Transportation Report

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

February 2003

STATE OF CALIFORNIA Business, Transportation and Housing Agency

MEMORANDUM

Date: February 24, 2003

To: **ROSE CASEY**
Chief, Division of Planning, Public Transportation, and Local Assistance

DOUGLAS FAILING
District Director

From: **DEPARTMENT OF TRANSPORTATION – District 7**
System Planning Unit
Office of Advance Planning

Subject: **Approval of Interstate 10 Transportation Concept Report**

Submitted for your review and approval is the Transportation Concept Report for Interstate 10.

This approved Transportation Concept Report will serve as the Department's basic guide to the development of this route.

Approved by:

Original Signed by

_____
ROSE CASEY
Division of Planning, Public Transportation, and Local Assistance

Original Signed by

_____
DOUGLAS FAILING
District Director

TRANSPORTATION CONCEPT REPORT
INTERSTATE 10

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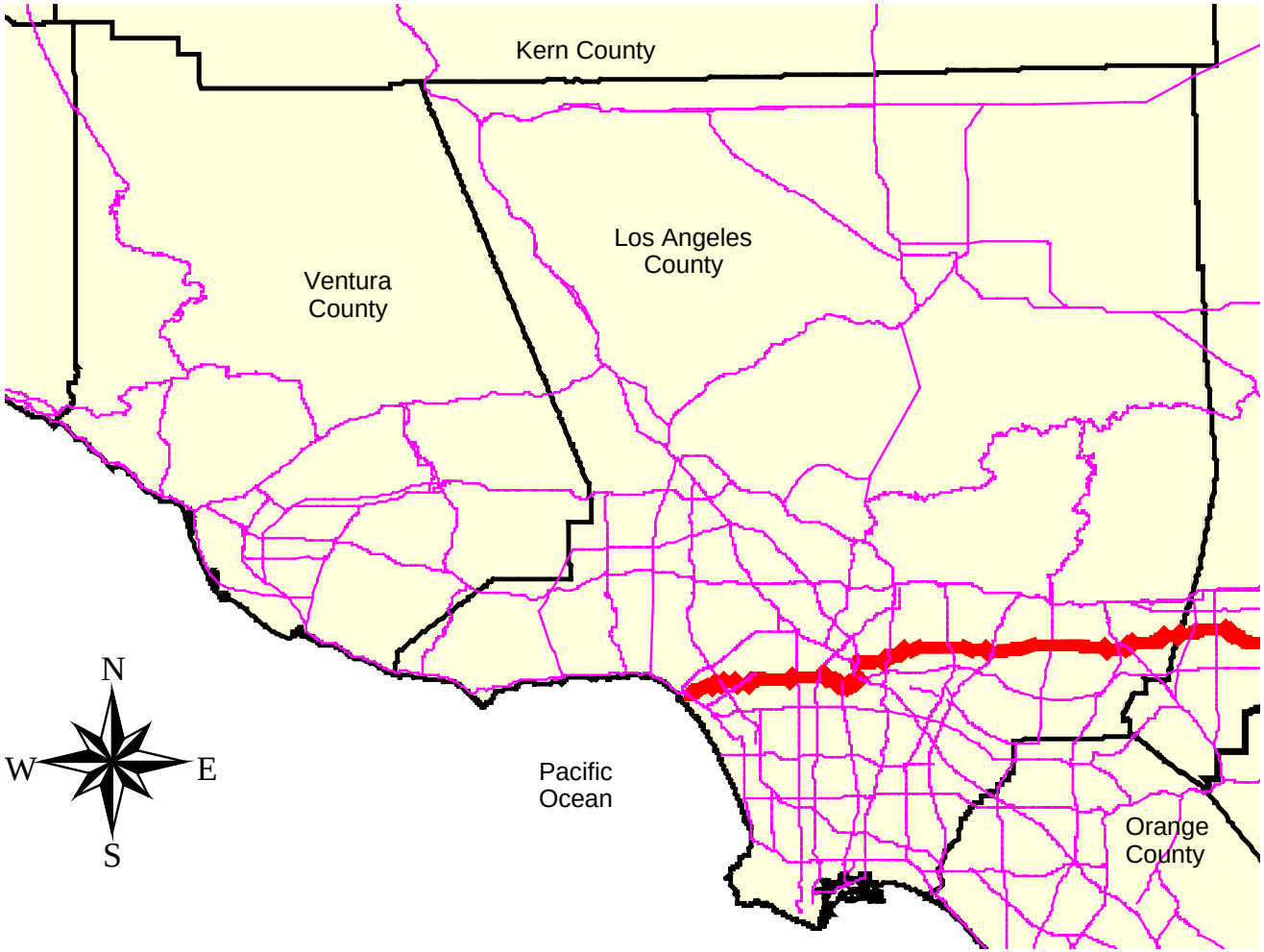
Interstate 10
Transportation Concept Report



STATEMENT OF PLANNING INTENT

This Transportation Concept Report (TCR) is a planning document, which describes the Department's approach to the future development of State Highways. Taking into consideration reasonable financial constraints, proposed land use, and projected travel demand over 20 years planning period, the TCR defines an appropriate type of facility and level of service for each route.

The Transportation Concept Report contains the Department's goals for the development of each route in terms of Level of Service (LOS). It provides a basis for the development of the State Transportation Improvement Program (STIP) and for determination of the appropriate concept for future highway projects.

The TCR is a preliminary planning phase that leads to programming and the project development process. The specific nature of proposed improvements and design and operational detail will be included and analyzed in subsequent project development documents such as Project Study Reports, Environmental Documents, Project Reports and Preliminary and Final Design.

Information contained in the TCR is subject to change as conditions and priorities change and as new information is obtained. The nature and size of identified improvements may change as they move through the project development stages, with final determinations made at the time of project planning and design. Changes that occur during project development may require revision of TCR.

Preparation of this report included review of planned and programmed projects, review of previous TCR's prepared for this route, projects under construction, and analysis of Level of Service. Internal documents from the California Department of Transportation, Office of Traffic Operations, Office of Maintenance, Office of Project Development and Office of Program Management, and external documents from the Los Angeles County Metropolitan Transportation Authority (LACMTA), Ventura County Transportation Commission (VCTC), and Southern California Association of Governments (SCAG) were referenced for this TCR.

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.

DOCUMENT SUMMARY

While this Transportation Concept Report is divided into twelve major sections, three of the sections--**III, VI and XI**--are the heart of the document. They include detailed Segment Summaries (Section III), lists of suggested Improvements (Section VI) and the Transportation Concept and Conclusions (Section XI). All of the other sections provide a context for analyzing the Interstate 10 (I-10) corridor and document the data resources studied.

The basic aim of this document is to suggest a configuration for I-10 that will meet projected demands within a framework of common sense and regional policy. The concept selected--Alternative #1 for Segment #1 and Alternative #2 for Segments #2 to #9--generally conforms to regional plans and provides substantial congestion relief over the 20-year planning period.

Alternative #1 includes an additional mixed flow lane and an HOV lane from SR-1/SR-2 to I-405. Alternative #2 includes an additional mixed flow lane and 2 HOV lanes from I-405 to the East Los Angeles I/C; an additional HOV lane along the El Monte Busway; 2 HOV lanes from the El Monte Busway to the San Bernardino County line; and a truck lane from I-210/SR-57/SR-71 to the San Bernardino County line.

Interstate 10 - Summary of Concept Improvements

Segment	Limits	Existing Facility	Alternative Concept #1	Alternative Concept #2	Maintain Current D/C	LOS "D" Attainment
1	SR-1/SR-2 to I-405	3MF	4MF + 1HOV	4MF + 2HOV	4MF + 1HOV	6MF + 1HOV
2	I-405 to I-110	4MF	5MF + 1HOV	6MF + 1HOV	6MF + 1HOV	9MF + 1HOV
3	I-110 to ELA I/C	4MF	5MF + 1HOV	6MF + 1HOV	9MF + 1HOV	9MF + 1HOV
4	US-101 to I-5	3MF + 1HOV	3MF + 1HOV	3MF + 2HOV	8MF + 3HOV	6MF + 1HOV
5	I-5 to I-710	6MF + 1HOV	6MF + 1HOV	6MF + 2HOV	10MF + 3HOV	9MF + 1HOV
6	I-710 to SR-19	4MF + 1HOV	4MF + 1HOV	4MF + 2HOV	6MF + 3HOV	7MF + 1HOV
7	SR-19 to I-605	4MF	4MF + 1HOV	4MF + 2HOV	8MF + 1HOV	7MF + 1HOV
8	I-605 to I-210/SR-57/SR-71	4MF	4MF + 1HOV	4MF + 2HOV	6MF + 1HOV	8MF + 2HOV
9	I-210/SR-57/SR-71to Co Line	4MF	4MF + 1HOV + 1TL	4MF + 2HOV + 1TL	6MF + 1HOV + 1TL	8MF + 1HOV + 1TL

III. DOCUMENT PURPOSE

This Transportation Concept Report (TCR)[1] is an ***internal Caltrans planning tool*** intended to provide an initial look at developments within the I-10 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. Please note that any identified improvements should not be construed as being 100% publicly funded.

As an initial step in the planning process, its observations and conclusions serve as the starting point for more complex and specific reports such as Feasibility Studies, Major Investment Studies, and Project Studies.

In preparing this report, District 7 System Planning Staff has researched Federal, State, Regional and Departmental plans and documents. Staff has attempted to provide thorough documentation of all sources of important information and policies. This documentation is provided in footnotes and in the Appendix, Section XII.

The heart of this TCR is a series of proposed alternatives for development of I-10. The alternatives are included in the Segment Summaries, Section III. The alternatives cover a wide range: Alternative #1 is based on existing plans--primarily the SCAG RTP, the LACMTA Long Range and HOV Plans, and the Caltrans District System Management Plan--and is the most conservative development plan. Alternative #2 typically adds a second HOV lane to Alternative #1 to evaluate its

1. This TCR is an update of the “Route 10 Concept Report”, March, 1991.

effectiveness. 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 rating (see Appendix, XII-23).[2] 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 problems.

2. 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**.

IV. REGIONAL THRESHOLD CRITERIA AND POLICIES

I. CALTRANS: California Transportation Plan:

1) Provide safety and security
2) Maintain system/investment
3) Manage network as a seamless intermodal system
4) Develop airport ground access

II. CALTRANS: District System Management Plan:

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.[1]
2) HOV Criteria for implementing HOV lanes:[2]
   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-10 TOS/TOPS System
4) Goods Movement – I-5 Corridor:[3]
   a. Primary Goods Movement Corridor: I-710 to Kern County Line.
   b. Secondary Goods Movement Corridor: Orange County Line to I-710
5) Truck Lanes: Trucks-Only: Under investigation on I-710, Ports to Commerce and in the I-5 and SR-60 corridors[4]

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[1] District System Management Plan, California Department of Transportation, District 7, August 5, 1996, page 4

[2] Op. cit., page 16

[3] Op. cit., page 36

[4] Op. cit., page 37

SCAG: Regional Transportation Plan:

1) Truck Lanes on I-5, SR-60 to 126 (1 lane in each direction, if free access; 2 lanes in each direction if tolled)[5]
2) HOV Connectors on I-5 at: SR-170, SR-14 (to possible toll lanes) and SR-134[6]
3) Add mixed flow lanes to increase capacity (with restrictions), close gaps and for connectivity[7]
4) California High Speed Rail System: On I-5 from Union Station to SR-14 and on SR-14 to Lancaster/Palmdale[8]
5) Maglev System: LAX to March Inland Port, Palmdale to Union Station and San Diego.
6) Operations and maintenance: Pay now or pay later[9]
7) 76% Freight increase through the ports and 200% freight increase at the airports.

III. LA Metropolitan Transportation Authority: MTA HOV Plan

Primary Corridor Criteria:[10]

1) Travel time Savings: Only build where building a lane would provide a travel time savings of 0.3 minutes per mile on the proposed facility compared to adjacent general purpose lanes.

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5 Community Link 21, 2001 Regional Transportation Plan, Southern California Association of Governments, April 2001, page 89

6 Op. cit., page 72

7 Op. cit., pages 72-74

8 Op. cit., page 86-89

9 Op. cit., page 78

10 A recommended HOV System for Los Angeles County, (Report was for informational purposes and never adopted by the MTA Board) LACMTA, October 23,1996, page 13.

2) Lane Volume:	a.	600 vph minimum
	b.	1500 vehicles (at 2+) *to take an existing freeway lane*
3) Person Movement:	a.	Minimum person movement of 2000 persons per hour is needed to satisfy criteria for *add-a-lane projects*
	b.	Minimum of 3000 people in 2+ HOV are necessary to consider projects what would take a lane from existing facilities
4) Transit System Integration:	Goal of: operation time reductions between HOV and adjacent general purpose lane.	

Secondary Corridor Criteria[11]

1) 20 mph for bus round trips: **Minimum LOS E**
2) Implementation of an HOV facility should not adversely impact general purpose lane operations or capacity. Criteria is met as long as mainline general purpose capacity is not reduced.
3) HOV enforcement is necessary requiring dedicated enforcement areas or wide enough shoulders to monitor and apprehend violators; this criteria will not be satisfied with reduced standard shoulders and no facilities for enforcement areas.
4) Transit Station/Park and Ride Lot integration with HOV facility: primary objective is to maximize the number of HOV's that can use a facility. This criteria will be satisfied with direct access or bypass HOV lane on general purpose ramps entering the freeway.

System Criteria/Goals[12]

[11] Op. cit., page 13
[12] Op. cit., page 18

1) Primary means of linking HOV facility is by gap closure and freeway to freeway HOV connectors
2) Inter-county connectivity at county lines
3) System-wide time savings
4) Regional mobility
5) VMT--should reduce VMT for the entire freeway system
6) Mode shift impact
7) Transit system integration

HOV I/C Criteria/Goal[13]

1) Travel time savings
2) Threshold ramp volume
3) Threshold person movement
4) Recommend: HOV Connectors at I-605 and SR-57 South

I-10 HOV Lane Projects: Projects Recommended for Development 2001 to 2005[14]

1) Baldwin Ave. to I-605
2) I-605 to Jct. I-210/SR-57/SR-71
3) Jct. I-210/SR-57/SR-71 to San Bernardino Co. Line

I-10 HOV Lane Projects: Projects Recommended for Development 2011 to 2015[14]

1) HOV connector at 10/605 I/C from east to south
2) HOV connector at 10/605 I/C from west to south

Potential Additional I-10 Projects:

1) Additional HOV lane west of I-605

[13] Op. cit., page 20
[14] Op. cit., page 69
[14] Op. cit., page 70

2) HOV connectors at I-605

Implementation Approach:

1) Rehabilitate Roadway
2) Upgrade median barrier
3) Modify interchange and ramps
4) R/W for construction
5) Re-stripe and widen

V. 1997 Final Proposed Congestion Management Plan

LOS "E" unless base year is lower

VI. TEA 21--Generally:

1) Maintain TDM
2) Provide for intelligent transportation systems (ITS)
3) Expands funding to include intermodal terminals at seaports

INTERSTATE 10
POLICY/PROCEDURES

Caltrans Status of HOV Projects			STATE TRANSPORTATION IMPROVEMENT PLAN (STIP)				
	HOV			*HOV*	*HOV I/C*		
Segment 1			Segment 1		NA		
Segment 2	Pending HOV		Segment 2		NA		
Segment 3			Segment 3		NA		
Segment 4			Segment 4		NA		
Segment 5	Exist HOV		Segment 5	Exist HOV	NA		
Segment 6	Exist HOV		Segment 6	Exist HOV	NA		
Segment 7	Pending HOV		Segment 7	Pending HOV	NA		
Segment 8	Pending HOV		Segment 8	Pending HOV	NA		
Segment 9	Pending HOV		Segment 9	Pending HOV	NA		

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

District System Management Plan (DSMP)							
	HOV	*HOV I/C*	*GOODS MOVEMENT*	*EXISTING Comuter Rail*	*Urban Rail*		
Segment 1	Pending HOV		Truck Lane*		Light rail or bus		
Segment 2	Pending HOV		Truck Lane*		Light rail or bus		
Segment 3			Truck Lane*				
Segment 4			Truck Lane*	Metrolink			
Segment 5	Exist HOV		Truck Lane*	Metrolink			
Segment 6	Exist HOV		Truck Lane*	Metrolink			
Segment 7	Pending HOV	I/C @ I-605	Truck Lane*	Metrolink			
Segment 8	Pending HOV		Truck Lane*	Metrolink			
Segment 9	Pending HOV		Truck Lane	Metrolink			

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

SCAG Regional Transportation Plan (RTP)						MTA Long Range Trans	
	HOV	*EXISTING Commuter Rail*	*HIGH SPEED RAIL State Alignment*	*SOUTHWEST PASSAGE MULTI-MODAL*	*MULTI-MODAL*	*HOV*	*HOV I/C*
Segment 1	NA						
Segment 2	NA					HOV	
Segment 3	NA						
Segment 4	NA			GOODS & FREIGHT			
Segment 5	NA	Metrolink	High Speed Rail	GOODS & FREIGHT			
Segment 6	NA	Metrolink	High Speed Rail	GOODS & FREIGHT	MULTI-MODAL	HOV	
Segment 7	NA	Metrolink	High Speed Rail	GOODS & FREIGHT	MULTI-MODAL	HOV	I/C @ I-60
Segment 8	NA	Metrolink	High Speed Rail	GOODS & FREIGHT	MULTI-MODAL	HOV	
Segment 9	NA	Metrolink	High Speed Rail	GOODS & FREIGHT	MULTI-MODAL	HOV	

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

MTA HOV PLAN								
	SCENARIO A				SCENARIO B1			
	HOV	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*	*HOV*	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*
Segment 1								
Segment 2	HOV**			Red Line	HOV**			Red Line
Segment 3				Red Line				Red Line
Segment 4				Red Line				Red Line
Segment 5	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 6	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 7	HOV	I/C @ I-605	Metrolink		HOV	I/C @ I-605***	Metrolink	
Segment 8	HOV		Metrolink		HOV		Metrolink	
Segment 9	HOV		Metrolink		HOV		Metrolink	

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

MTA HOV PLAN								
	SCENARIO B2				SCENARIO B3			
	HOV	*HOV I/C*	*EXISTING Commuter rail*	*EXISTING Urban Rail*	*HOV*	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*
Segment 1								
Segment 2	HOV**			Red Line	ADD HOV			Red Line
Segment 3				Red Line				Red Line
Segment 4	Add HOV			Red Line				Red Line
Segment 5	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 6	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 7	HOV	I/C @ I-605***	Metrolink		HOV	I/C @ I-605***	Metrolink	
Segment 8	HOV		Metrolink		HOV		Metrolink	
Segment 9	HOV		Metrolink		HOV		Metrolink	

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

MTA HOV PLAN								
	SCENARIO C1				SCENARIO C2			
	HOV	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*	*HOV*	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*
Segment 1								
Segment 2	HOV***			Red Line	HOV**	ADD I/C @ I-405		Red Line
Segment 3				Red Line				Red Line
Segment 4				Red Line				Red Line
Segment 5	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 6	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 7	HOV	I/C @ I-605	Metrolink		HOV	I/C @ I-605	Metrolink	
Segment 8	HOV		Metrolink		HOV		Metrolink	
Segment 9	HOV		Metrolink		HOV		Metrolink	

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

MTA HOV PLAN					
	SCENARIO D1				
	HOV	*HOV I/C*	*INTERMODAL INTERFACES*	*EXISTING Comuter Rail*	*EXISTING Urban Rail*
Segment 1					
Segment 2	HOV***		HOV/RAIL/AIRPORT INTERFACE		Red Line
Segment 3					Red Line
Segment 4					Red Line
Segment 5	Exist HOV		HOV/RAIL/AIRPORT INTERFACE	Metrolink	
Segment 6	Exist HOV			Metrolink	
Segment 7	HOV	I/C @ I-605		Metrolink	
Segment 8	HOV			Metrolink	
Segment 9	HOV			Metrolink	

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

MTA HOV PLAN								
	OPTION 1				OPTION 2			
	HOV	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*	*HOV*	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*
Segment 1								
Segment 2				Red Line	HOV**			Red Line
Segment 3				Red Line				Red Line
Segment 4				Red Line				Red Line
Segment 5	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 6	Exist HOV		Metrolink		Exist HOV		Metrolink	
Segment 7	HOV	I/C @ I-605	Metrolink		HOV	I/C @ I-605	Metrolink	
Segment 8	HOV		Metrolink		HOV		Metrolink	
Segment 9	HOV		Metrolink		HOV		Metrolink	

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

INTERSTATE 10
POLICY/PROCEDURES

MTA CMP for Los Angeles County				
	HOV	*HOV I/C*	*EXISTING Commuter Rail*	*EXISTING Urban Rail*
Segment 1	NA	NA		NA
Segment 2	NA	NA		NA
Segment 3	NA	NA		NA
Segment 4	NA	NA		NA
Segment 5	NA	NA	Metrolink	NA
Segment 6	NA	NA	Metrolink	NA
Segment 7	NA	NA	Metrolink	NA
Segment 8	NA	NA	Metrolink	NA
Segment 9	NA	NA	Metrolink	NA

NA=Not Applicable
* Secondary Corridor
** Lane conversion
*** Potentially removed from Adopted Long Range Plan

V. ROUTE DESCRIPTION

Pursuant to statues relating to the California Department of Transportation, Route 10 runs from Route 1 in Santa Monica to Route 5 near Seventh Street in Los Angeles and from Route 101 near Mission Road in Los Angeles to the Arizona State Line at the Colorado River via the vicinity of Monterey Park, Pomona, Colton, Indio, Chiriaco Summit, and Blythe.

