D		D		E	D	E	C
Segment 3	F1		F3		F3		F0	F0	F0	C
Segment 4	F0		F2	F0	F2	F0	F1	F0	F0	C
Segment 5	F0	C	F2	F1	F2	F1	F2	F1	F0	F0
Segment 6	F0	C	F3	F1	F2	F1	F1	F0	F0	D
Segment 7	D	C	F1	E	F1	F0	F0	E	F0	B

HOURS OF DELAY										
	2000* EXISTING		2020 NULL* (without I-710)		2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
	Segment 1	0		50		0		0	0	50
Segment 2	0		50		50		50	0	50	0
Segment 3	600		1,550		1,800		550	50	400	0
Segment 4	550		1,500	150	1,400	150	1,250	100	800	0
Segment 5	50	0	350	50	350	50	400	50	250	50
Segment 6	100	0	750	50	600	50	350	0	200	0
Segment 7	0	0	100	0	100	0	50	0	50	0

Speed values are estimates and are to be used for comparative purposes only

Delay values are estimates and are to be used for comparative purposes only

*: Worst condition during peak hours

GOODS MOVEMENT

The economic vitality and well being of the Los Angeles region depends upon the safe and timely transport of goods as well as people. Current levels of congestion are detrimental to this vitality, and future projections indicate that this situation will get much worse. In terms of freight alone, the 2004 SCAG RTP forecasts international trade to triple by year 2020. Significant actions thus need to be taken to protect the economic well being of the region. These include improved rail service, including more grade separations; additional and improved intermodal transfer facilities; truck lanes on major truck routes; improved access to and enhanced cargo handling capabilities at seaports; and improved air cargo accessibility with separation from passenger activities at airports. Some significant development programs that will impact State Route 60 are as follows:

Multi-County Goods Movement Plan.

It is envisioned this study will be a major comprehensive, multi-modal corridor study for goods movement in the SCAG region including Ventura, Los Angeles, Orange, Riverside and San Bernardino Counties.

Global Gateways Development Program:

A strategy developed in cooperation with goods movement industry representatives and other stakeholders for improving the flow of national and international trade to and through California's seaports, airports, international ports of entry, intermodal transfer facilities and major highways and rail corridors. State Route 60 has been identified as a major highway for the global gateways. These facilities include I-10, Port of Long Beach, Port of Los Angeles, Los Angeles International Airport, Ontario International Airport, Burlington Northern Santa Fe Railroad, and Union Pacific Railroad. Projects include dedicated truck lanes, bypass lanes, truck climbing lanes, interchange improvements, highway capacity improvements, access improvements, ITS, rail grade separations, and extended hours of operation at ports and distribution centers.

National I-10 Freight Corridor Study

An effort to conduct a national feasibility study for a Nationwide Automated Truck Facility along the I-10 corridor from California to Florida has been undertaken. In the Los Angeles region, this corridor includes SR-60

Statewide Goods Movement Strategy

A strategic policy and action blueprint for improving the goods movement transportation system. This strategy focuses on improving existing system efficiency, through new technology and other means, to maximize system capacity and reliability, and minimize long-term transportation system costs and to ensure the quality of life in California is maintained and improved in the future.

Trucks: State Route 60 is part of the Surface Transportation Assistance Act (STAA) truck network, and is identified in the SCAG RTP from downtown Los Angeles eastward as part of the Southwest Compact Multi-Modal Corridor for goods movement between Los Angeles and Houston. As such, it will carry increasing truck traffic from the ports of Los Angeles and Long Beach, and possibly also Los Angeles International Airport. Truck volumes in year 2004 range from 4.84% to 11.26% of ADT. Regionally, truck traffic is expected to increase from 22,431 in year 2000 to 48,447 in year 2030. (see SCAG 2004 RTP).

Rail: Union Pacific freight lines generally serve the same areas as State Route 60. Burlington Northern Santa Fe freight lines serve the eastern end of State Route 60 in Pomona. Available facilities include an intermodal terminal in Los Angeles, a major classification yard in East Los Angeles, and major truck-train transfer and warehouse facilities in Los Angeles and Pomona (see SCAG 2004 RTP). Service improvements could include enhancements to and/or additional transfer facilities, additional tracks, and more grade separations. The Alameda Corridor East includes an extensive list of these improvements and as such will significantly enhance the movement of freight from downtown Los Angeles to the San Bernardino County Line.