The route spans a total distance of 241 miles. There are 47 miles within District 7's boundary, beginning at Routes 1 and 2 (Lincoln Blvd. Interchange) to the San Bernardino County Line. The remaining 194 miles of the route are within the boundaries of District 8.

For the purpose of analysis in this report, Route 10 is divided into two freeway names. It is known as the Santa Monica Freeway from Lincoln Blvd. in the City of Santa Monica to the East Los Angeles Interchange and the San Bernardino Freeway from the East Los Angeles Interchange to the San Bernardino County Line in the City of Claremont.

Route 10 traverses 13 incorporated cities in District 7: Santa Monica, Los Angeles, Monterey Park, Alhambra, San Gabriel, Rosemead, El Monte, Baldwin Park, West Covina, Covina, San Dimas, Pomona, and Claremont.

PURPOSE OF ROUTE

Route 10 is a major east-west route that is used for interstate, interregional and commute travel. The purpose of Route 10 is shown in the following table:

Santa Monica Freeway

Seq.	P.M.	Description	Rte. Purpose	Facility Type
1-3	R2.16 – 18.39	Rtes. 1 & 2 to Rtes. 5, 60 and 101	Interstate/Interregional/ Commute travel	Freeway

San Bernardino Freeway

Seq.	P.M.	Description	Rte. Purpose	Facility Type
4-9	S0.00 – 48.27	Rte 101 to San Bernardino County Line	Interstate/Interregional/ Commute travel	Freeway

FUNCTIONAL CLASSIFICATION

Route 10 is part of the Federal Aid Interstate (FAI) system, which is a subset of the National Highway System. For the purpose of this analysis, the route has been divided into 9 segments based on traffic volume, connections to local streets or State Highways, freeway interchanges, and the county boundary. The criteria for segmentation and functional class for each segment is shown in the following table:

Santa Monica Freeway

Seg.	P.M.	Criteria	Functional Class
1	R2.16 – R5.45	Jct. Rtes 1 and 2 to West Los Angeles	P1P – Urban Principal Arterial
2	R5.45 – 14.84	Rte 405 to Rte 110	P3 – Entirely within an urban area
3	14.84 – 18.39	Rte 110 to Rtes 5, 60 and 101	P1P – Urban Principal Arterial

San Bernardino Freeway

Seg.	P.M.	Criteria	Functional Class
4-9	S0.00 – 48.27	Rte 101 to San Bernardino County Line	P1P – Urban Principal Arterial

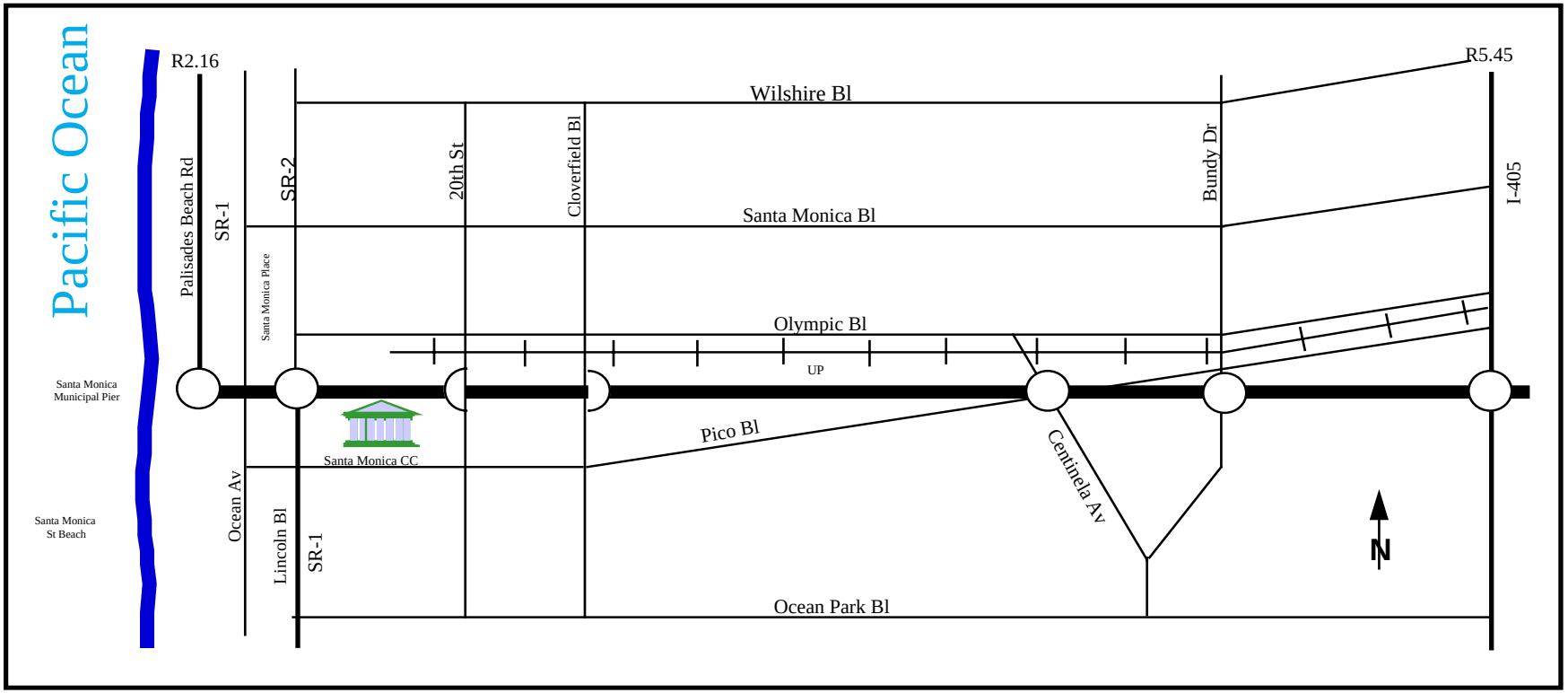
VI. CONGESTION

This section is divided into five (5) sub-sections:

Segment Congestion Maps Pages 22 to 41	These illustrate segment operating conditions during peak hours on incident-free days. On the maps, speed is indicated by color and length of delay is indicated by width.
Duration and Speed Chart Page 42	This chart illustrates segment speeds and duration of speed conditions during peak hours.
Demand/Capacity Ratios Page 42	This chart illustrates the "demand to capacity ratio" for each segment during peak hours.
Level of Service (LOS) Page 42	This chart illustrates the level of service operating characteristics for each segment
Hours of Delay Page 42	This chart will measure commuters' hours of delay.[1]

[1] Footnote 1995 Congestion AM + PM

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 1*
Begin Freeway to I-405



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

15 min. to 1 hour

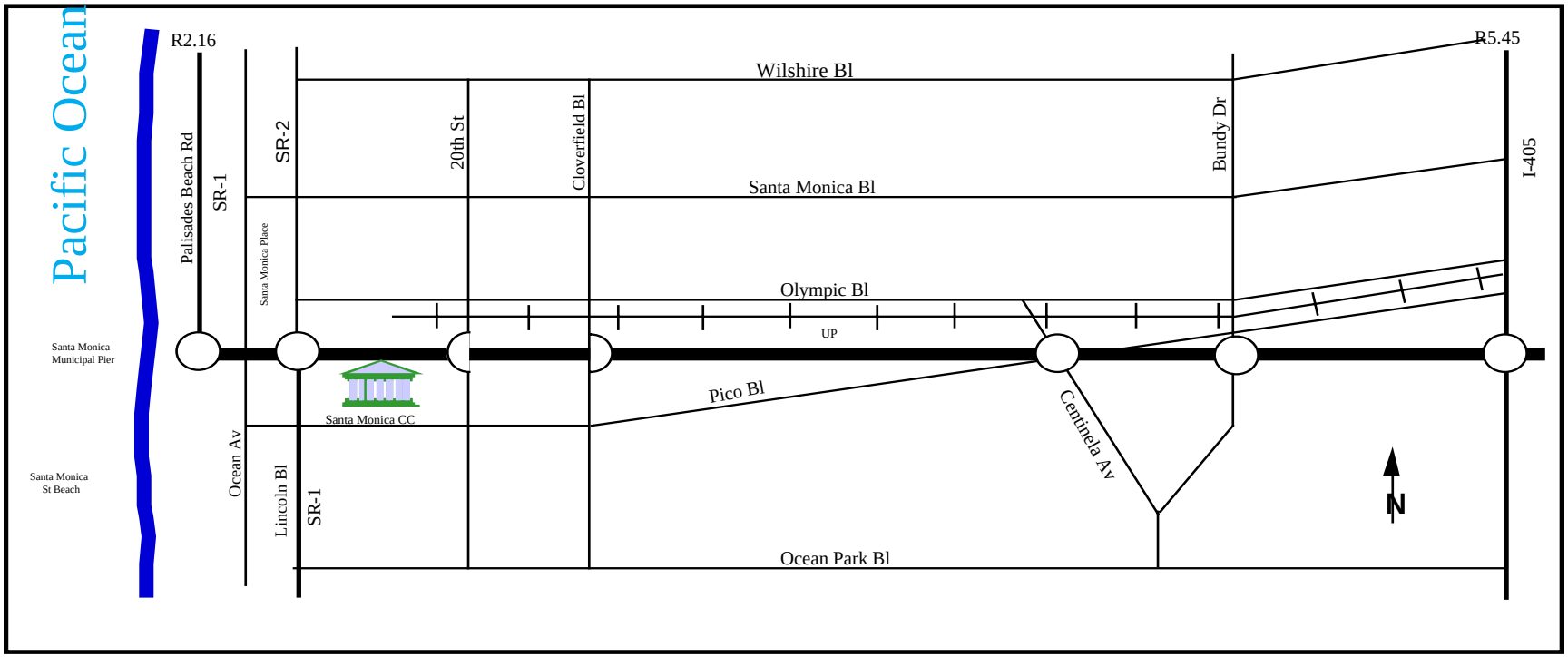
1 hour to 2 hours

2 - 3 hours

more than 3 hours

* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 1*
Begin Freeway to I-405



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

15 min. to 1 hour

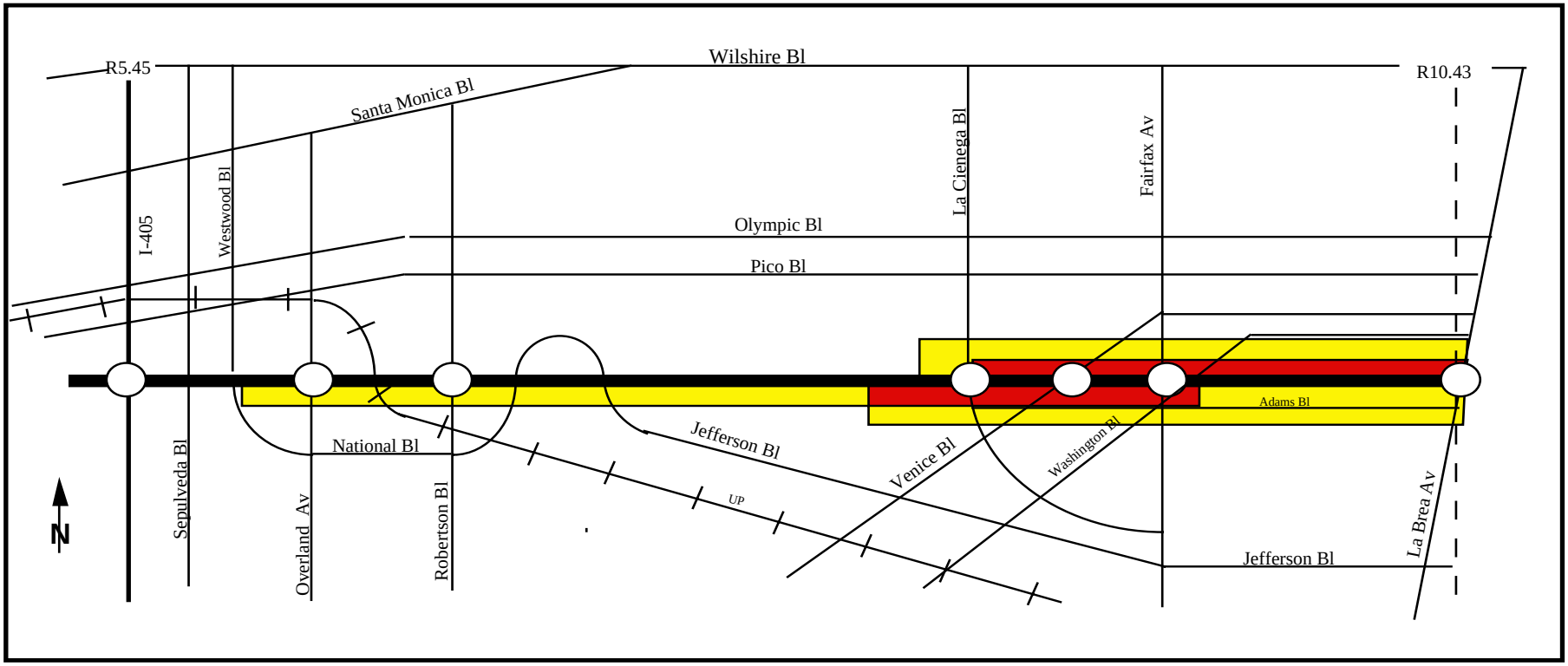
1 hour to 2 hours

2 - 3 hours

more than 3 hours

* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 2a
I-405 to La Brea



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

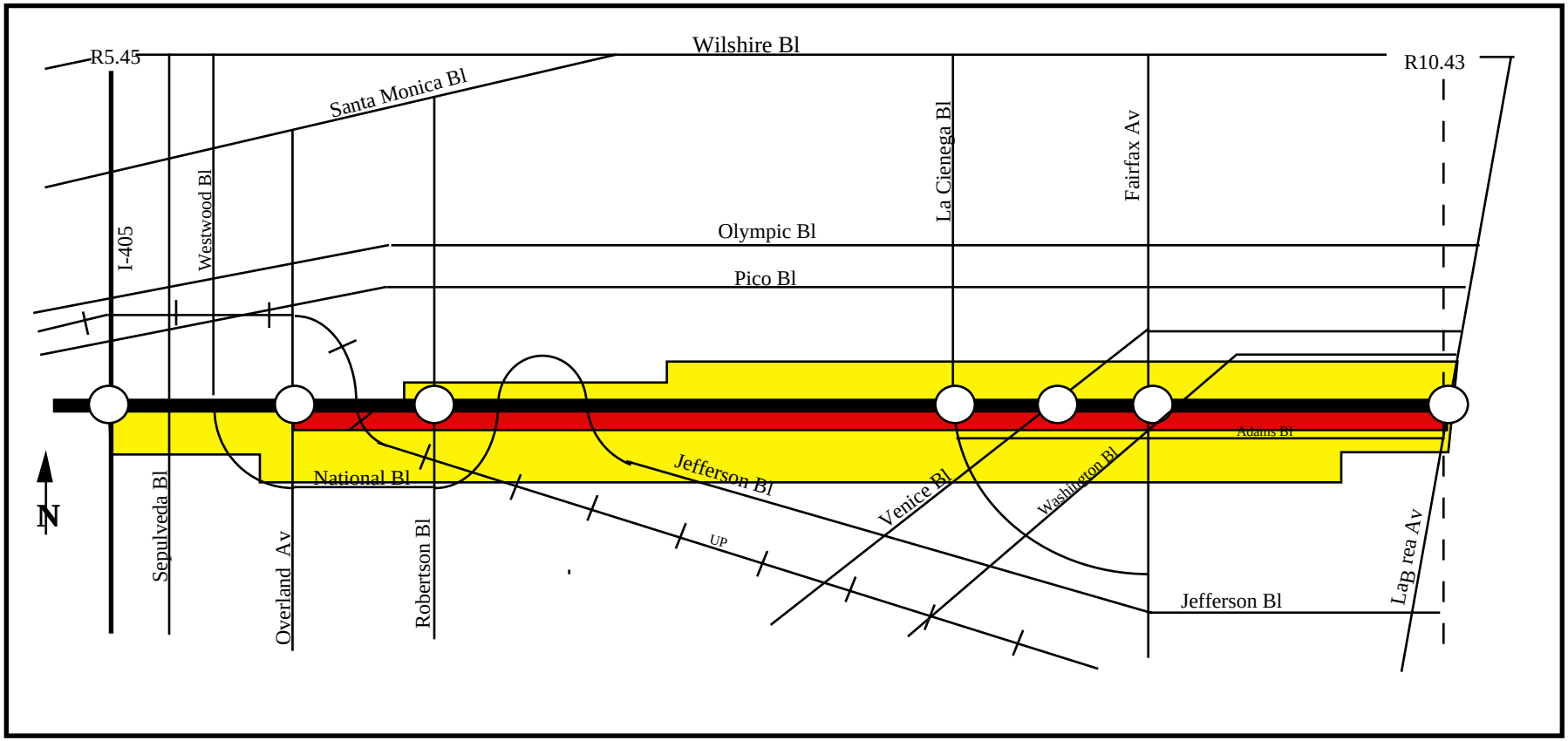
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 2a
I-405 to La Brea



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

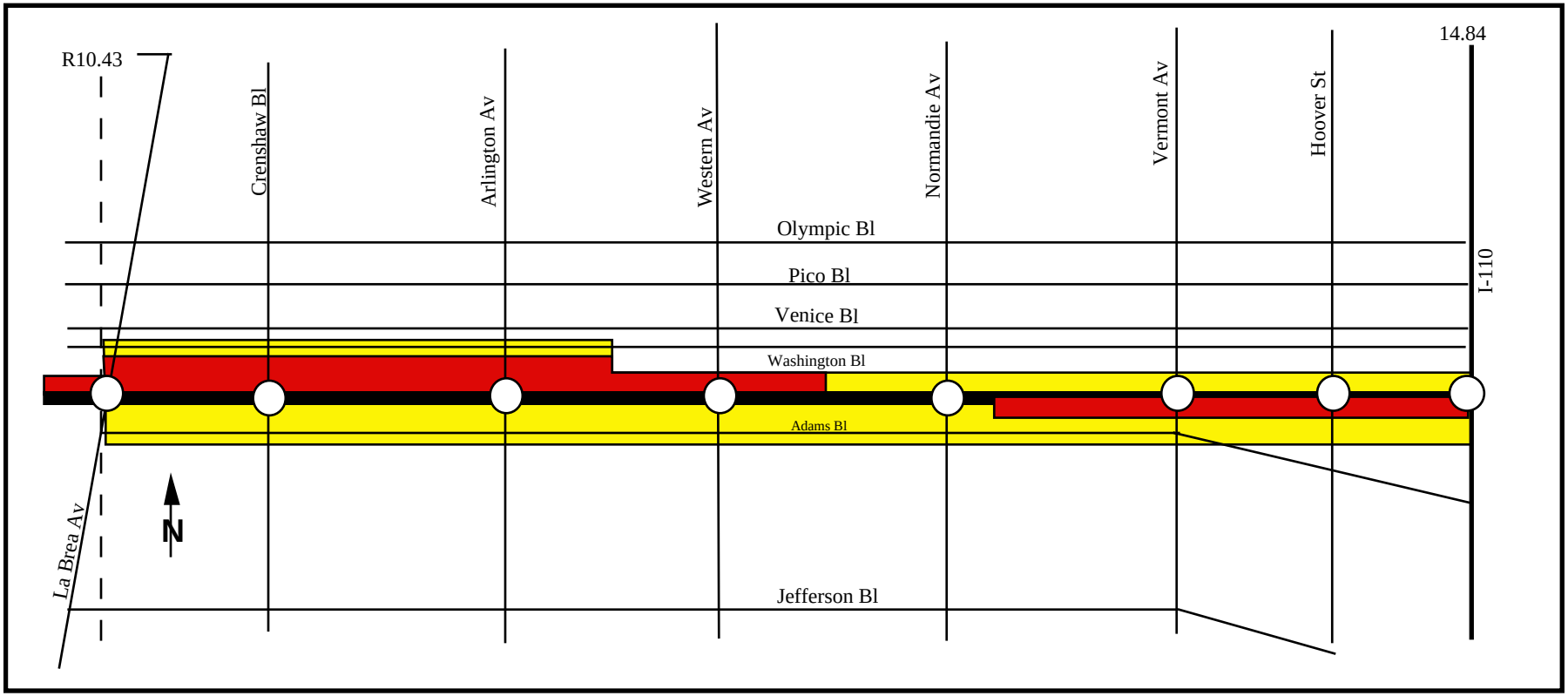
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 2b
La Brea to I-110



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

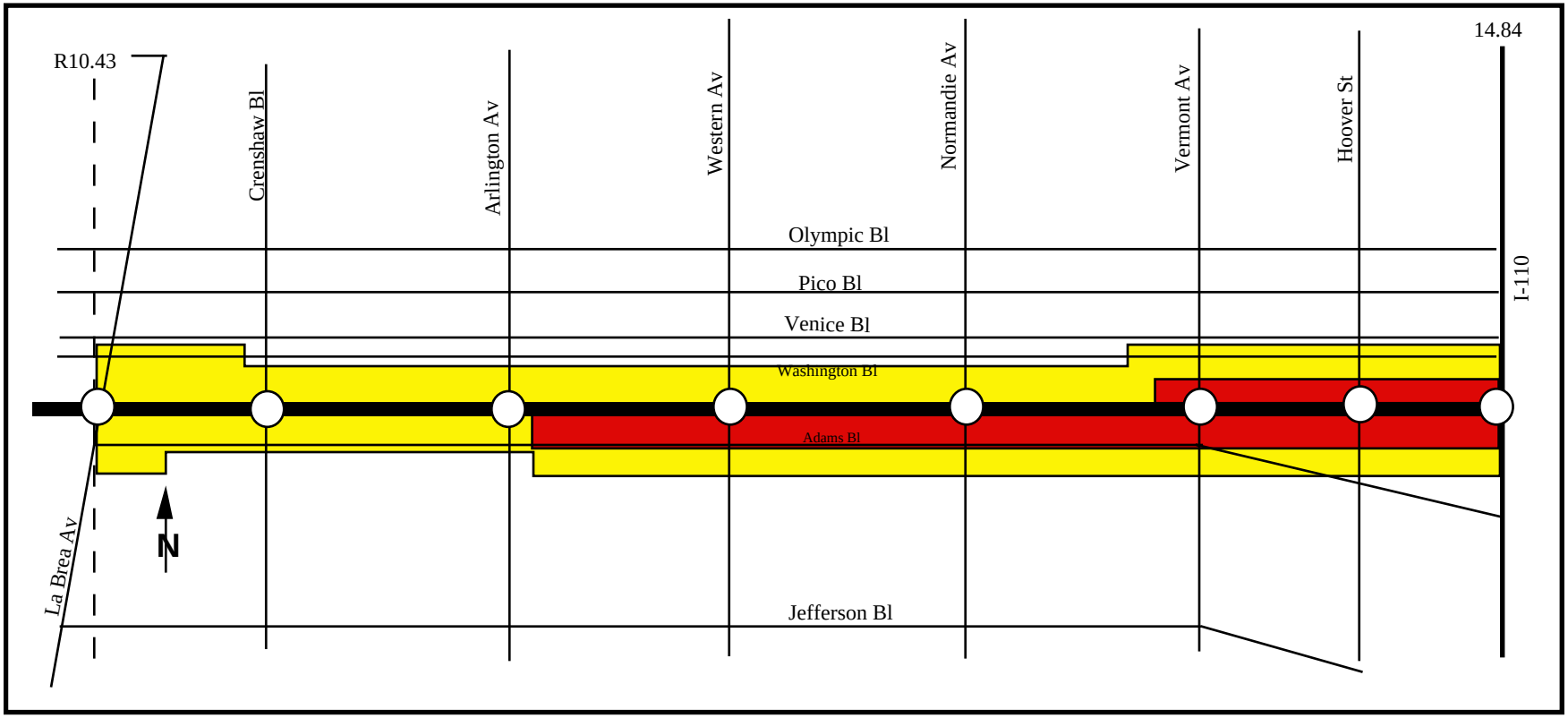
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 2b
La Brea to I-110



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

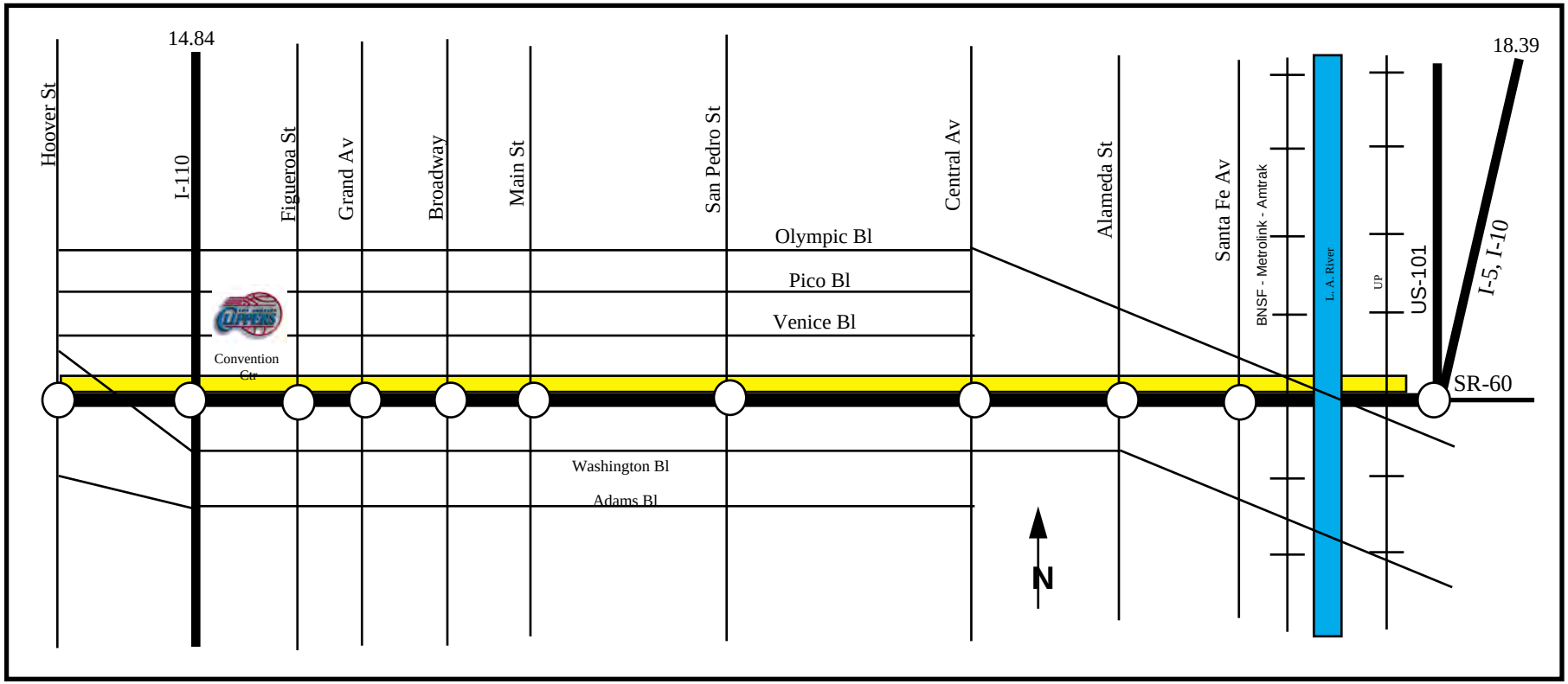
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 3
I-110 to East L.A. Interchange



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

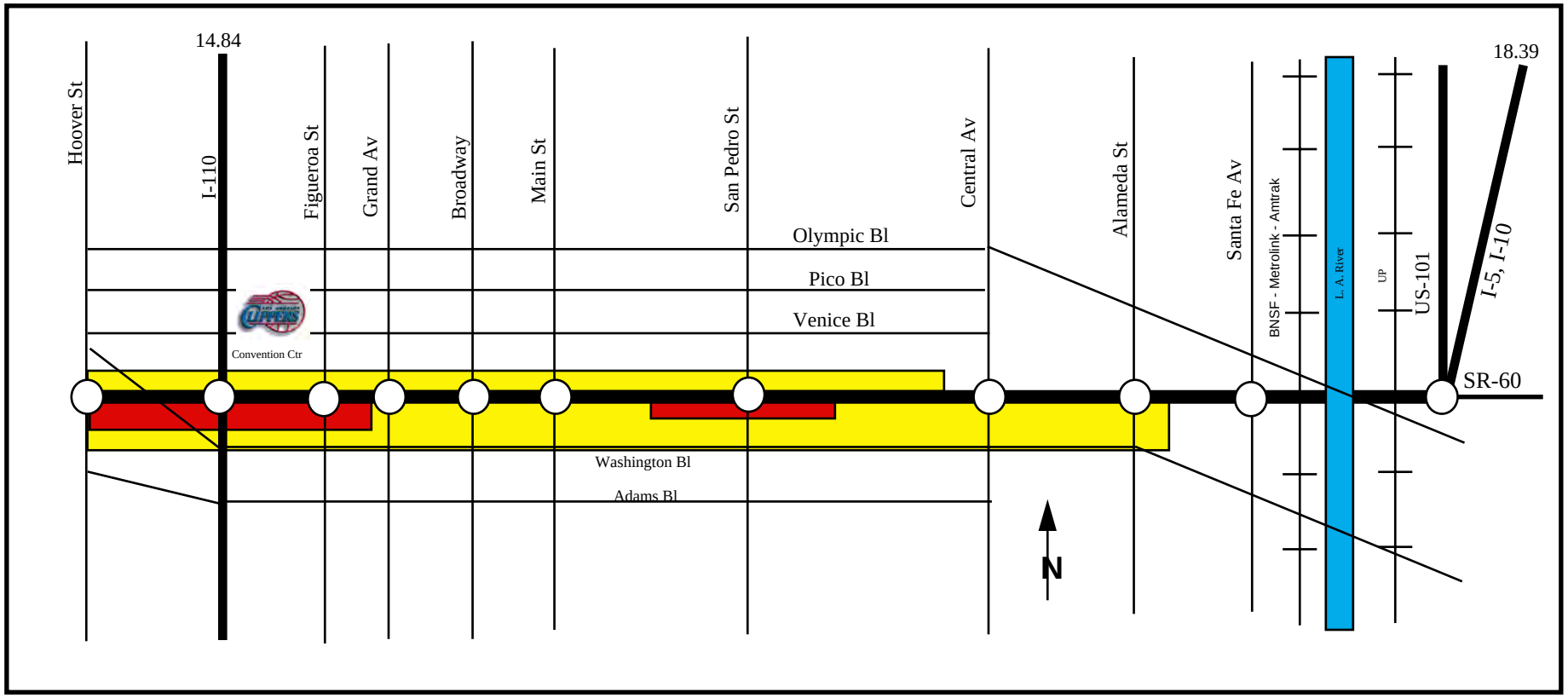
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 3
I-110 to East L.A. Interchange



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

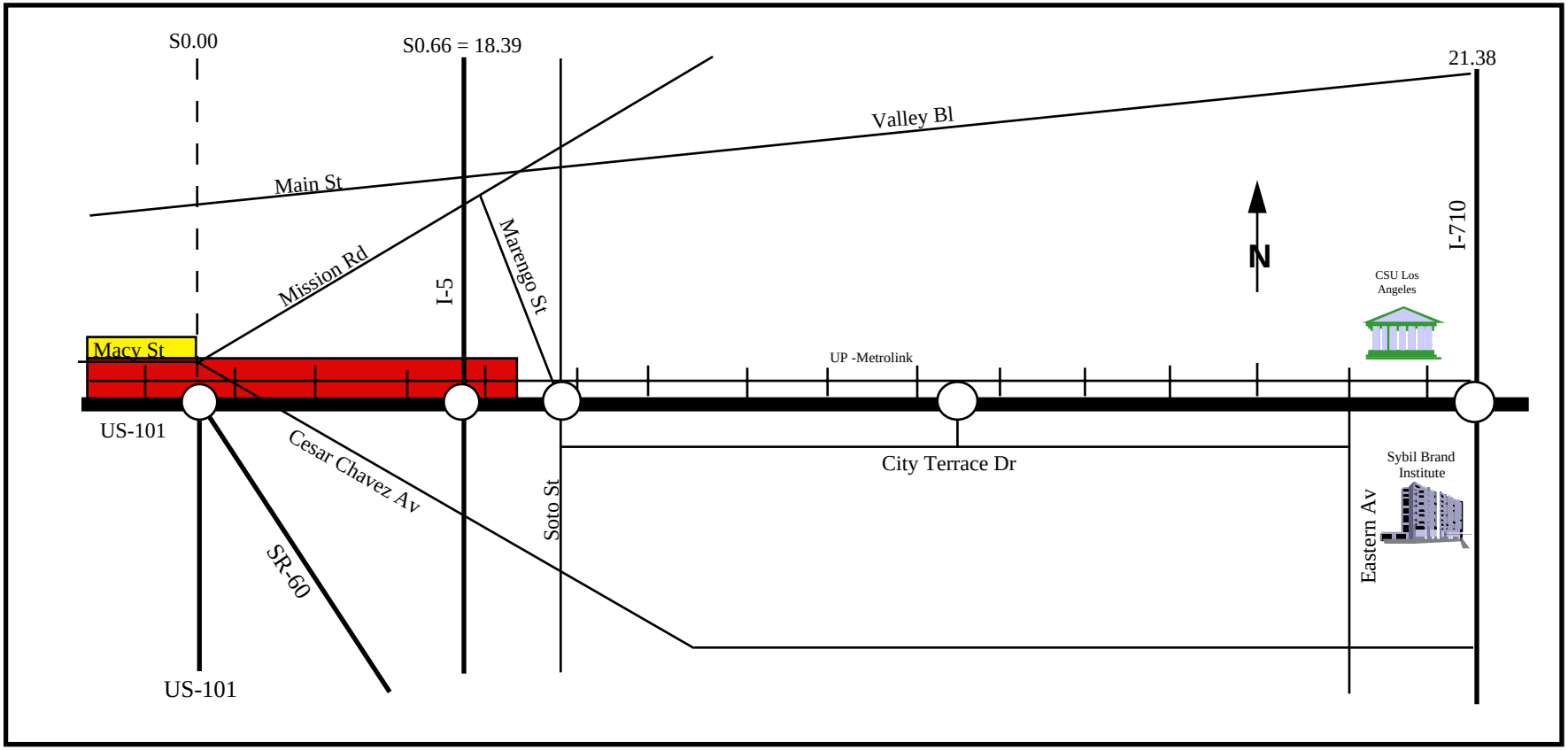
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENTS 4 & 5
US-101 to I-5 to I-710



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

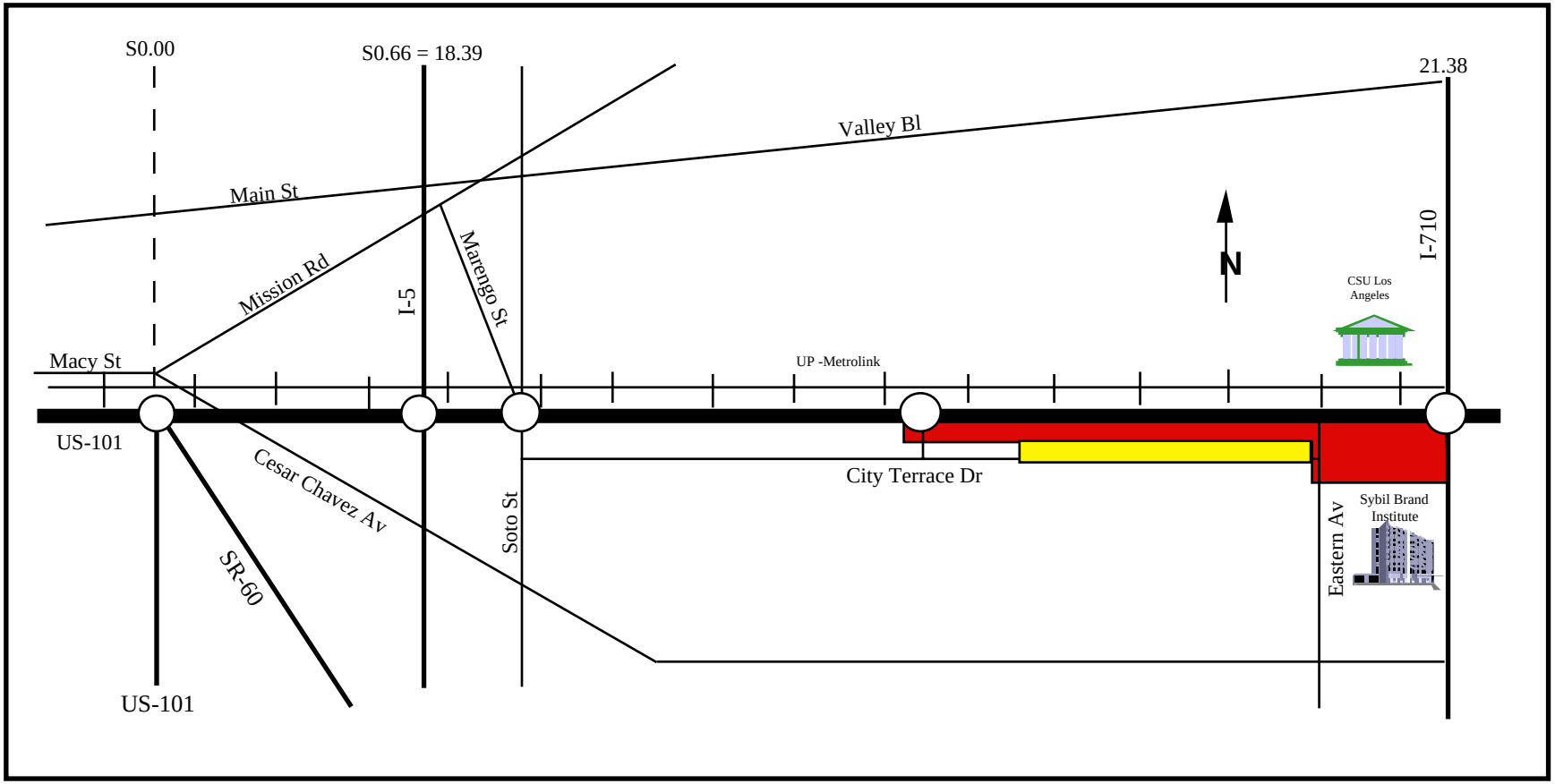
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENTS 4& 5
US-101 to I-5 to I-710