Seaports: As part of the Southwest Compact Multi-Modal Corridor, State Route 60 will handle some of the freight from the ports of Los Angeles and Long Beach. It is expected that most port cargo going less than 800 miles will be transported by truck. These are full service ports, handling in particular containers, autos, and bulk cargo. Together they are the third busiest in the world, and with planned improvements. Both ports are included in the Global Gateways Development Program.

Airports: Overall, passenger travel by air is expected to double by year 2020, and air cargo activity is expected to triple regionally, with Los Angeles International Airport (LAX) currently handling 75% of this cargo volume (SCAG 2004 RTP). Expansion of Los Angeles International Airport is currently being planned, and this could have an impact on State Route 60. Ontario International airport is also nearby in San Bernardino County and impacts State Route 60.

TECHNOLOGY

Intelligent Transportation Systems (ITS)

Technological innovations have and will continue to provide ever-increasing opportunities for improvements to the transportation system. Loop detectors, ramp meters, changeable message signs, and other monitoring and control devices have already contributed to reducing congestion and improving traffic flow. So have Freeway Service Patrols, by responding to and clearing incidents quicker. Telecommuting, flexible hours, and ridesharing have likewise contributed to reducing demand and congestion during peak periods. Intelligent Transportation Systems, using advanced technologies including geographic information systems and global positioning systems, will provide further improvement. These are key components of traveler information systems, available via the web, kiosks, personal communications, etc., that provide current travel information with which to make informed transportation choices. Motorists will further benefit from in-vehicle navigation systems, signal synchronization, and computerized information on ridesharing and parking. Transit operators will be able to provide better service and information at less cost with the added use of automatic

vehicle location, automatic vehicle identification, smart cards, and traffic signal preemption. Goods movement will benefit from automatic vehicle location, vehicle routing systems, transponders with permit and weight information, and collision avoidance systems. Highway workers will be able to perform their jobs in a safer environment and complete maintenance work quicker by utilizing fast drying concrete, hi-tech bridge inspection, garbage collecting and striping equipment, etc.

In the long term, automated highways and collision avoidance systems are other technologies being developed that will benefit those travelers who make use of them. Intelligent Transportation Systems has the potential of increasing the capacity of transportation facilities. Dialogue between vehicle manufacturers and facility builders can enhance the possibilities with Intelligent Transportation Systems.

Traffic Operations Strategies (TOS) Developed by Caltrans and the CHP to ensure the safety and service of California motorists by implementing the latest in interactive/integrated transportation management and information systems. Caltrans and the CHP uses sophisticated electronic technologies to process and analyze freeway traffic data, to monitor traffic flow in order to rapidly detect and effectively respond to incidents and resulting congestion. Implementation of TOS includes minor operational improvements i.e. geometric upgrades and major capital improvements i.e., geometric upgrades fiber optics/closed circuit cable television monitoring system, changeable message signs and ramp meters) and major capital improvements (i.e., HOV lanes, ramp upgrades, auxiliary lanes, and freeway connector metering. Also included in the plan are additional freeway lanes, direct HOV connectors, and Changeable Message Signs (CMS) and Highway Advisory Radio (HAR).

IMPROVEMENTS

Executive Summary Report #1

Major Milestones of COS Projects with Work Plan (All)

EA	Limits	Description	PM	FY5/6 CDP	PAED	PSE	RWC	RTL	CCA
23560K	LA -060 -11.1 /13.2	CONST A 60-605 HOV DIRECT CONNECT.	ZS	No	7/30/2007	4/8/2011	6/17/2011	7/1/2011	1/2/2015
129411	LA -060 -11.7 /18.0	WIDEN FWY FOR HOV	ZS	Yes	09/29/00A	1/31/2005	1/11/2005	3/22/2005	8/5/2008
129421	LA -060 -18.0 /23.0R	WIDEN FWY FOR HOV	ZS	Yes	09/29/00A	1/31/2005	1/11/2005	3/22/2005	8/5/2008
224100	LA -060 - 21.5R/23.0R	CONSTRUCT INTERCHANGE	ZS	No	12/28/2005	5/5/2008	9/9/2008	10/7/2008	1/5/2012
384111	LA -060 -28.3 /30.3	CONSTRUCT INTERCHANGE	JP	No	01/17/90A	03/26/92A	06/25/92A	06/25/92A	12/30/99A