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

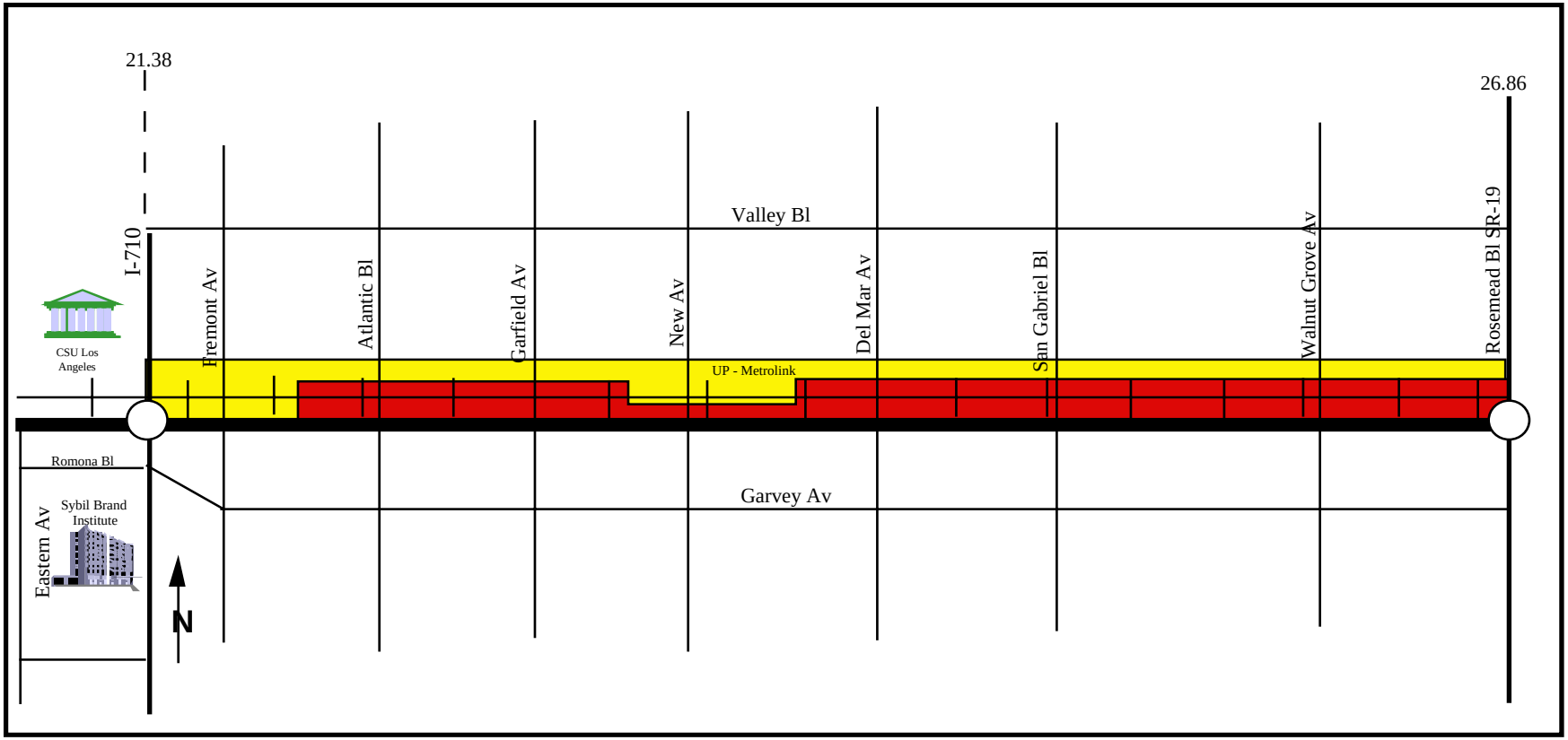
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 6
I-710 to SR-19 (Rosemead Blvd.)



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

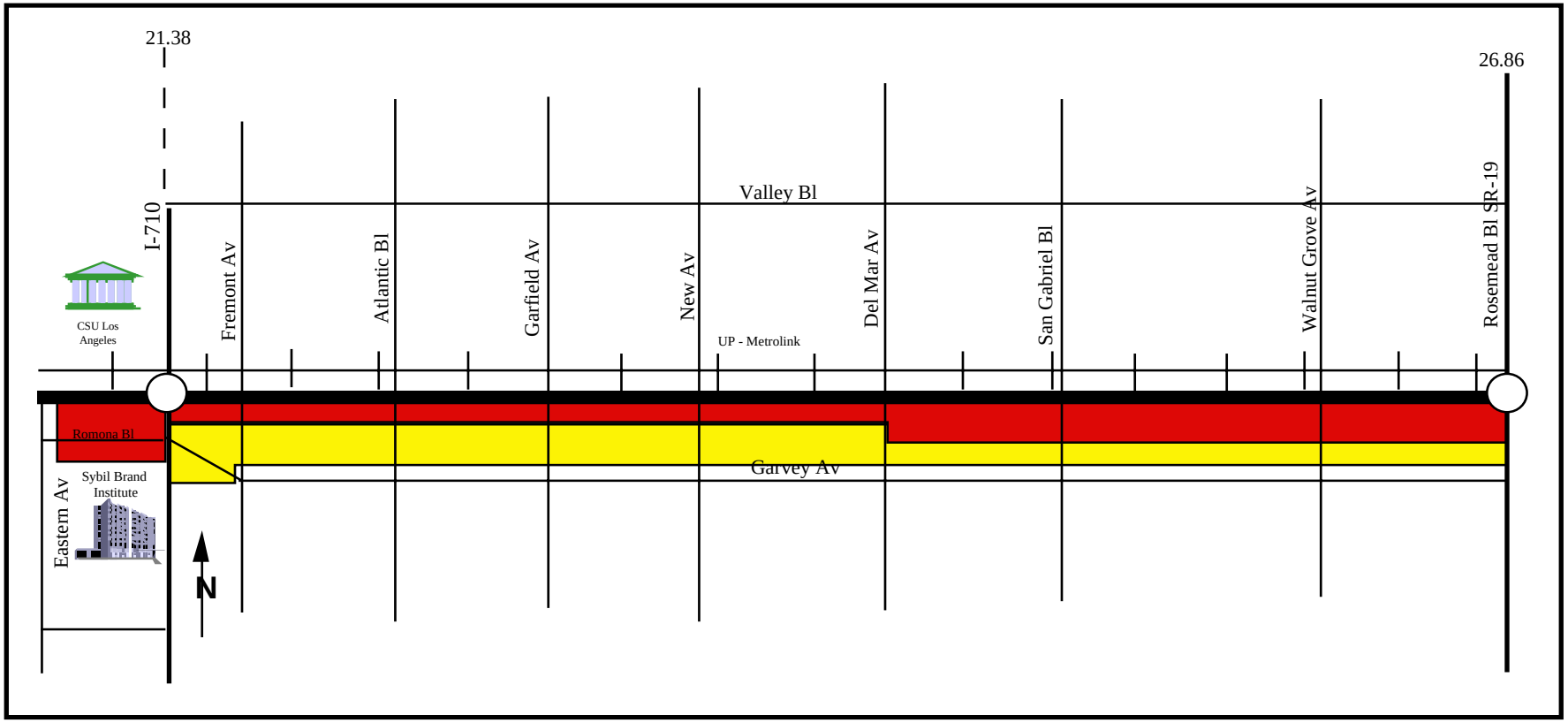
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 6
I-710 to SR-19 (Rosemead Blvd.)



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

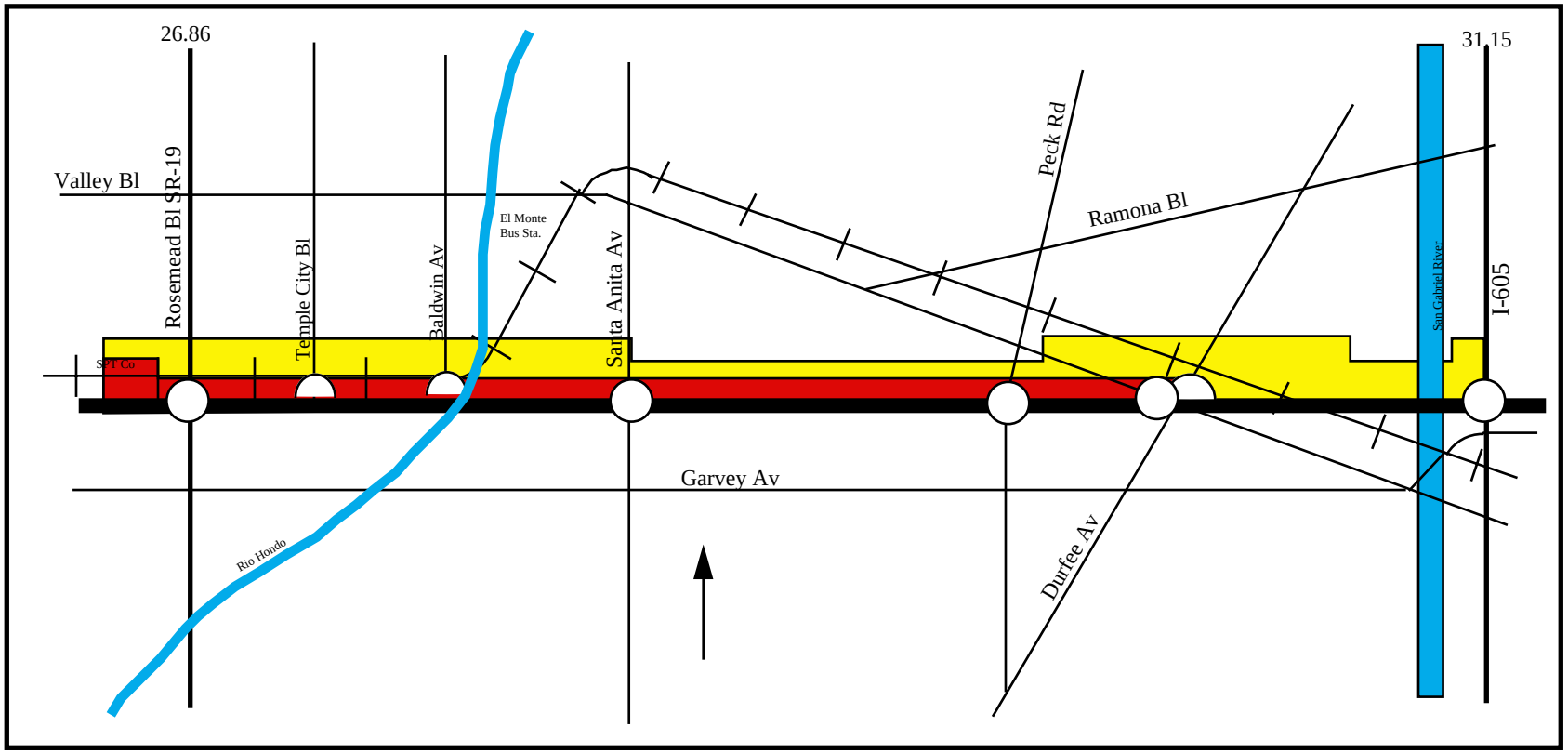
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 7
SR-19 (Rosemead Blvd.) TO I-605



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

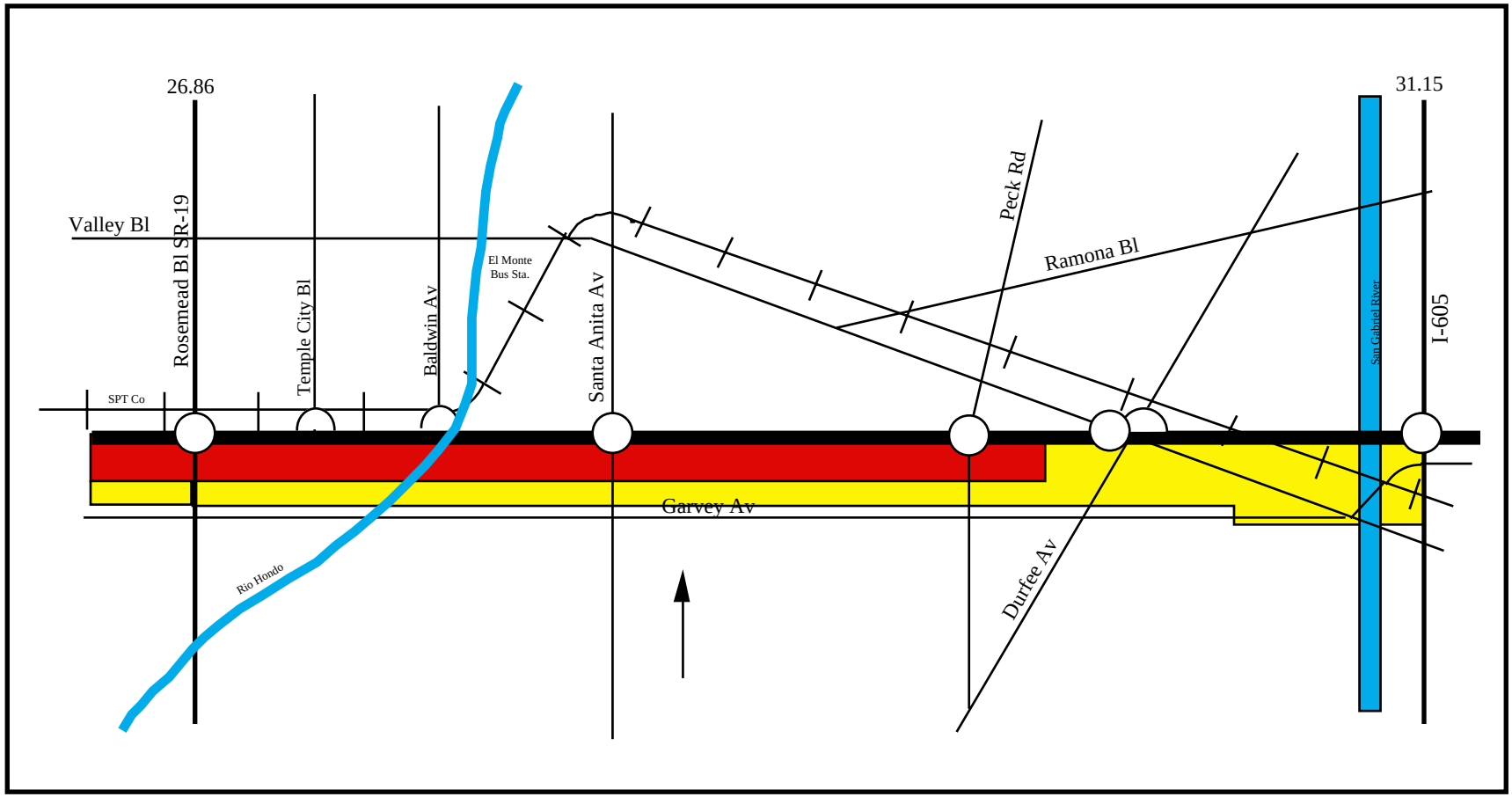
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 7
SR-19 (Rosemead Blvd.) to I-605



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

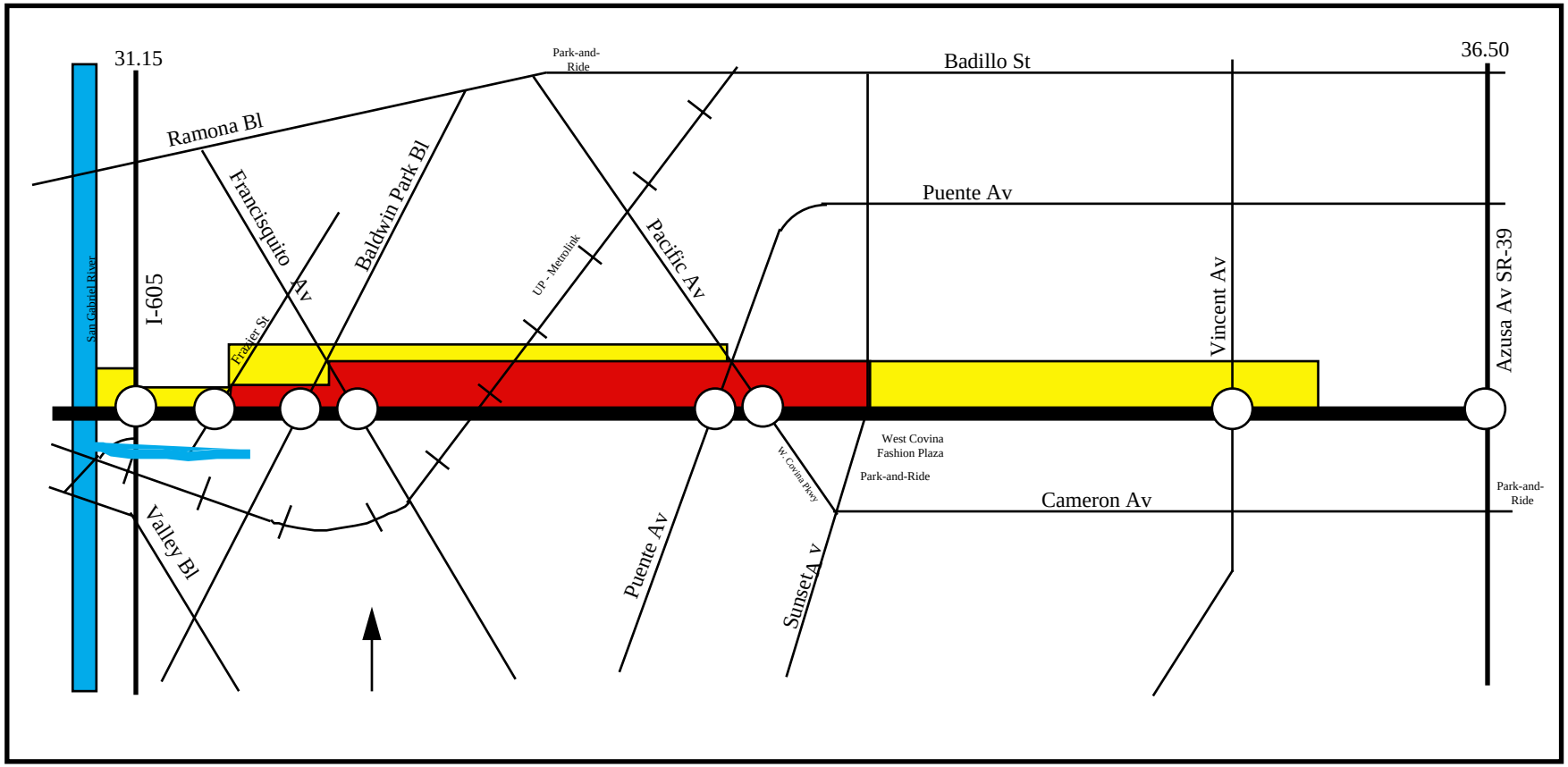
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 8
I-605 to SR-39 (Azusa Ave.)