Executive Summary Report #1

Major Milestones of COS Projects with Work Plan (STIP)

EA	Limits	Description	PM	FY5/6 CDP	PAED	PSE	RWC	RTL	CCA
1257U1	LA -060 - 22.4R/25.0R	HOV DIRECT CONNECT. & COLLECTOR	JP	Yes	09/27/00A	05/02/02A	06/26/02A	06/30/02A	1/24/2007

Source: Caltrans District 7 COSDM Office

LEGEND

EA	Expenditure Authorization	PSE	Plans, Specifications & Estimates
COS	Capital Outlay Support	RWC	Right of Way Completion
PAED	Project Report Approval/Environ. Doc.	RTL	Ready To List
PM	Project Manager	CCA	Construction Contract Acceptance- Job Completion
CDP	Capital Delivery Project Plan		

The table above lists SR-60 capacity enhancement and operational improvement projects.

The following is a brief description of six programming documents which provide a mechanism for project funding within the region.

Regional Transportation Improvement Program (RTIP).

A five year list of proposed transportation projects.

The Regional Transportation Planning Agency (RTPA) submits the RTIP to the California Transportation Commission (CTC) as a request for State funding. If the RTIP projects have federal funding components, they will also appear in the FTIP once selected for the STIP. (See page 50).

Interregional Improvement Program (IIP)--

A five-year program developed by Caltrans, that includes projects developed through the Interregional Road System Plan, Inter-city Rail, Soundwall, Toll Bridge, and Aeronautics programs.

State Transportation Improvement Program (STIP)

A five-year list of transportation projects proposed in RTIP's and PSTIP's that the CTC adopts. Those projects that have federal funding components. Those projects that have federal funding components will also appear in FTIP and FSTIP.

State Highway Operation and Protection Program (SHOPP)

A ten-year Master Plan and a four-year program limited to projects related to State highway safety and rehabilitation.

Federal Transportation Improvement Program (FTIP) A 3 to 5 year list of all transportation projects proposed for federal funding under TEA-21, within the planning area of an MPO. An MPO develops the FTIP and the Director of Caltrans approves it. In air quality non-attainment areas, the plan must conform to a State Implementation Plan.

Federal State Transportation Improvement Program (FSTIP) A three-year list of transportation projects proposed for funding under TEA-21 developed by the State in cooperation with MPO's and in consultation with local non-urbanized governments. The FSTIP includes all FTIP projects as well as other federally funded rural projects.

XI. TRANSPORTATION CONCEPT AND CONCLUSION

TRANSPORTATION CONCEPT: The transportation concept describes the operating conditions and physical facilities required to provide those conditions that could exist on State Route 60 after considering the conclusions, priorities, and strategies discussed in the District Management Plan (DSMP), the SCAG Regional Transportation Plan (RTP), and other planning documents. The route concept represents what could reasonably be accomplished to facilitate the mobility of traffic desiring to use the route. It assumes that management improvement strategies and system operation improvements to maximize the efficiency on State Route 60 will be implemented.

The transportation concept is composed of a Level of Service (LOS) and facility component. The concept LOS indicates the minimum level of service the District would allow on a route prior to proposing an alternative to improve operating conditions. The concept facility is the facility that could be developed to maintain or attain the concept LOS.

RECOMMENDED CONCEPT AND CONCLUSION:

The recommended transportation concept for State Route 60 is Alternative #2, which is based on existing plans, primarily the SCAG RTP, the LACMTA Long Range Plan, the HOV Plan, and the Caltrans District System Management Plan.

Alternative Concept number 2 recommends adding two HOV lanes for segments 1 and 2 in each direction. Adding one mixed flow lane, two HOV lanes and two truck lanes in each direction for segment three. Adding two HOV lanes and two truck lanes in each direction for segment 4. Adding one HOV lane and two truck lanes in each direction for segments 5 through 7.