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

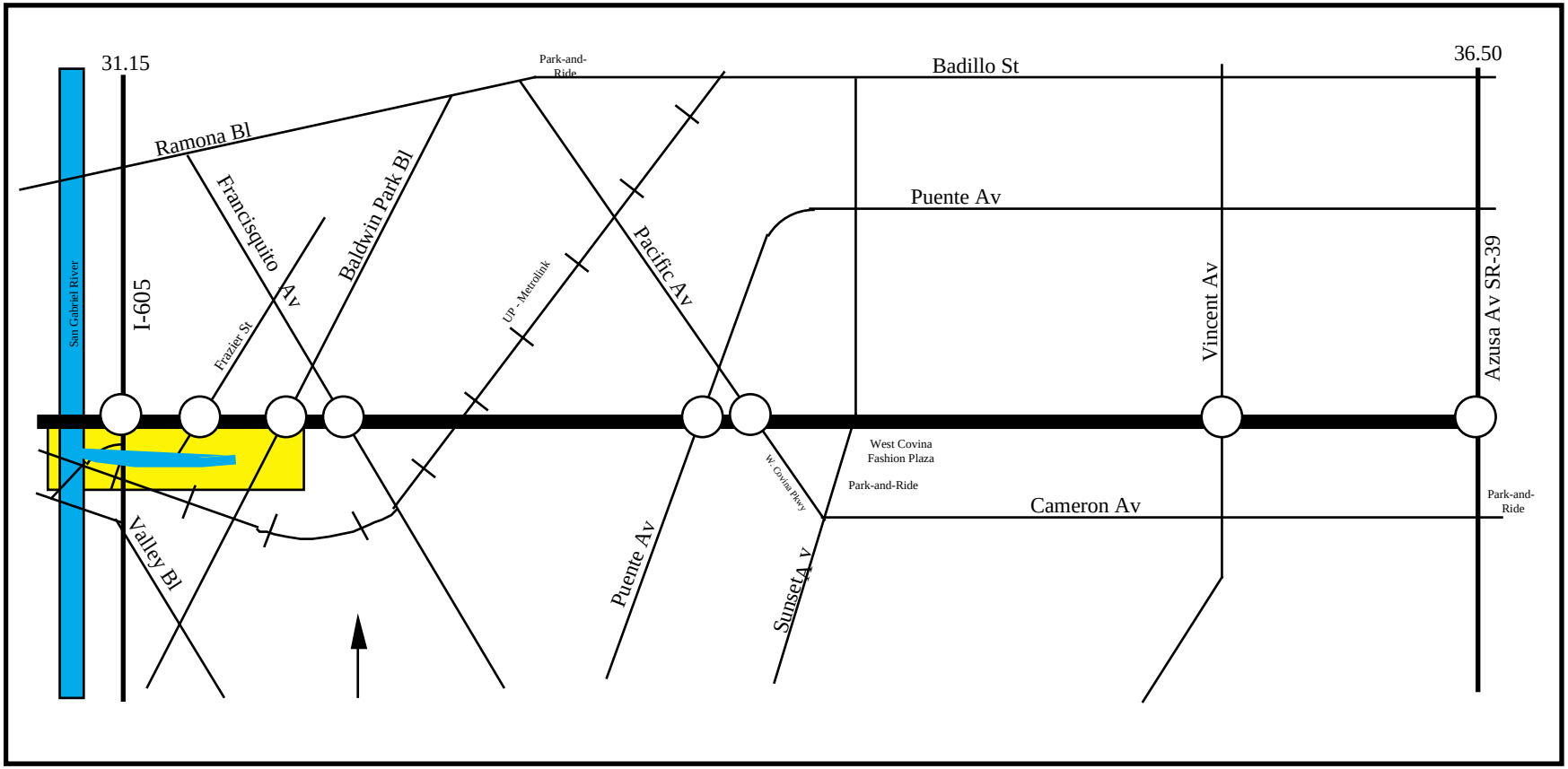
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 8
I-605 to SR-39 (Azusa Ave.)



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

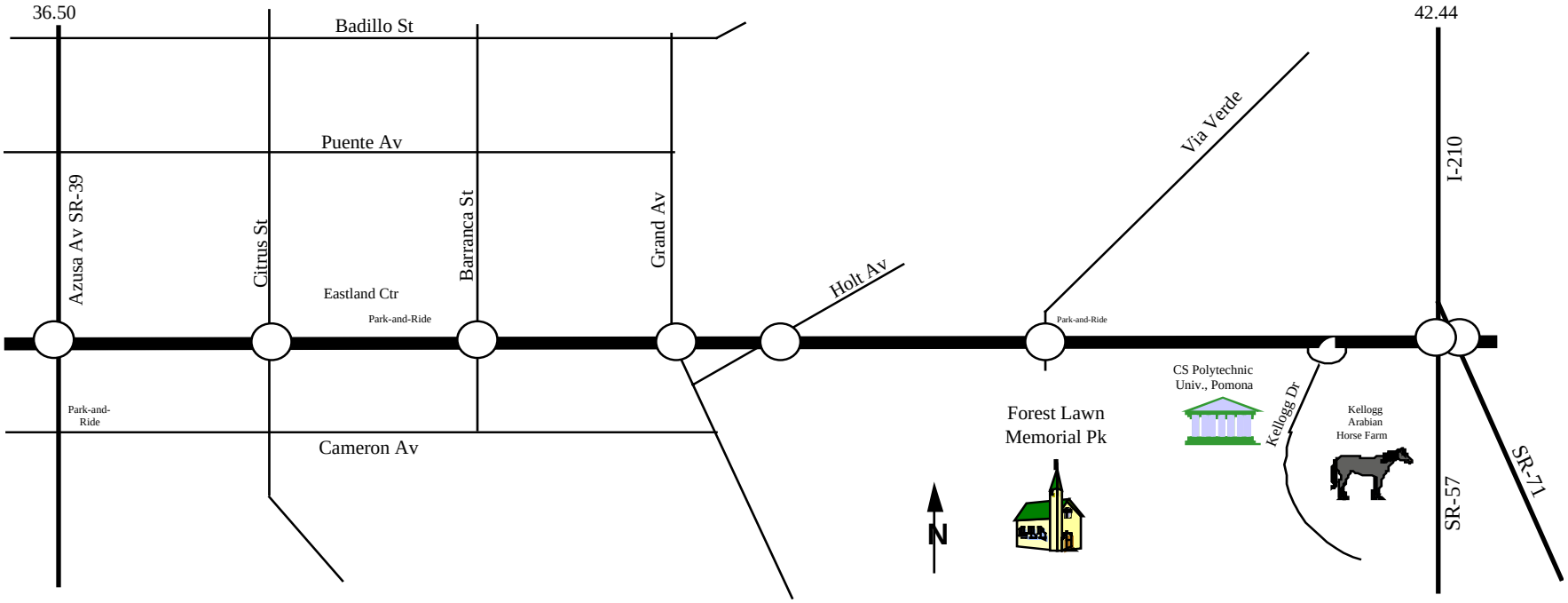
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 8, CONTINUED
SR-39 (Azusa Blvd.) to I-210/SR-57/SR-71 Interchange



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

15 min. to 1 hour

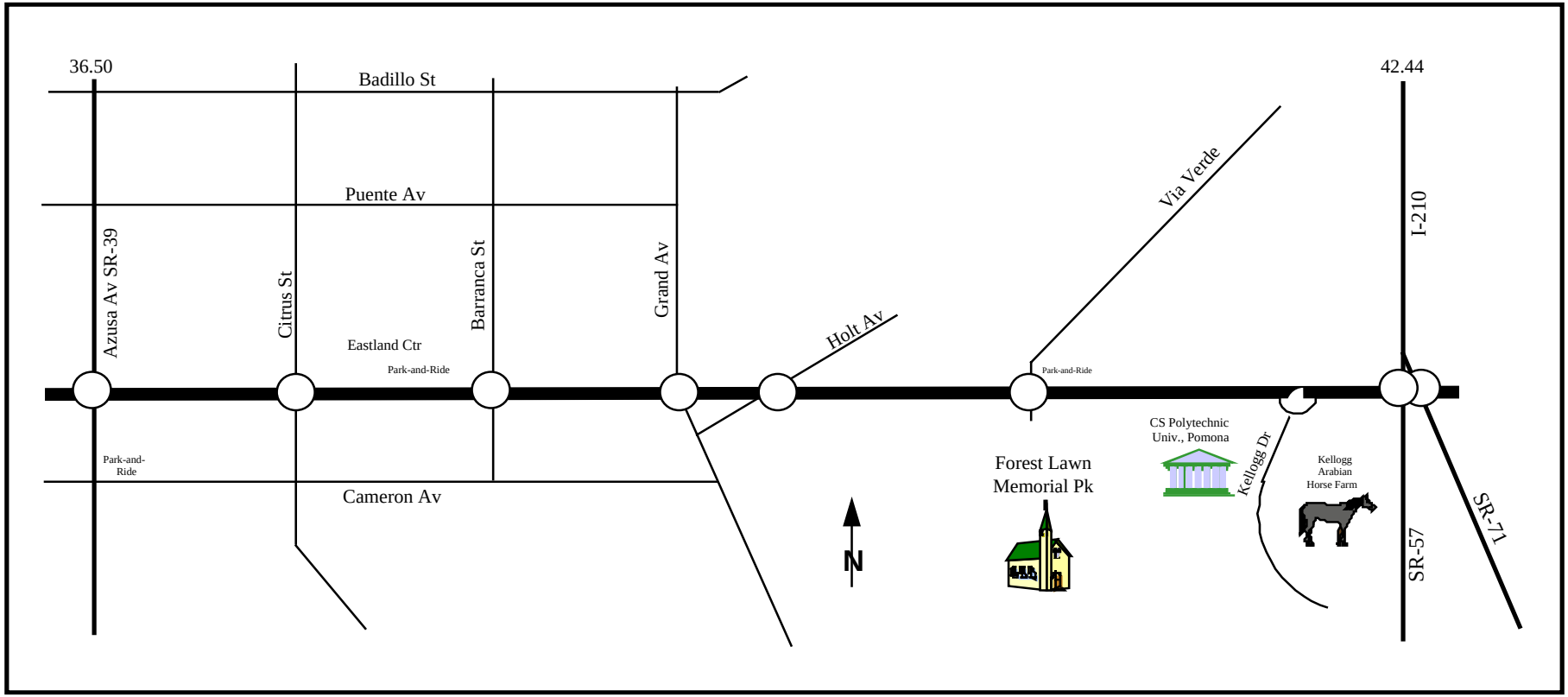
1 hour to 2 hours

2 - 3 hours

more than 3 hours

* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 8, CONTINUED
SR-39 (Azusa Blvd.) to I-210/SR-57/SR-71 Interchange



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

15 min. to 1 hour

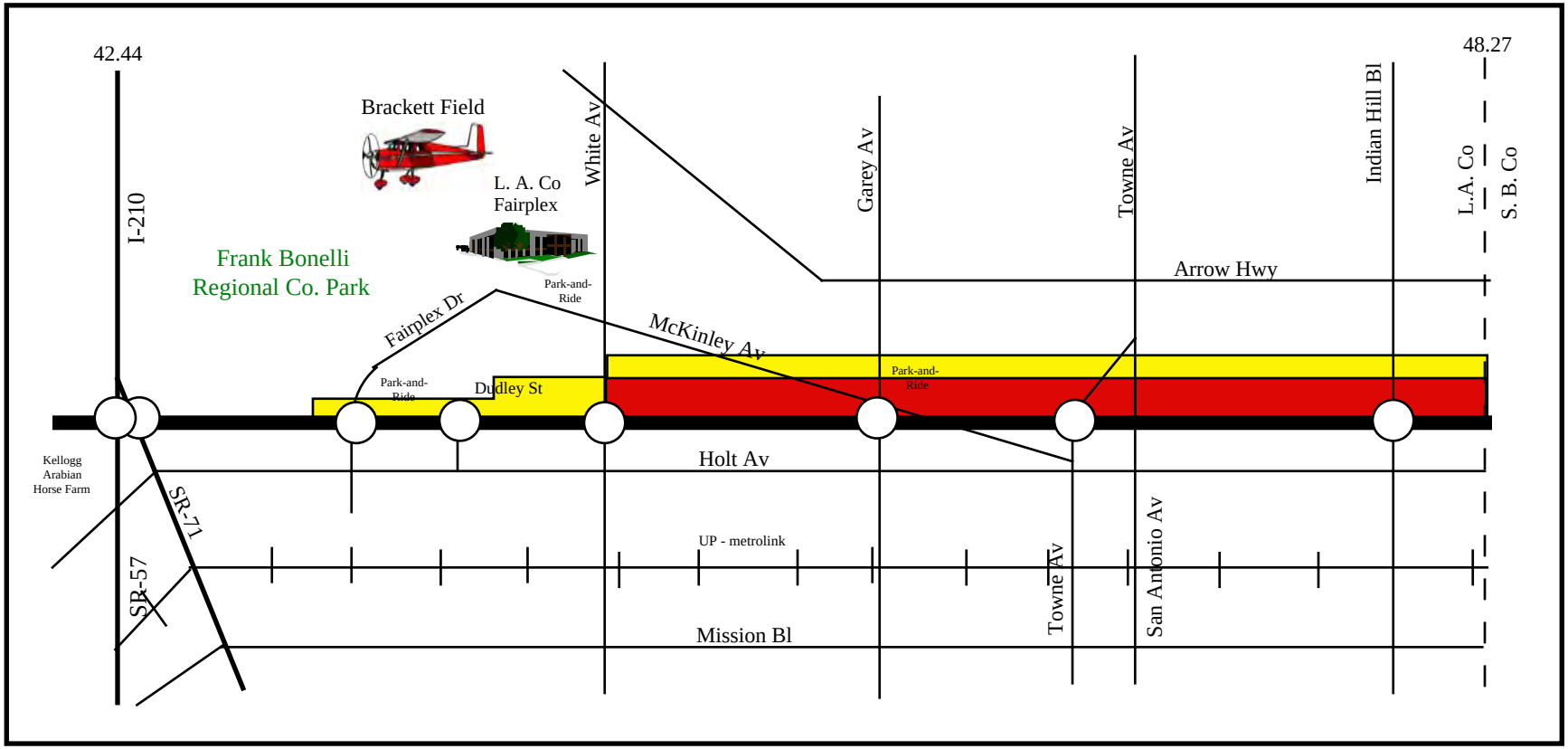
1 hour to 2 hours

2 - 3 hours

more than 3 hours

* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 10
AM PEAK CONGESTION
SEGMENT 9
I-210/SR-57/SR-71 to San Bernardino County Line



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

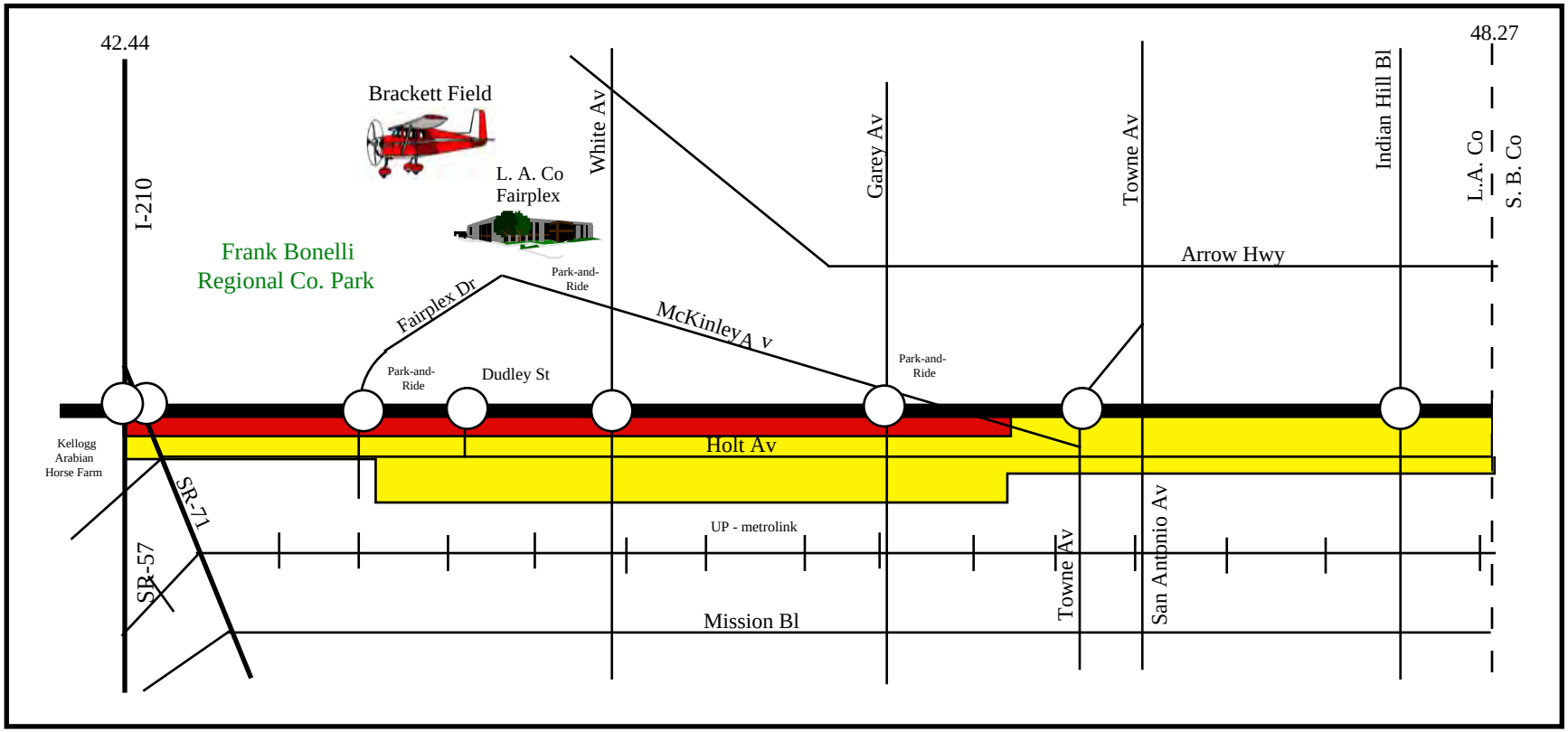
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10
PM PEAK CONGESTION
SEGMENT 9
I-210/SR-57/SR-71 to San Bernardino County Line



20 to 35 MPH

LESS THAN 20 MPH

Freeway center line

P&R Park-and-Ride

15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 10 - CONGESTION MEASURES

DURATION AND SPEED

	DURATION (hours)		AVERAGE SPEEDS (mph)					
	1995* EXISTING		2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	< 20mph	< 35 mph	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	0	0	32	N/A	48	> 50	48	> 50
Segment 2	1-2	>3	13	N/A	23	36	23	> 50
Segment 3	1-2	2-3	13	N/A	24	44	24	> 50
Segment 4	1-2	2-3	7	> 50	24	> 50	26	> 50
Segment 5	2-3	2-3	34	> 50	44	> 50	45	> 50
Segment 6	2-3	>3	24	> 50	33	> 50	34	> 50
Segment 7	1-2	>3	20	> 50	29	> 50	31	> 50
Segment 8	1-2	2-3	16	32	18	32	22	> 50
Segment 9	1-2	>3	13	39	26	39	31	> 50

DEMAND / CAPACITY RATIOS

	1995* EXISTING	2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	1.42	1.47	N/A	1.19	0.72	1.19	0.36
Segment 2	2.07	1.93	N/A	1.66	1.35	1.65	0.68
Segment 3	1.23	1.92	N/A	1.63	1.20	1.62	0.60
Segment 4	0.94	2.20	0.69	1.62	0.69	1.58	0.35
Segment 5	1.05	1.44	0.68	1.27	0.68	1.25	0.34
Segment 6	1.24	1.62	0.69	1.46	0.69	1.44	0.35
Segment 7	1.42	1.71	0.88	1.52	0.88	1.50	0.44
Segment 8	1.81	1.83	1.41	1.77	1.41	1.66	0.71
Segment 9	1.24	1.92	1.29	1.58	1.29	1.49	0.65

LEVEL OF SERVICE

	1995* EXISTING	2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	F2	F3	N/A	F0	C	F0	B
Segment 2	F3	F3	N/A	F3	F1	F3	C
Segment 3	F0	F3	N/A	F3	F0	F3	C
Segment 4	E	F3	C	F3	C	F3	A
Segment 5	F0	F2	C	F1	C	F0	A
Segment 6	F0	F3	C	F3	C	F2	A
Segment 7	F2	F3	D	F3	D	F3	B
Segment 8	F3	F3	F2	F3	F2	F3	C
Segment 9	F0	F3	F1	F3	F1	F3	C

HOURS OF DELAY

	1995* EXISTING	2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	350	400	N/A	150	0	150	0
Segment 2	10,750	7,300	N/A	3,550	250	4,250	0
Segment 3	200	2,950	N/A	1,300	50	1,550	0
Segment 4	0	950	0	150	0	150	0
Segment 5	100	650	0	300	0	250	0
Segment 6	350	1,650	0	850	0	750	0
Segment 7	500	1,500	0	750	0	650	0
Segment 8	5,500	6,050	350	5,000	350	3,500	0
Segment 9	350	4,700	100	1,800	100	1,250	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

SOCIO-ECONOMICS

Interstate 10 traverses six of the Southern California Association of Government's (SCAG) Regional Statistical Areas (RSA). (See Appendix for description of RSA's.) The following graphs illustrate projected growth in these areas between 1990 and 2020, and are provided to give perspective to socio-economic conditions in the I-10 corridor. It will contain a significant amount of the regionally projected growth of 43% in population and 61% in employment. Included are data on housing, population and employment.

The I-10 corridor is heavily congested, highly developed, and varies from residential to commercial. The many significant trip generators along this corridor include:

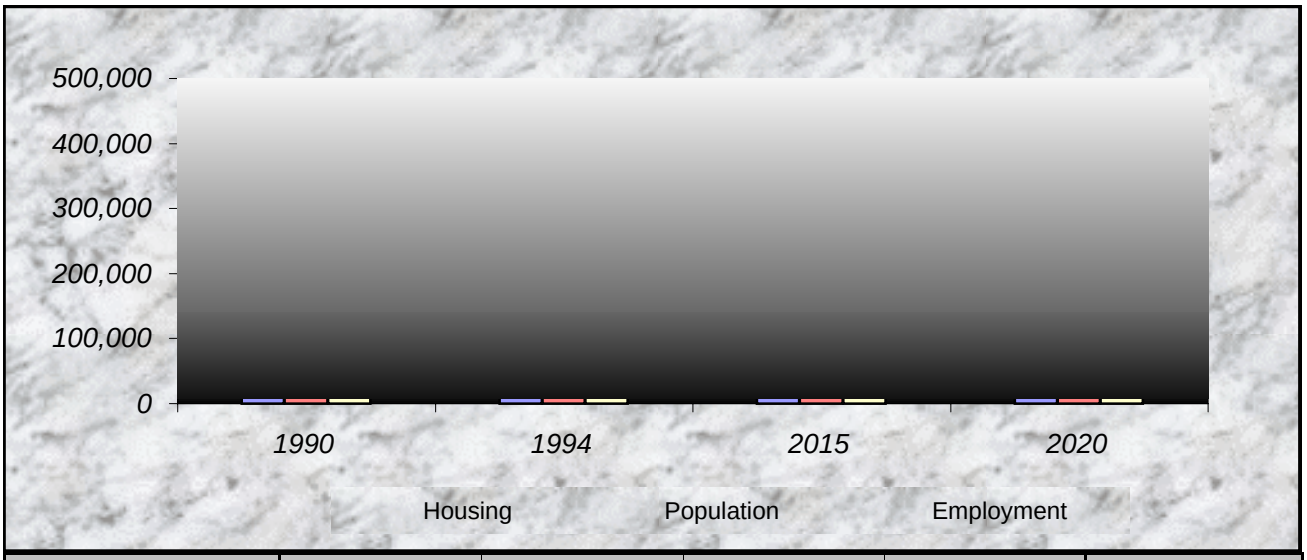
- Downtown Los Angeles
- Santa Monica Airport
- Santa Monica coastal beaches
- University of California, Los Angeles
- Convention Center/Staples Center
- University of Southern California
- L. A. County University of Southern California Medical Center
- California State University, Los Angeles
- El Monte Airport
- Santa Anita Race Track
- California Polytechnic University, Pomona
- Frank G. Bonelli Regional Recreation Areas
- Pomona Fairplex
- Brackett Airport
- Laverne University
- The Claremont Colleges
- Numerous major shopping centers

Significant growth in housing, population, and employment are generally projected throughout the I-10 corridor. This growth is expected to occur through infill and recycling of existing land uses. The ranges in growth rates among these RSA's and socio-economic factors are:

- The Los Angeles Central Business District RSA, currently with low levels of housing and population, shows the greatest increases in these factors of 59% and 43%, respectively. Its employment base, however, shows a decline of 3%.
- Among the other RSA's, the biggest increases in housing, population, and employment all occur in Pomona, with 36%, 36%, and 41%, respectively.
- The smallest increases occur in housing in the West San Gabriel Valley RSA with 22%, in population in the East San Gabriel Valley RSA with 26%, and in employment in the West Central Los Angeles RSA with 10%.

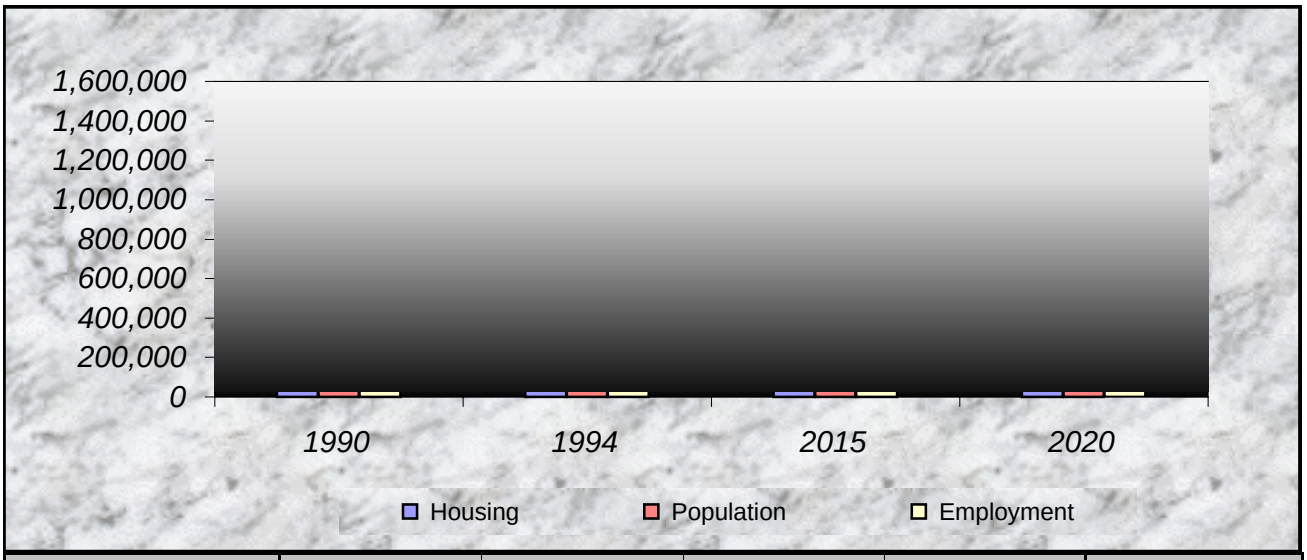
INTERSTATE 10 SOCIO-ECONOMIC DATA

Santa Monica Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	147,577	151,669	201,032	191,111	29%
Population	313,759	325,331	438,248	419,016	34%
Employment	188,095	188,942	229,336	251,811	34%

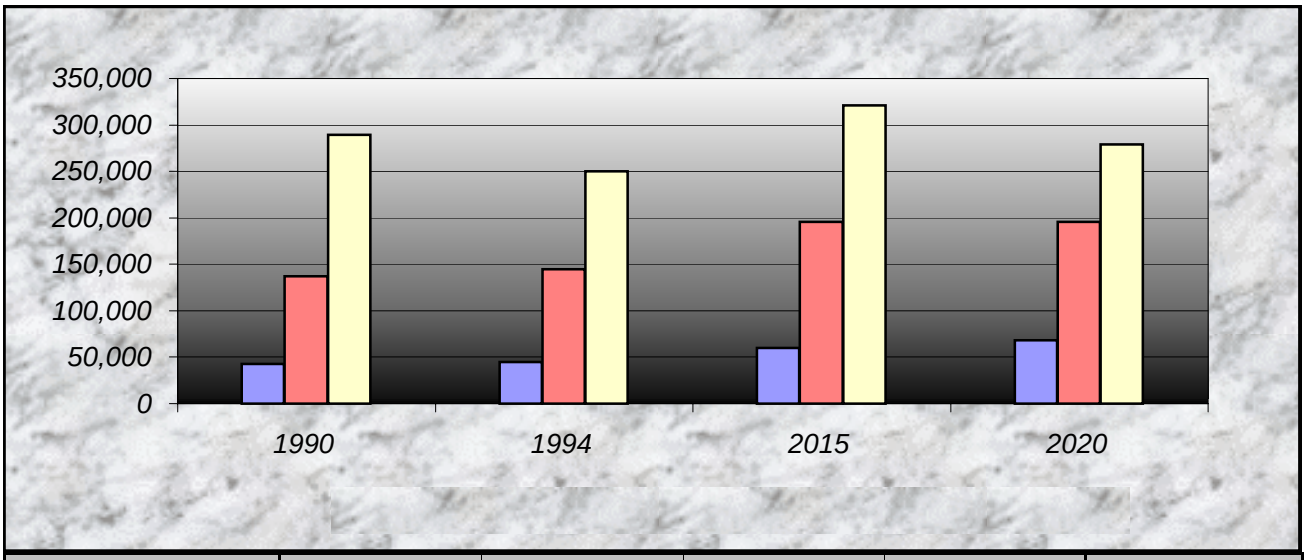
West Central (LA) Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	440,047	453,516	507,953	576,099	31%
Population	1,139,090	1,182,549	1,360,567	1,476,401	30%
Employment	638,071	572,982	717,953	704,555	10%

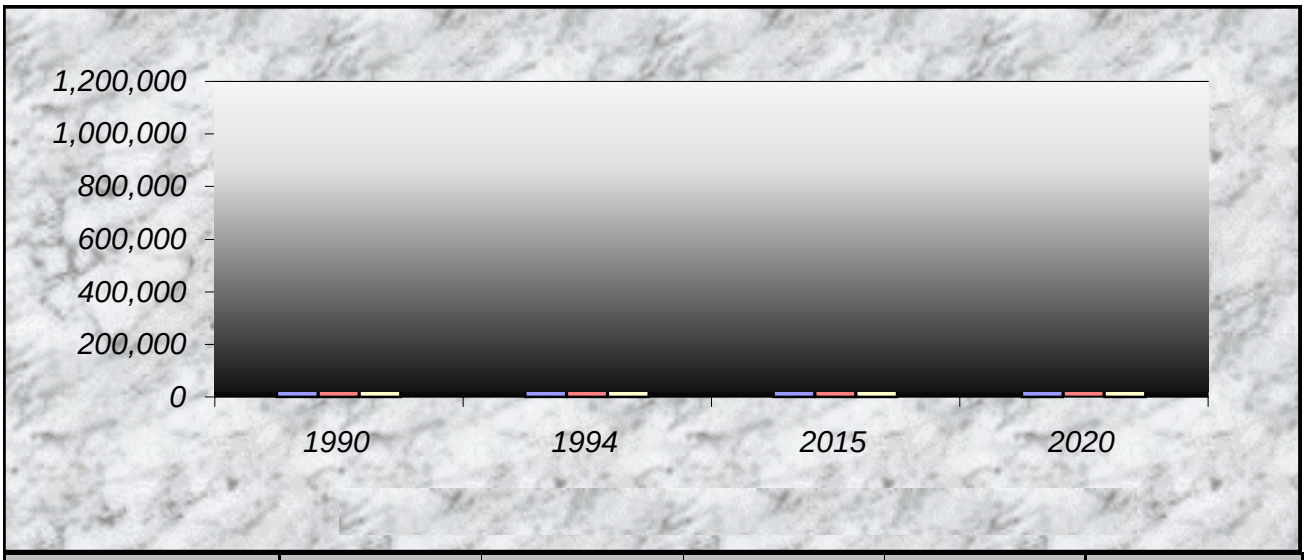
INTERSTATE 10 SOCIO-ECONOMIC DATA

LA Central Business District Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	42,736	44,475	60,229	67,964	59%
Population	137,261	144,436	195,732	195,644	43%
Employment	289,137	250,327	320,841	279,092	-3%

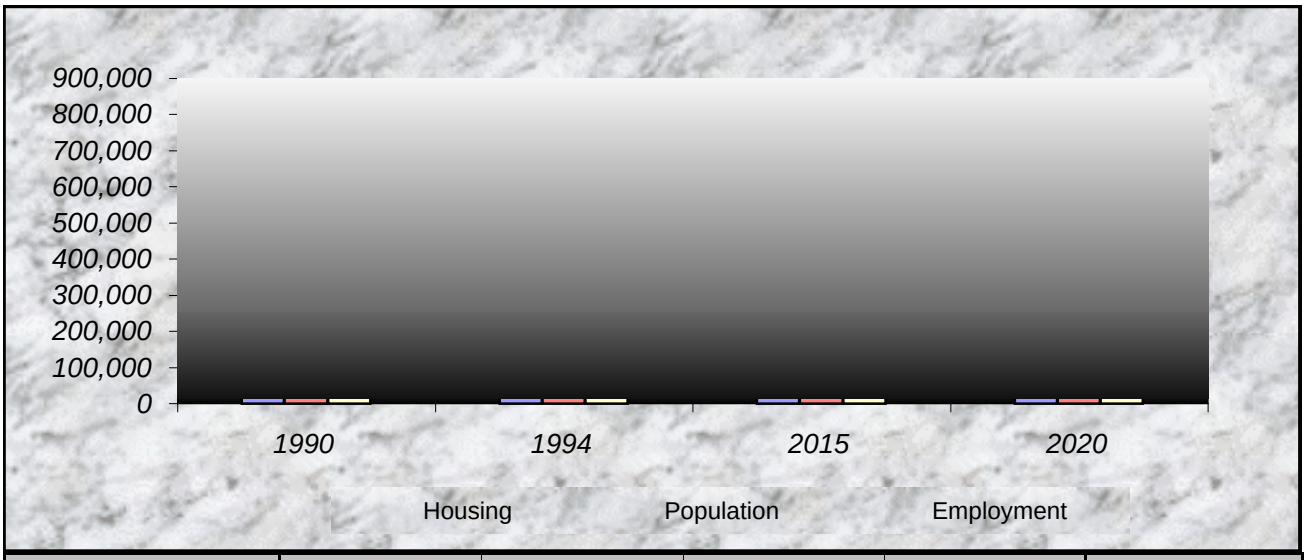
West San Gabriel Valley Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	262,692	267,967	313,683	319,797	22%
Population	789,375	819,944	968,475	1,007,060	28%
Employment	371,842	337,837	466,360	451,898	22%

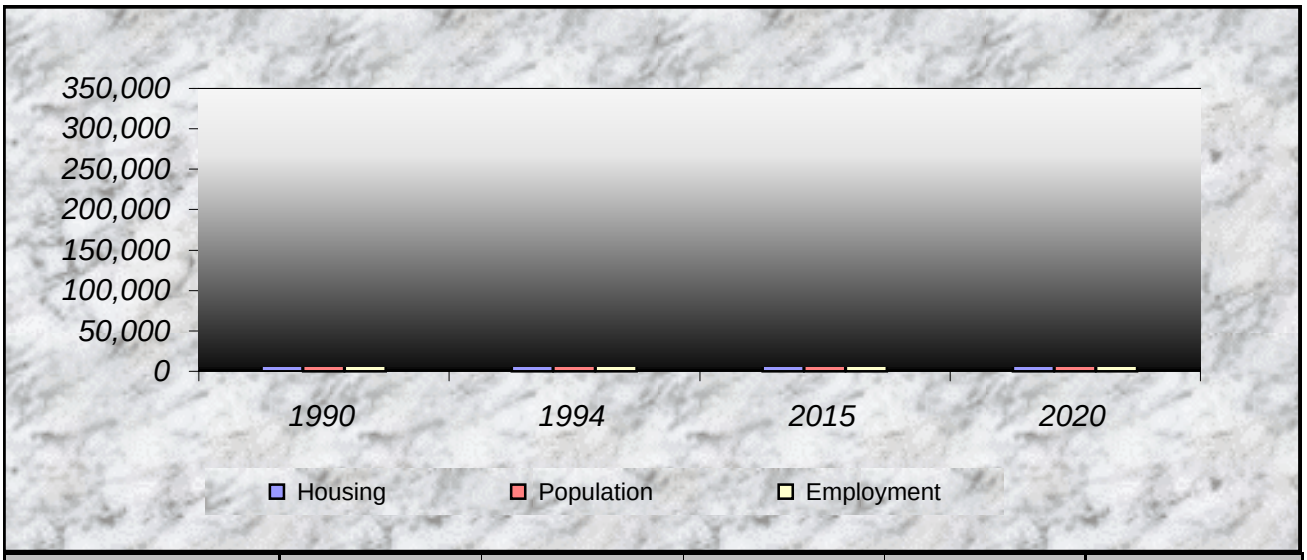
INTERSTATE 10 SOCIO-ECONOMIC DATA

East San Gabriel Valley Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	187,870	192,960	237,448	232,155	24%
Population	645,027	669,696	828,200	815,814	26%
Employment	260,683	236,469	385,297	355,747	36%

Pomona Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	64,988	67,080	82,568	88,368	36%
Population	215,818	225,077	278,090	293,375	36%
Employment	86,121	78,583	123,554	121,379	41%

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 April 1, 1999 through March 31, 2002.