The better results under alternative #2 can be seen across all categories (speed, D/C ratios, LOS, hours of delay). Thus alternative #2 is the recommended transportation concept for this route.

Although the recommended alternative provides some relief, additional measures need to be examined such as; encouraging and effectively marketing the use of carpools, vanpools, buses, commuter rail, goods movement and further development of Intelligent Transportation Systems (ITS) infrastructure.

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GLOSSARY

AADT: (Average Annual Daily Traffic) Denotes that the daily traffic is averaged over one calendar year.

ADT: (Average Daily Traffic) The average number of vehicles passing a specified point during a 24-hour period.

AQMD: (Air Quality Management District) A regional agency, which adopts and enforces regulations to achieve and maintain state and federal air quality standards.

AQMP: (Air Quality Management Plan) The plan for attaining state air quality as required by the California Clean Air Act of 1988. The plan is adopted by air quality districts and is subject to approval by the California Air Resources Board.

ATIS: (Advanced Traveler Information Systems)

ATMS: (Advanced Traffic Management Systems)

AV: (Antelope Valley Transit)

AVCS: (Automated Vehicle Control Systems)

AVO: (Average Vehicle Occupancy) The average number of persons occupying a passenger vehicle along a roadway segment intersection, or area, as typically monitored during a specified time period. For the purpose of the California Clean Air Act, passenger vehicles include autos, light duty trucks, passenger vans, buses, passenger rail vehicles and motorcycles.

AVR: (Average Vehicle Ridership) The number of employees who report to a worksite divided by the number of vehicles driven by those employees, typically

averaged over an established time period. This calculation includes crediting vehicle trip reductions from telecommuting, compressed workweeks and non-motorized transportation.

Caltrans: (California Department of Transportation) As the owner/operator of the state highway system, state agency responsible for its safe operation and maintenance. Proposes projects for intercity rail, interregional roads, and sound walls. Also responsible for the SHOPP, Toll Bridge, and Aeronautics programs. Caltrans is the implementing agency for most state highway projects, regardless of program, and for the Intercity Rail program.

CBD: (Central Business District) The downtown core area of a city, generally an area of high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and service businesses.

CCTV: (Closed Circuit Television)

CEQA: (California Environmental Quality Act) A statute that requires all jurisdictions in the State of California to evaluate the extent of environmental degradation posed by proposed development or project.

CHP: (California Highway Patrol)

CIP: (Capital Improvement Program) A seven-year program of projects to maintain or improve the traffic level of service and transit performance standards developed and to mitigate regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to transportation-related vehicle emissions air quality mitigation measures.

CMA: (Congestion Management Agency) The agency responsible for developing the Congestion Management Program and coordinating and monitoring its implementation.

CMAQ: (Congestion Mitigation Air Quality program) Part of ISTEA, this is a funding program designed for projects that contribute to the attainment of air quality goals.

CMP: (Congestion Management Program) A legislatively required countywide program, which addresses congestion problems.

CMS: (Changeable Message Sign)

CMS: (Congestion Management System) Required by ISTEA to be implemented by states to improve transportation planning.

COG: (Council of Governments) A voluntary consortium of local government representatives, from contiguous communities, meeting on a regular basis, and formed to cooperate on common planning and solve common development problems of their area. COGs can function as the RTPAs and MPOs in urbanized areas.

Commute Hours: AM and PM peak commute travel times. Generally, between the hours of 5:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m., Monday through Friday.

Concept: A strategy for future improvements that will reduce congestion or maintain the existing level of service on a specific route.

Congestion: Defined by Caltrans as, reduced speeds of less than 35 miles per hour for longer than 15 minutes.

CTC: (California Transportation Commission) A body established by Assembly Bill 402 (AB 402) and appointed by the Governor to advise and assist the Secretary of the Business, Transportation and Housing Agency and the Legislature in formulating and evaluating state policies and plans for transportation.

D/C: (Demand-to-Capacity ratio) The relationship between the number of vehicle trips operating on a facility, versus the number of vehicle trips that can be accommodated on that facility.

DSMP: (District System Management Plan) A part of the system planning process. A district's long-range plan for management of transportation systems in its jurisdiction.

EIR: (Environmental Impact Report) A report prepared pursuant to CEQA that analyzes the level of environmental degradation expected to be caused by a proposed development or project.

Extended Commute: Service hours beyond the normal commute hours. Generally, in the evening, this refers to transit service until 10:00 p.m.

F+I Actual: (Fatal Plus Injury Actual) Contains specific data for accidents that are State highway related. Each accident record contains a ramp, intersection or highway postmile address that ties it to the Highway database.

F+I Average: (Fatal Plus Injury Average) The Statewide Average Accident Rate (SWA) is based on a rated segment. The accident-rating factor (ARF) indicates how the existing segment compares to other segments on the State Highway System. The ARF is a comparison of the segment's accident rate to the statewide average accident rate for roads of the same type and having similar characteristics. Accident severity as well as accident frequency is considered in

calculating the ARF. If the total number of accidents is less than three, there will not be a calculation for the ARF. If there are more than two, but less than twenty-five total accidents, an accident-rating factor will be generated, but there will not be an accident severity flag listed. If there are more than twenty-five accidents, an accident rating factor and severity flag will be generated.

F+I/MVM: (Fatal Plus Injury per Million Vehicle Miles) The fatality rate of those killed in vehicles plus the injury rate of those injured in vehicles.

FAI: (Federal Aid Interstate) Highway program established in 1956 for national defense purposes, these roadways interconnect the major nationwide population and economic centers. Also, there is a federal funding category for these routes.

FHWA: (Federal Highway Administration)

Free-flow Speed: Speed that occurs when density and flow are “zero”.

Freeway Capacity: The maximum sustained 15 minute rate of flow that can be accommodated by a uniform freeway segment under prevailing traffic and roadway conditions in a specified direction.

FSP: (Freeway Service Patrol) A special team of tow truck drivers who continuously patrol freeways during commuter hours to help clear disabled automobiles.

FT: (Foothill Transit)

GM: (Gardena Municipal Bus Lines)

GRT: (Guaranteed Return Trip) A ridesharing strategy which provides a “Guaranteed Return Trip” to those who rideshare, in the case of an emergency or when overtime work hours are required.

HAR: (Highway Advisory Radio)

HCM: (Highway Capacity Manual) Revised in 1994 by the Transportation Research Board of the National Research Council, the HCM presents various methodologies for analyzing the operation (see Level of Service) of transportation systems as freeways, arterial, transit, and pedestrian facilities.

HOT Lanes: (High Occupancy Toll Lane) New HOV lanes that allow single occupant vehicles access for a fee.

HOV: (High Occupancy Vehicle Lane) A lane of freeway reserved for the use of vehicles with more than a preset number of occupants; such vehicles often include buses, taxis and carpools.

HSR: (High Speed Rail) A regional system that will connect major regional activity centers and significant inter-/multi-modal transportation facilities.

I/C: (Interchange) A system of interconnecting roadways in conjunction with one or more grade separations providing for the interchange of traffic between two or more roadways on different levels.

ICES: (Intermodal Corridors of Economic Significance) Significant National Highway System Corridors that link intermodal facilities most directly, conveniently and efficiently to intrastate, interstate and international markets.

IRRS: (Interregional Road System) A series of interregional state highway routes, outside the urbanized areas, that provide access to, and links between,

the state's economic centers, major recreational areas, and urban and rural regions.

ISTEA: (Intermodal Surface Transportation Efficiency Act) Federal legislation and funding Program adopted in 1991. It provides increased funding and program flexibility for multi-modal transportation programs. Update: ISTEA expired on September 30, 1997. In December 1997, Congress passed and the President signed a six-month extension of the law, holding funding to current levels and keeping program structure and formulas intact. This extension expired on March 31, 1998, with an obligation deadline of May 1, 1998. On June 9, 1998, the President signed into law PL 105-178, the Transportation Equity Act for the 21st Century (TEA-21) authorizing highway, highway safety, transit and other surface transportation programs for the next 6 years. TEA-21 builds on the initiatives established in the 1991 ISTEA.