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 I-10 during the coverage period. This graph has two graph lines, "Average" and "Actual". The "Actual" is based on specific data for accidents on I-10. 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

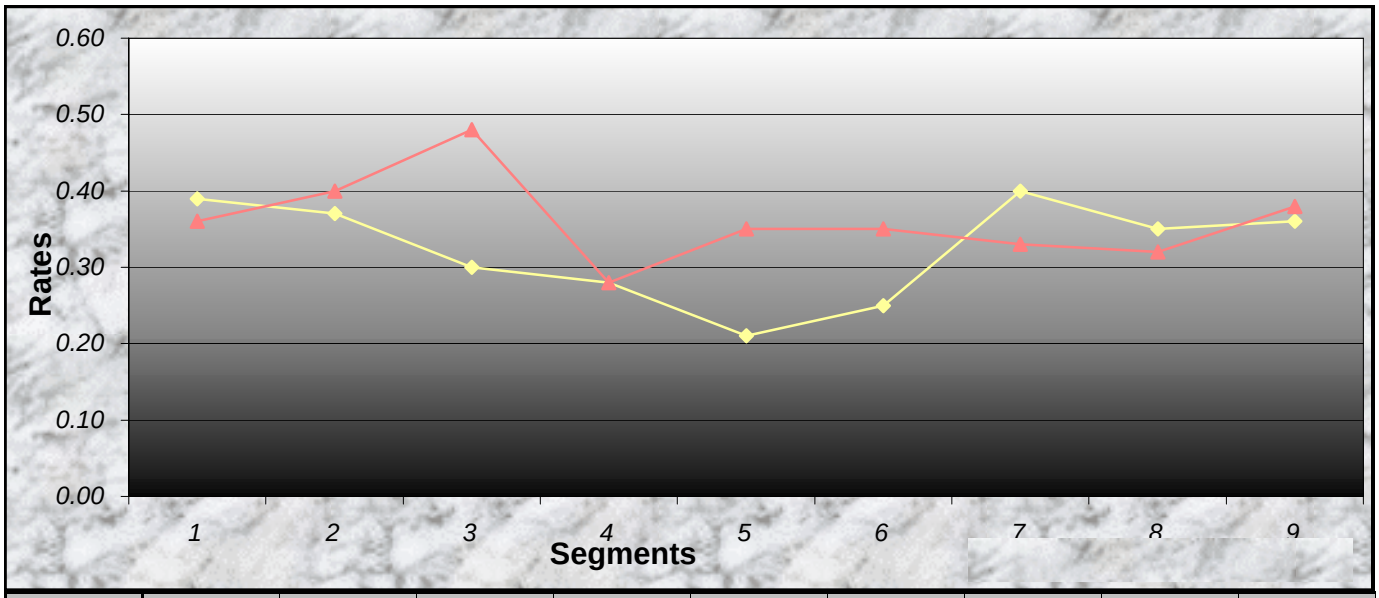
The second graph, "Total Accidents Per Million Vehicle Miles" (Total/MVM) includes all accidents (fatal, non-fatal injury and accidents without injuries) within the coverage period. As in the first graph, the "Actual" is based on specific I-10 data and "Average" represents a statewide average for comparable 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 TCR's will document the state of that research.

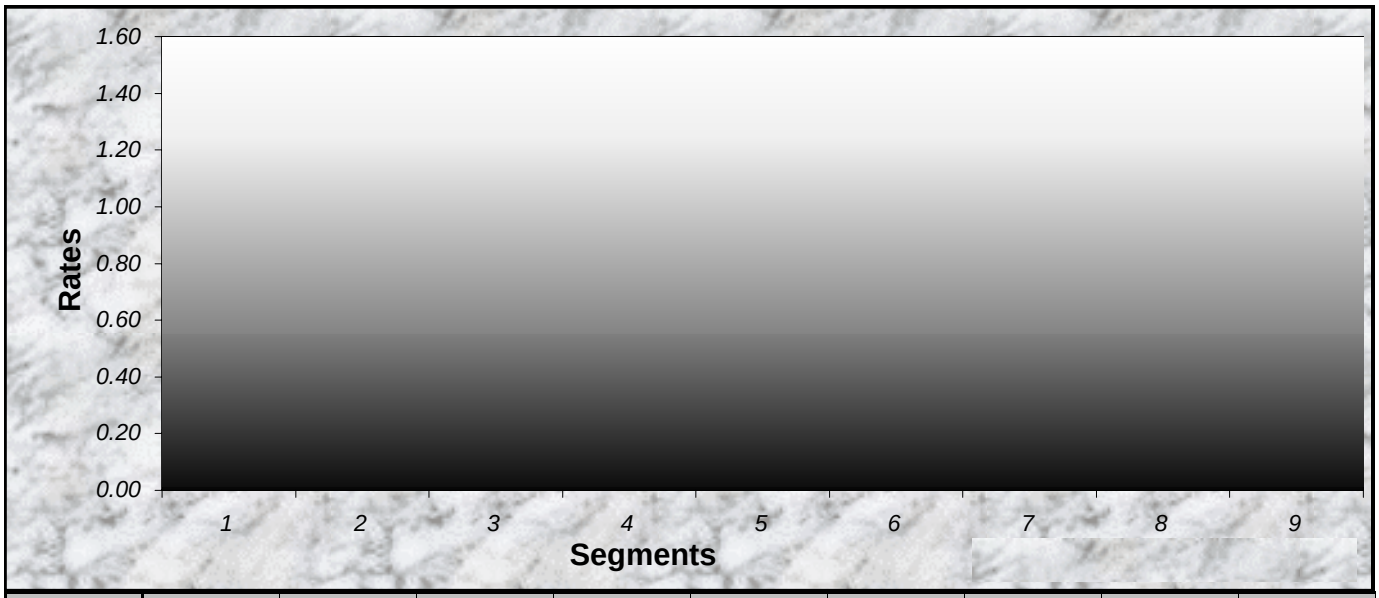
INTERSTATE 10 ACCIDENT RATES

Fatal + Injury (Per Million Vehicle Miles)



	1	2	3	4	5	6	7	8	9
Actual	0.39	0.37	0.30	0.28	0.21	0.25	0.40	0.35	0.36
Average	0.36	0.40	0.48	0.28	0.35	0.35	0.33	0.32	0.38

Total Accidents (Per Million Vehicle Miles)



	1	2	3	4	5	6	7	8	9
Actual	1.11	1.37	1.31	1.34	0.75	1.24	1.47	1.14	1.22
Average	1.16	1.29	1.50	0.92	1.10	1.12	1.06	1.02	1.22

INTERSTATE 10

ACCIDENT LOCATIONS HIGHER THAN AVERAGE
Fatal plus Injury per Million Vehicle Miles (F+I/MVM)
Chart VIII-2

SEGMENT 1	JCT. RTES 1 & 2-ROUTE 405
SEGMENT 7	ROUTE 19-ROUTE 605
SEGMENT 8	ROUTE 605-JCT. RTES 57, 71, 210

ACCIDENT LOCATIONS HIGHER THAT AVERAGE
Total Accidents per Million Vehicle Miles (Total/MVM)
Chart VIII-3

SEGMENT 2	ROUTE 405-ROUTE 110
SEGMENT 4	ROUTE 101-ROUTE 5
SEGMENT 6	ROUTE 710-ROUTE 19
SEGMENT 7	ROUTE 19-ROUTE 605
SEGMENT 8	ROUTE 605-JCT. RTES 57, 71, 210

IX. SEGMENT SUMMARIES
INTRODUCTION

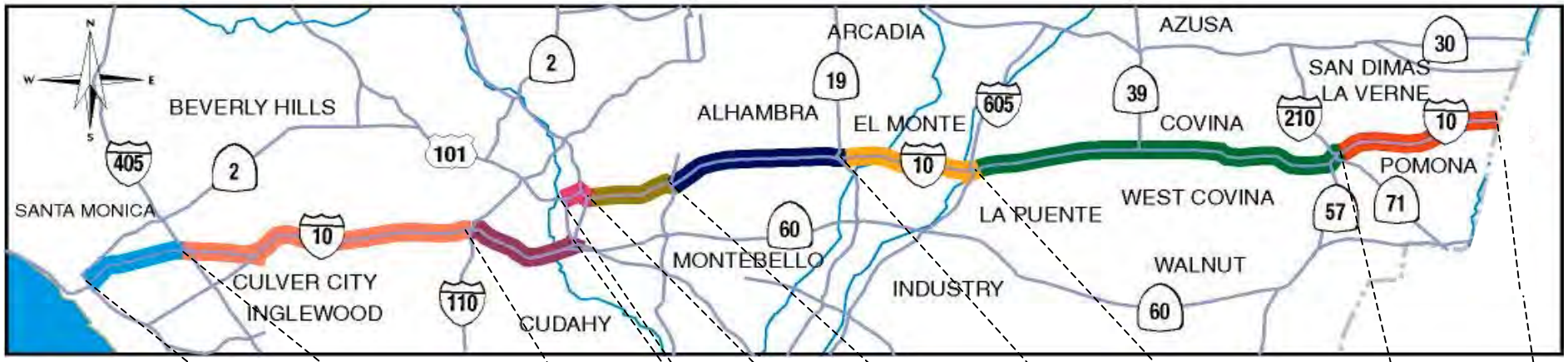
This TCR analyzes I-10 conditions using the "segment" as the study unit. Segments are generally defined as "freeway interchange to freeway interchange", "county line to freeway interchange" or "freeway interchange to end of freeway". The map on the following page illustrates these segments.

Each of the summaries that follows describes the segment's current and projected operating characteristics, existing configuration, projected traffic demand and proposed alternative improvements.

Documentation of sources for information in these summaries is in Section XII, beginning on page 130 of Section XIII (F).

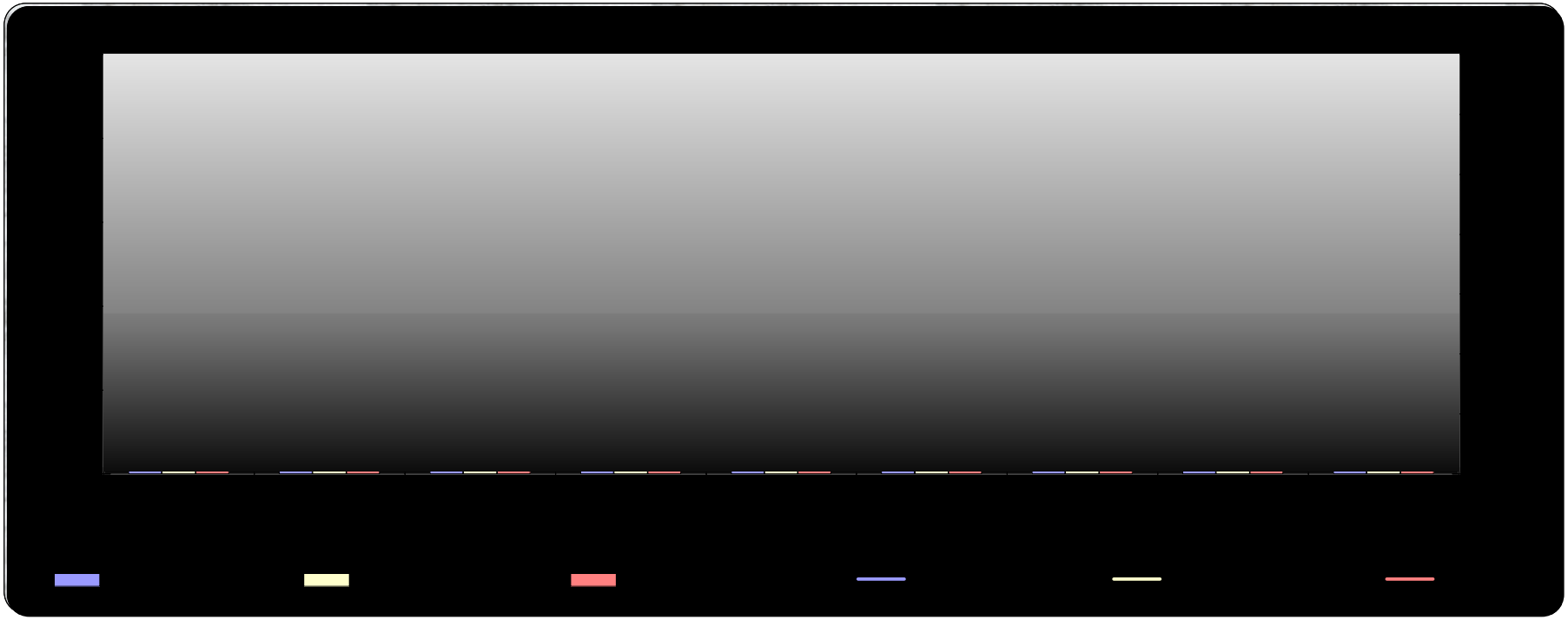
Interstate 10
Concept Summary - TCR Segmentation

Interstate 10
Concept Summary - Segment Configuration



Segment #	1	2	3	4	5	6	7	8	9
Existing									
Demand / Capacity	1.42	2.07	1.23	0.94	1.05	1.24	1.42	1.81	1.24
Avg. Daily Traffic (x1,000)	179	288	264	97	236	226	216	211	238
Number of Lanes	3	4	4	3	6	4	4	4	4
Pk.hour Level Of Service	F2	F3	F0	E	F0	F0	F2	F3	F0
2020 Null With Route 710 (Main Line)									
Demand / Capacity	1.47	1.93	1.92	2.20	1.44	1.62	1.71	1.83	1.92
Avg. Daily Traffic (x1,000)	182	304	332	188	275	239	197	213	271
Number of Lanes	3	4	4	3	6	4	4	4	4
Pk.hour Level Of Service	F3	F3	F3	F3	F2	F3	F3	F3	F3
2020 Concept (Alternate #1)									
Demand / Capacity	1.19	1.66	1.63	1.62	1.27	1.46	1.52	1.77	1.58
Avg. Daily Traffic (x1,000)	178	290	323	138	266	228	189	214	272
Number of Lanes	4	5	5	3	6	4	4	4	5
Pk.hour Level Of Service	F0	F3	F3	F3	F1	F3	F3	F3	F3

Interstate 10
Concept Summary - Level of Service



Segment #	1	2	3	4	5	6	7	8	9
Existing									
Demand / Capacity	1.42	2.07	1.23	0.94	1.05	1.24	1.42	1.81	1.24
Avg. Daily Traffic (x1,000)	179	288	264	97	236	226	216	211	238
Number of Lanes	3	4	4	3	6	4	4	4	4
Pk.hour Level Of Service	F2	F3	F0	E	F0	F0	F2	F3	F0
2020 Null With Route 710 (Main Line)									
Demand / Capacity	1.47	1.93	1.92	2.20	1.44	1.62	1.71	1.83	1.92
Avg. Daily Traffic (x1,000)	182	304	332	188	275	239	197	213	271
Number of Lanes	3	4	4	3	6	4	4	4	4
Pk.hour Level Of Service	F3	F3	F3	F3	F2	F3	F3	F3	F3
2020 Concept (Alternate #1)									
Demand / Capacity	1.19	1.66	1.63	1.62	1.27	1.46	1.52	1.77	1.58
Avg. Daily Traffic (x1,000)	178	290	323	138	266	228	189	214	272
Number of Lanes	4	5	5	3	6	4	4	4	5
Pk.hour Level Of Service	F0	F3	F3	F3	F1	F3	F3	F3	F3

INTERSTATE 10 - SEGMENT 1 SUMMARY

DESCRIPTION

Limits:	Jct. Rtes. 1 & 2 to Jct. Rte. 405
Post Miles:	R2.16 - 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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	4	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	191' - 303'
Median / Outside Shoulder:	22' / 10'
Design Speed (MPH)	70
Bridge Structures:	17

Corridor Characteristics

Trucks (% of ADT):	3%
Express Transit (lines):	2 lines
Operators:	MTA, SM
Rail Service:	None
Park & Ride Lots (Spaces):	None

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.39	1.11	0.36	1.16

TRAFFIC DATA

		EXISTING (1995)		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)		179,000		183,200		181,700		178,300	22,900	178,000	22,900
Lanes Configuration (ea. direction)		3							1	4	2
Volume											
AM Peak Hour	**E**	7,700		7,350		7,350		7,500	1,300	7,300	1,300
AM Peak Hour	**W**	7,100		6,400		6,450		6,850	900	6,750	900
PM Peak Hour	**E**	6,400	3	7,600	3	7,600	4	8,150	1,100	8,200	1,100
PM Peak Hour	**W**	7,050		7,900		7,950		8,600	800	8,600	800
Speed (mph)											
AM Average	**E**	35		38		38		> 50		> 50	
AM Average	**W**	41		48		48		> 50		> 50	
PM Average	**E**	48		36		36		> 50		> 50	
PM Average	**W**	42		32		32		48		48	
Service Characteristics											
Level Of Service, AM	**E**	F2		F1		F1		F0	C	F0	B
Level Of Service, AM	**W**	F1		F0		F0		E	B	D	A
Level Of Service, PM	**E**	F0		F2		F2		F0	C	F0	A
Level Of Service, PM	**W**	F1		F3		F3		F0	B	F0	A
Directional Split (%) AM	**E**	52%		53%		53%		52%	59%	52%	59%
Directional Split (%) PM	**E**	48%		49%		49%		49%	58%	49%	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

INTERSTATE 10 - SEGMENT 2 SUMMARY

DESCRIPTION	
Limits:	Rte. 405 to Rte. 110
Post Miles:	R5.45 - 14.84

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	6	1

Physical Characteristics	
Terrain:	Flat
Mainline R/W	200' - 322'
Median / Outside Shoulder:	10' - 99' (I/C split) / 8' - 10'
Design Speed (MPH)	70
Bridge Structures:	53

Corridor Characteristics	
Trucks (% of ADT):	5%
Express Transit (lines):	9 lines
Operators:	MTA, LX, SM
Rail Service:	None
Park & Ride Lots (Spaces):	2 (77)

Accident Rates per Million Vehicle Miles (MVM) (4/99 to 3/02)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.37	1.37	0.4	1.29

TRAFFIC DATA

		EXISTING (1995)		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)		287,600		303,800		304,100		289,500	41,800	344,400	41,800
Lanes Configuration (ea. direction)		4							1	6	1
Volume											
AM Peak Hour	E	12,800		11,450		11,500		11,550	2,200	12,950	2,200
AM Peak Hour	W	13,350		10,100		10,150		9,200	1,500	10,550	1,500
PM Peak Hour	E	13,500	4	11,250	4	11,250	5	11,900	1,800	14,350	1,800
PM Peak Hour	W	9,400		12,650		12,600		13,500	1,300	16,150	1,300
Speed (mph)											
AM Average	E	12		19		18		35		40	
AM Average	W	10		28		27		> 50		> 50	
PM Average	E	10		20		20		33		32	
PM Average	W	34		13		13		23		23	
Service Characteristics											
Level Of Service, AM	E	F3		F3		F3		F2	F1	F1	F1
Level Of Service, AM	W	F3		F3		F3		F0	D	F0	D
Level Of Service, PM	E	F3		F3		F3		F3	F0	F3	F0
Level Of Service, PM	W	F2		F3		F3		F3	D	F3	D
Directional Split (%) AM	E	49%		53%		53%		56%	60%	55%	60%
Directional Split (%) PM	E	59%		47%		47%		47%	58%	47%	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

INTERSTATE 10 - SEGMENT 3 SUMMARY

DESCRIPTION

Limits:	Rte. 110 to Jct. Rtes. 5, 60, and 101
Post Miles:	14.84 - 18.39

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	6	1

Physical Characteristics

Terrain:	Flat
Mainline R/W	147' - 253'
Median / Outside Shoulder:	22' - 99' (I/C split) / 0' - 10'
Design Speed (MPH)	70
Bridge Structures:	7

Corridor Characteristics

Trucks (% of ADT):	6%
Express Transit (lines):	9 lines
Operators:	MTA, LX, SM
Rail Service:	None
Park & Ride Lots (Spaces):	None