ITIP: (Interregional Transportation Improvement Program) An improvement program that makes up 25% of the STIP. 60% of this program is for improvements on Interregional Routes in non-urbanized areas and intercity rail. 40% is to fund projects of interregional significance (for the interregional movement of people and goods).

ITMS: (Intermodal Transportation Management System) A quick-response statewide sketch planning tool to assist planners in evaluating proposals in order to improve spending decisions. It provides the capability to analyze the current transportation network and to evaluate the impacts of investment options at the corridor area or statewide level.

ITS: (Intelligent Transportation Systems) The application of electronics and computer information systems to transportation.

ITSP: (Interregional Transportation Strategic Plan) Caltrans guiding framework for implementing the Interregional Improvement Program under Senate Bill 45.

IVHS: (Intelligent Vehicle Highway Systems) The development of application of electronics, communications or information processing (including advanced traffic management systems, public transportation systems, satellite vehicle tracking systems, and advanced vehicle communications systems) used alone or in combination to improve the efficiency and safety of surface transportation systems.

LACMTA: (Los Angeles County Metropolitan Transportation Authority)

LADOT: (Los Angeles Department of Transportation)

LARTS: (Los Angeles Regional Transportation Study) An organization of transportation planners and data analysts who have developed and are charged with monitoring and forecasting travel in the Los Angeles area. It has primary responsibility for predicting future travel behavior within six counties (Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial) which comprises the Southern California Association of Governments (SCAG) region. It operates under the aegis of CALTRANS, District 7, and functions with the support of SCAG, U.S. Department of Transportation, and transit districts, cities and counties of the SCAG region.

LIR: (Local Implementation Report) A report that jurisdictions must submit to LACMTA to remain in conformance with Los Angeles County Congestion Management Program (CMP) requirements. This report is submitted on an annual basis, and contains a resolution of conformance, new development activity reporting, selected mitigation strategies and credit claims and future transportation improvements.

LOS: (Level of Service) A qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

LROP: (Long-Range Operations Plan)

LX: (Los Angeles Department of Transportation Commuter Express)

MF: (Mixed Flow) Traffic movement having automobiles, trucks, buses, and motorcycles sharing traffic lanes.

Model: (1) A mathematical or conceptual presentation of relationships and actions within a system. It is used for analysis of the system or its evaluation under various conditions. (2) A mathematical description of a real-life situation, that uses data on past and present conditions to make a projection about the future.

Model, Land Use: A model used to predict the future spatial allocation of urban activities (land use), given total regional growth, the future transportation system, and other factors.

Model, Mode Choice: A model used to forecast the proportion of total person trips on each of the available transportation modes.

Model, Traffic: A mathematical equation or graphic technique used to simulate traffic movements, particularly those in urban areas or on a freeway.

MPAH: (Master Plan of Arterial Highways)

MPO: (Metropolitan Planning Organization) According to U.S. Code, the organization designated by the governor and local elected officials as responsible, together with the state, for the transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government.

MTA: (Metropolitan Transportation Authority) Metro Bus Lines

Multi-modal: Pertaining to more than one mode of travel.

NHS: (National Highway System) Will consist of 155,000 miles (plus or minus 15 percent) of the major roads in the U.S. Included will be all Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

Night Owl: Evening transit service hours that extend beyond the normal commute service hours, but is less than 24 hour per day.

NOP: (Notice of Preparation) A notice informing potentially affected agencies that an Environmental Impact Report (EIR) is being prepared for a proposed development or project.

Null: A concept that includes only existing projects and those projects which may or may not be constructed but are programmed in the 1996 STIP.

OHC: Other Highway Construction.

Peak: (Peak Period, Rush Hours): (1) The period during which the maximum amount of travel occurs. It may be specified as the morning (a.m.) or afternoon or evening (p.m.) peak. (2) The period during which the demand for

transportation service is the heaviest. (AM Peak period represents 6:30 a.m. to 8:30 a.m. and PM Peak period represents 3:00 p.m. to 6:00 p.m.)

Performance Indicator: Quantitative measures of how effective an activity, task, or function is being performed. In transportation systems, it is usually computed by relating a measure of service output or use to a measure of service input or cost.

PM: (Post Mile) Is the mileage measured from a county line or the beginning of a route to another county line or the ending of the route. Each post mile along a route in a county is a unique location on the State Highway System.

PMT: (Passenger Miles Traveled) The number of miles traveled by all passengers on a transportation mode such as transit.

PPN: (Planning and Program Number) Used in the State Transportation Improvement Program (STIP) to identify projects.

PSR: (Project Study Report) The pre-programming document required before a project may be included in the STIP.

Public Transportation: Transportation service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point or another. Routes and schedules may be determined through a cooperative arrangement. Subcategories include public transit service, and paratransit services that are available to the general public.

RAS: (Rehabilitation and Safety)

Ridesharing: Two or more persons traveling by any mode, including but not limited to, automobile, vanpool, bus, taxi, jitney, and public transit.

RME: (Regional Mobility Element) SCAGs major policy and planning statement on the region's transportation issues and goals. It is comprised of a set of long-range policies, plans, and programs that outline a vision of a regional transportation system compatible with federal and state mobility objectives. Formerly called the Regional Mobility Plan (RMP).

RMP: (Regional Mobility Plan) The equivalent to the federal and state required Regional Transportation Plan (RTP) for the SCAG region.

Roadway Characteristics: The geometric characteristics of the freeway segment under study, including the number and width of lanes, lateral clearances at the roadside and median, free-flow speeds, grades and lane configurations.

RSA: (Regional Statistical Area) An aggregation of census tracts for the purpose of sub-regional demographic and transportation analysis within the Southern California Association of Governments (SCAG) area.

RTIP: (Regional Transportation Improvement Program) A list of proposed transportation projects submitted to the CTC by the regional transportation planning agency, as a request for state funding through the FCR and Urban and Commuter Rail Programs. The individual projects are first proposed by local jurisdictions (CMAs in urbanized counties), then evaluated and prioritized by the RTPA for submission to the CTC. The RTIP has a seven-year planning horizon, and is updated every two years.

RTP: (Regional Transportation Plan) A comprehensive 20-year plan for the region, updated every two years by the regional transportation-planning agency.

The RTP includes goals, objectives, and policies, and recommends specific transportation improvements.

RTPA: (Regional Transportation Planning Agency) The agency responsible for the preparation of RTPs and RTIPs and designated by the State Business Transportation and Housing Agency to allocate transit funds. RTPAs can be local transportation commissions, COGs, MPOs or statutorily created agencies. In the Los Angeles area, SCAG is the RTPA.

SC: (Santa Clarita Transit)

SCAB: (South Coast Air Basin) A geographic area defined by the San Jacinto Mountains to the east, the San Bernardino Mountains to the north, and the Pacific Ocean to the west and south. The entire SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

SCAG: (Southern California Association of Governments) The Metropolitan Planning Organization (MPO) for Ventura, Los Angeles, Orange, San Bernardino, Riverside and Imperial counties that is responsible for preparing the RTIP and the RTP. SCAG also prepared land use and transportation control measures in the 1994 Air Quality Management Plan (AQMP).

SCAQMD: (South Coast Air Quality Management District) The agency responsible for preparing the Air Quality Management Plan (AQMP) for the South Coast Air Basin.

SCRRA: (Southern California Regional Rail Authority) Operates Metrolink.

SHELL: (Subsystem of Highways for the movement of Extra Legal Loads)

SHOPP: (State Highway Operation and Protection Program) A four-year program limited to projects related to State highway safety and rehabilitation.

SJHTC: (San Joaquin Hills Transportation Corridor)

SM: (Santa Monica Transit)

Smart Shuttle: A multiple occupant passenger vehicle equipped with advanced technology for more effective vehicle and fleet planning, scheduling and operation, as well as offering passengers more information and fare payment options.

SR: (State Route)

SRTP: (Short-Range Transit Program) A five-year comprehensive plan required by the Federal Transit Administration for all transit operators receiving federal funds. The plans establish the operator's goals, policies, and objectives, analyze current and past performance, and describe short-term operational and capital improvement plans.

STAA: (Surface Transportation Assistance Act)

STIP: (State Transportation Improvement Program) A list of transportation projects, proposed in RTIPs and the PSTIP, which are approved for funding by the CTC.

STP: (Surface Transportation Program) Part of ISTEA, this is a funding program intended for use by the states and cities for congestion relief in urban areas.

STRAHNET: (Strategic Highway Corridor Network)

TASAS: (Traffic Accident Surveillance and Analysis System) A system that provides a detailed list and/or summary of accidents that have occurred on highways, ramps or intersections in the State Highway System. Accidents can be selected by location, highway characteristics, accident data codes or any combination of these.

TCM: (Transportation Control Measure) A measure intended to reduce pollutant emissions from motor vehicles. Examples of TCMs include programs to encourage ridesharing or public transit usage, city or county trip reduction ordinances, and the use of cleaner burning fuels in motor vehicles.

TCR: (Transportation Concept Report) Formerly Route Concept Report (RCR) this report analyzes a transportation corridor service area, establishes a twenty-year transportation planning concept and identifies modal transportation options and applications needed to achieve the twenty-year concepts.

TDM: (Transportation Demand Management) Demand based techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of peak hours.

TEA-21: (Transportation Equity Act for the 21st Century) Signed by President Clinton on June 9, 1998. TEA-21 builds on the initiatives established in the ISTEA Act of 1991. This new Act combines the continuation and improvement of current programs with new initiatives to meet the challenges of improving safety as traffic continues to increase at record levels, protecting and enhancing communities and the natural environment as we provide transportation, and advancing America's economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

TIA: (Transportation Impact Analysis) An analysis procedure to assist local jurisdictions in assessing the impact of land use decisions on the Congestion Management Program (CMP) system for Los Angeles County.

TL: (Truck Lane)

TMC: (Transportation Management Center) A focal point that can monitor traffic and road conditions, as well as train and transit schedules, and airport and shipping advisories. From here, information about accidents, road closures and emergency notifications is relayed to travelers.

TOS: (Traffic Operation System) Computer based signal operation.

TOT/MVM: (Total Accidents Per Million Vehicle Miles)

TPMP: (Transit Performance Measurement Program) A state mandated program to evaluate transit operator system performance on the basis of operating statistics. The program monitors transit system performance of Los Angeles County operators that receive state and federal funds and analyzes the institutional relationships among operators to ensure coordination.

Traffic Conditions: Any characteristics of the traffic stream that may affect capacity or operations, including the percentage composition of the traffic stream by vehicle type and driver characteristics (such as the differences between weekday commuters and recreational drivers).

Transportation Management Association (TMA)/Organization (TMO): A private/non-profit association that has a financial dues structure joined together in a legal agreement for the purpose of achieving mobility and air quality goals and objectives within a designated area. There are fourteen operating TMA/TMO's in Los Angeles County.

TRO: (Trip Reduction Ordinances)

TSM: (Transportation System Management) That part of the urban transportation Process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short-term, low capital transportation improvements that generally cost less and can be implemented more quickly than system development actions.

TT: (Torrance Transit)

TW: (Transitway)

UTPS: (Urban Transportation Planning System) A tool for multi-modal transportation planning developed by the Urban Mass Transportation Administration (now the Federal Transit Administration) and the Federal Highway Administration. It is used for both long and short-range Planning, particularly system analysis and covers both computerized and manual planning methods. UTPS consists of computer programs, attendant documentation, user guides and manuals that cover one or more of five analytical categories: highway network analysis, transit network analysis, demand estimation, data capture and manipulation, and sketch planning.

VCTC: (Ventura County Transportation Commission)

Vehicle Occupancy: The number of people aboard a vehicle at a given time; also known as auto or automobile occupancy when the reference is to automobile travel only.

Vehicle Trip: A one-way movement of a vehicle between two points.

V/C: (Volume/Capacity).

VMT: (Vehicle Miles Traveled) (1) On highways, a measurement of the total miles traveled in all vehicles in the area for a specified time period. It is calculated by the number of vehicles multiplied by the miles traveled in a given area or on a given highway during the time period. (2) In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

VSM: (Vehicle Service Miles) The total miles traveled by transit service vehicles while in revenue service.