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.3	1.31	0.48	1.5

TRAFFIC DATA

		EXISTING (1995)		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)		264,400		331,800		332,200		322,700	38,600	384,200	38,600
Lanes Configuration (ea. direction)		4							1	6	1
Volume											
AM Peak Hour	**E**	7,000		12,600		12,450		12,100	2,100	14,050	2,100
AM Peak Hour	**W**	8,600		12,050		12,300		11,450	1,600	13,450	1,600
PM Peak Hour	**E**	8,600	4	13,300	4	13,450	5	13,550	1,700	16,250	1,700
PM Peak Hour	**W**	7,000		13,500		13,450		14,200	1,200	17,000	1,200
Speed (mph)											
AM Average	**E**	> 50		17		18		37		39	
AM Average	**W**	46		20		18		41		43	
PM Average	**E**	46		14		13		28		28	
PM Average	**W**	> 50		13		13		24		24	
Service Characteristics											
Level Of Service, AM	**E**	E		F3		F3		F2	F0	F1	F0
Level Of Service, AM	**W**	F0		F3		F3		F1	D	F1	D
Level Of Service, PM	**E**	F0		F3		F3		F3	E	F3	E
Level Of Service, PM	**W**	E		F3		F3		F3	C	F3	C
Directional Split (%) AM	**E**	45%		51%		50%		51%	57%	51%	57%
Directional Split (%) PM	**E**	55%		50%		50%		49%	59%	49%	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

INTERSTATE 10 - SEGMENT 4 SUMMARY

DESCRIPTION

Limits:	Rte.101 to Rte. 5
Post Miles:	S0.00 - S0.66

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	3	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	191' - 265'
Median / Outside Shoulder:	22' - 99' (I/C split) / 1' - 8'
Design Speed (MPH)	70
Bridge Structures:	6

Corridor Characteristics

Trucks (% of ADT):	6%
Express Transit (lines):	13 lines
Operators:	MTA, FT
Rail Service:	None
Park & Ride Lots (Spaces):	None

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.28	1.34	0.28	0.92

TRAFFIC DATA

		EXISTING (1995)		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)		97,000	3,350	181,400	17,800	187,900	17,800	137,700	17,800	137,100	17,800
Lanes Configuration (ea. direction)		3	1	3	1	3	1	3	1	3	2
Volume											
AM Peak Hour	**E**	1,950	150	6,100	500	6,050	500	5,000	500	5,200	500
AM Peak Hour	**W**	4,600	700	8,750	1,200	10,600	1,200	6,200	1,200	6,050	1,200
PM Peak Hour	**E**	4,950	650	10,200	1,100	11,550	1,100	8,500	1,100	8,300	1,100
PM Peak Hour	**W**	2,350	200	8,400	800	7,900	800	6,150	800	5,900	800
Speed (mph)											
AM Average	**E**	> 50		49		50		> 50		> 50	
AM Average	**W**	> 50		22		11		48		50	
PM Average	**E**	> 50		13		7		24		26	
PM Average	**W**	> 50		25		30		49		> 50	
Service Characteristics											
Level Of Service, AM	**E**	B	A	F0	A	F0	A	E	A	E	A
Level Of Service, AM	**W**	D	B	F3	C	F3	C	F0	C	F0	A
Level Of Service, PM	**E**	E	B	F3	C	F3	C	F3	C	F3	A
Level Of Service, PM	**W**	B	A	F3	B	F3	B	F0	B	F0	A
Directional Split (%) AM	**E**	30%	18%	41%	29%	36%	29%	45%	29%	46%	29%
Directional Split (%) PM	**E**	68%	77%	55%	58%	59%	58%	58%	58%	58%	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

INTERSTATE 10 - SEGMENT 5 SUMMARY

DESCRIPTION

Limits:	Jct. Rte. 5 to Jct. Rte. 710
Post Miles:	S0.66 = 18.39 - 21.38 / S1.06 = 29.60 - 34.41

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	6	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	256' - 284' (variable)
Median / Outside Shoulder:	22' / 8 - 13' (variable)
Design Speed (MPH)	70
Bridge Structures:	21

Corridor Characteristics

Trucks (% of ADT):	5%
Express Transit (lines):	13 lines
Operators:	MTA, FT
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	None

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.21	0.75	0.35	1.1

TRAFFIC DATA

		EXISTING (1995)		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)		236,300	5,800	270,600	17,800	274,900	17,800	266,400	17,800	265,000	17,800
Lanes Configuration (ea. direction)		6	1	6	1	6	1	6	1	6	2
Volume											
AM Peak Hour	**E**	6,050	200	11,550	500	9,450	500	9,900	500	10,000	500
AM Peak Hour	**W**	11,100	850	11,750	1,200	13,250	1,200	10,800	1,200	10,350	1,200
PM Peak Hour	**E**	10,850	700	14,450	1,100	15,250	1,100	13,400	1,100	13,250	1,100
PM Peak Hour	**W**	6,950	350	13,400	800	12,650	800	11,750	800	11,950	800
Speed (mph)											
AM Average	**E**	> 50		> 50		> 50		> 50		> 50	
AM Average	**W**	> 50		> 50		45		> 50		> 50	
PM Average	**E**	> 50		38		34		44		45	
PM Average	**W**	> 50		44		48		> 50		> 50	
Service Characteristics											
Level Of Service, AM	**E**	C	A	F0	A	D	A	D	A	E	A
Level Of Service, AM	**W**	F0	B	F0	C	F0	C	F0	B	E	A
Level Of Service, PM	**E**	F0	B	F2	C	F2	C	F1	B	F0	A
Level Of Service, PM	**W**	C	A	F1	A	F0	A	F0	A	F0	A
Directional Split (%) AM	**E**	35%	19%	50%	33%	42%	33%	48%	36%	49%	36%
Directional Split (%) PM	**E**	61%	67%	52%	67%	55%	67%	53%	64%	53%	64%

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

INTERSTATE 10 - SEGMENT 6 SUMMARY

DESCRIPTION

Limits:	Rte. 710 to Jct. Rte. 19
Post Miles:	21.38 - 26.86

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	4	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	190' - 285'
Median / Outside Shoulder:	12' - 74' / 8'
Design Speed (MPH)	70
Bridge Structures:	32

Corridor Characteristics

Trucks (% of ADT):	7%
Express Transit (lines):	9 lines
Operators:	MTA, FT
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	2 (205)

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.25	1.24	0.35	1.12

TRAFFIC DATA

		EXISTING (1995)		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)		226,100	12,800	242,400	19,900	239,000	19,900	227,700	19,900	226,700	19,900
Lanes Configuration (ea. direction)		4	1	4	1	4	1	4	1	4	2
Volume											
AM Peak Hour	**E**	7,150	250	8,800	700	9,150	700	8,350	700	8,200	700
AM Peak Hour	**W**	8,700	900	10,050	1,100	9,750	1,100	8,550	1,100	8,450	1,100
PM Peak Hour	**E**	8,700	800	11,450	1,200	11,300	1,200	10,200	1,200	10,050	1,200
PM Peak Hour	**W**	7,150	450	10,550	1,200	10,800	1,200	9,600	1,200	9,600	1,200
Speed (mph)											
AM Average	**E**	> 50		44		41		48		49	
AM Average	**W**	45		34		36		46		47	
PM Average	**E**	45		23		24		33		34	
PM Average	**W**	> 50		30		28		37		37	
Service Characteristics											
Level Of Service, AM	**E**	F0	A	F0	B	F1	B	F0	B	F0	A
Level Of Service, AM	**W**	F0	B	F2	C	F2	C	F0	C	F0	A
Level Of Service, PM	**E**	F0	B	F3	C	F3	C	F3	C	F2	A
Level Of Service, PM	**W**	F0	A	F3	C	F3	C	F2	C	F2	A
Directional Split (%) AM	**E**	45%	22%	47%	39%	48%	39%	49%	39%	49%	39%
Directional Split (%) PM	**E**	55%	64%	52%	50%	51%	50%	52%	50%	51%	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

INTERSTATE 10 - SEGMENT 7 SUMMARY

DESCRIPTION

Limits:	Rte. 19 to Jct. Rte. 605
Post Miles:	26.86 - 31.15

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	4	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	185' - 282'
Median / Outside Shoulder:	16' -76' / 2' -10'
Design Speed (MPH)	70
Bridge Structures:	20

Corridor Characteristics

Trucks (% of ADT):	6%
Express Transit (lines):	8 lines
Operators:	MTA, FT
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	4 (2359)

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.4	1.47	0.33	1.06

TRAFFIC DATA

		EXISTING (1995)		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)		215,600		193,500	20,900	197,000	20,900	188,600	20,900	187,800	20,900
Lanes Configuration (ea. direction)		4			1	4	1	4	1	4	2
Volume											
AM Peak Hour	**E**	3,700		7,350	700	7,700	700	6,950	700	6,900	700
AM Peak Hour	**W**	8,400		7,900	1,100	8,100	1,100	6,850	1,100	6,750	1,100
PM Peak Hour	**E**	8,150	4	10,000	1,300	10,100	1,300	9,000	1,300	8,850	1,300
PM Peak Hour	**W**	6,250		9,400	1,300	9,850	1,300	8,700	1,300	8,700	1,300
Speed (mph)											
AM Average	**E**	> 50		45		42		49		49	
AM Average	**W**	35		40		38		50		50	
PM Average	**E**	37		21		20		29		31	
PM Average	**W**	> 50		26		22		32		32	
Service Characteristics											
Level Of Service, AM	**E**	C		F0	B	F1	B	F0	B	F0	A
Level Of Service, AM	**W**	F2		F1	C	F2	C	F0	C	F0	B
Level Of Service, PM	**E**	F2		F3	D	F3	D	F3	D	F3	B
Level Of Service, PM	**W**	F0		F3	D	F3	D	F3	D	F3	B
Directional Split (%) AM	**E**	31%		48%	39%	49%	39%	50%	39%	51%	39%
Directional Split (%) PM	**E**	57%		52%	50%	51%	50%	51%	50%	50%	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

INTERSTATE 10 - SEGMENT 8 SUMMARY

DESCRIPTION

Limits:	Rte. 605 to Jct. Rtes. 57, 71, and 210
Post Miles:	31.15 - 42.44

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	4	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	160' - 400'
Median / Outside Shoulder:	8' - 16' / 8' - 10'
Design Speed (MPH)	70
Bridge Structures:	49

Corridor Characteristics

Trucks (% of ADT):	6%
Express Transit (lines):	8 lines
Operators:	MTA, FT
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	9 (1858)

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.35	1.14	0.32	1.02

TRAFFIC DATA

		EXISTING (1995)		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)		210,800		211,300	38,600	212,800	38,600	213,800	38,600	211,700	39,200
Lanes Configuration (ea. direction)		4			1	4	1	4	1	4	2
Volume											
AM Peak Hour	**E**	4,900		6,800	900	6,750	900	6,400	900	6,350	900
AM Peak Hour	**W**	7,600		9,350	2,200	9,750	2,200	8,000	2,200	7,300	2,400
PM Peak Hour	**E**	11,250	4	11,200	2,100	11,400	2,100	11,000	2,100	10,350	2,200
PM Peak Hour	**W**	10,650		9,450	1,800	9,400	1,800	9,250	1,800	9,200	1,800
Speed (mph)											
AM Average	**E**	> 50		> 50		> 50		> 50		> 50	
AM Average	**W**	46		30		27		43		49	
PM Average	**E**	17		17		16		18		22	
PM Average	**W**	20		29		30		31		32	
Service Characteristics											
Level Of Service, AM	**E**	D		F0	C	F0	C	F0	C	F0	A
Level Of Service, AM	**W**	F0		F3	F2	F3	F2	F1	F2	F0	C
Level Of Service, PM	**E**	F3		F3	F1	F3	F1	F3	F1	F3	C
Level Of Service, PM	**W**	F3		F3	F0	F3	F0	F3	F0	F3	C
Directional Split (%) AM	**E**	39%		42%	29%	41%	29%	45%	29%	47%	27%
Directional Split (%) PM	**E**	51%		54%	54%	55%	54%	54%	54%	53%	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

INTERSTATE 10 - SEGMENT 9 SUMMARY

DESCRIPTION

Limits:	Rtes. 57, 71, and 210 to SB Co. Line
Post Miles:	42.44 - 48.27

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,IRRS,STRAHNET,ICES,LIFELINE

Ultimate Concept

	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	N/A	N/A
Lanes Configuration (ea. direction)	4 + 1 truck	2

Physical Characteristics

Terrain:	Flat
Mainline R/W	176' -328'
Median / Outside Shoulder:	16' / 10'
Design Speed (MPH)	70
Bridge Structures:	19

Corridor Characteristics

Trucks (% of ADT):	9%
Express Transit (lines):	4 lines
Operators:	MTA, FT
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	5 (1301)

Accident Rates

per Million Vehicle Miles (MVM)
(4/99 to 3/02)

ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.36	1.22	0.38	1.22

TRAFFIC DATA

		EXISTING (1995)		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)		237,900		264,700	35,500	271,100	35,500	271,500	35,500	269,900	35,900
Lanes Configuration (ea. direction)		4		4	1	4	1	4 + 1 truck	1	4 + 1 truck	2
Volume											
AM Peak Hour	**E**	6,900		8,050	800	8,050	800	7,900	800	7,850	800
AM Peak Hour	**W**	8,500		10,300	2,200	10,850	2,200	9,400	2,200	9,050	2,400
PM Peak Hour	**E**	8,300		12,550	2,000	13,150	2,000	13,550	2,000	12,750	2,000
PM Peak Hour	**W**	7,500		10,750	1,600	11,000	1,600	11,600	1,600	11,450	1,600
Speed (mph)											
AM Average	**E**	> 50		49		49		> 50		> 50	
AM Average	**W**	45		30		26		> 50		> 50	
PM Average	**E**	47		16		13		26		31	
PM Average	**W**	> 50		27		25		39		40	
Service Characteristics											
Level Of Service, AM	**E**	E		F0	B	F0	B	D	B	D	A
Level Of Service, AM	**W**	F0		F3	F1	F3	F1	F0	F1	F0	C
Level Of Service, PM	**E**	F0		F3	F0	F3	F0	F3	F0	F3	C
Level Of Service, PM	**W**	F0		F3	D	F3	D	F1	D	F1	B
Directional Split (%) AM	**E**	45%		44%	27%	43%	27%	46%	27%	47%	25%
Directional Split (%) PM	**E**	53%		54%	56%	55%	56%	54%	56%	53%	56%

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

Interstate 10 - Summary of Concept Improvements

Segment	Limits	Existing Facility	Alternative Concept #1	Alternative Concept #2	Maintain Current D/C	LOS "D" Attainment
1	SR-1/SR-2 to I-405	3MF	4MF + 1HOV	4MF + 2HOV	4MF + 1HOV	6MF + 1HOV
2	I-405 to I-110	4MF	5MF + 1HOV	6MF + 1HOV	6MF + 1HOV	9MF + 1HOV
3	I-110 to ELA I/C	4MF	5MF + 1HOV	6MF + 1HOV	9MF + 1HOV	9MF + 1HOV
4	US-101 to I-5	3MF + 1HOV	3MF + 1HOV	3MF + 2HOV	8MF + 3HOV	6MF + 1HOV
5	I-5 to I-710	6MF + 1HOV	6MF + 1HOV	6MF + 2HOV	10MF + 3HOV	9MF + 1HOV
6	I-710 to SR-19	4MF + 1HOV	4MF + 1HOV	4MF + 2HOV	6MF + 3HOV	7MF + 1HOV
7	SR-19 to I-605	4MF	4MF + 1HOV	4MF + 2HOV	8MF + 1HOV	7MF + 1HOV
8	I-605 to I-210/SR-57/SR-71	4MF	4MF + 1HOV	4MF + 2HOV	6MF + 1HOV	8MF + 2HOV
9	I-210/SR-57/SR-71to Co Line	4MF	4MF + 1HOV + 1TL	4MF + 2HOV + 1TL	6MF + 1HOV + 1TL	8MF + 1HOV + 1TL

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

X. ROUTE ANALYSIS

I-10 Transit Component

Current System

The transit component for Interstate 10 embodies a multi-modal system including carpooling, Express Transit service, Commuter Rail (Metrolink), and Intercity Rail (Amtrak).

Four bus transit agencies and two rail agencies currently serve this route. Segments 1 and 2 (Beginning of Route to I-110) are served by Los Angeles Department of Transportation (LADOT) Commuter Express, Santa Monica Municipal Bus Lines and the Metropolitan Transportation Authority (MTA). Foothill Transit, the MTA, Southern California Regional Rail Authority (SCRRA) and Amtrak serve segments 3 through 9 (I-110, or Union Station, to the San Bernardino County Line). All of the transit agencies offer Express Transit to the Los Angeles Central Business District (CBD) during peak and off-peak hours. The agencies and individual transit lines are listed below.

Agency	Line #	Hours of Operation
Metropolitan Transit Authority	434, 436*, 439, 484, 490, 491, 497*, 576	Commute + Nightowl
Foothill Transit	479, 480, 481, 482, 486, 488, 493*, 495*, 498*, 499*, 699*	Commute + Extended
Los Angeles Department of Transportation	430*, 431*, 437*, 438*	Commute
Santa Monica Municipal Bus Line	S10	Commute + Extended
Southern California Regional Rail Authority	Metrolink	Commute
Amtrak	Sunset Limited	Intercity

Currently, there are three multi-modal facilities servicing this route. The largest, the El Monte Busway (located on Santa Anita Avenue in the City of El Monte) is a staging complex for carpools, van pools, local and express transit. The eleven-mile Busway

links Union Station in downtown Los Angeles with communities of the eastern San Gabriel Valley. The Busway station Park-n-Ride can accommodate up to 2, 070 vehicles. Two adjacent overflow lots increase the total to over 2,100 parking spaces. The nearby Metrolink station provides another 240 parking spaces.

MTA Line #	**Daily Boardings (CMP –'96)**
434	347
436*	347
439	2,110
484	7,156
490	3,739
491	3,044
497*	2,472
576	No data
Foothill Transit Line #	**Daily Boardings**
479	No data
480/481	12,360
482	4,883
486	4,627
488	3,304
493*	No data
495*	1,641
498*	2,173
499*	No data
699*	No data
LADOT	**Daily Boardings**
430*	88
431*	201
437*	167
438*	270
Santa Monica	**Daily Boardings**
S-10	2,228
Metrolink (SCRRA)	**Daily Boardings**
San Bernardino	6,660
Amtrak	**Daily Boardings**
Sunset Limited	N/A

* Peak period only

The El Monte Busway began operation in 1973 and is the oldest HOV facility in Los Angeles. Initially, it opened as an exclusive busway. Soon afterward, it allowed 3 or more person carpools to use the facility and remained the only facility in Southern California that required 3 or more persons per vehicle until the most recent decision to

revert it to 2 or more persons. The table below briefly summarizes the operation of the El Monte Busway.

HOV Operation on Route 10		
LA-010-25.09 Jackson O.C.[1]	**7:30 to 8:30 AM (WB)**	**4:15 to 5:15 PM (EB)**
Total Vehicles in HOV Lane	1,270	775
Total Vehicles on Mainline (4 lanes)	6,690	7,020
Total HOV People	7,277	4,069
Total Mixed-Flow People (4 lanes)	7,500	8,815
HOV Occupancy	5.73	5.25
Mainline Occupancy	1.12	1.26

The West Los Angeles Transit station (located at Fairfax Blvd. and Washington Blvd.) is a staging area for both local and express transit. The MTA and LADOT are the primary managers of this facility.

Los Angeles Union Station (located on Alameda St. and Cesar Chavez Street.) is the central focal point for transit and commuter rail.

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 August 1998, the San Bernardino Line (San Bernardino to Los Angeles) carries approximately 7,650 riders per day.

The Amtrak lines Desert Wind (Los Angeles to Chicago), Southwest Chief (Los Angeles to Chicago) and Sunset Limited (Los Angeles to Miami) also utilize this corridor from Union Station on a daily round-trip basis, except for the Sunset Limited which operates three days a week.

[1] "*Status of the HOV System",* Caltrans' District 7, Division of Operations, Office of Traffic Management, February 26, 1998, p. 6.

Recently, Amtrak and Metrolink introduced the Rail 2 Rail program to interconnect their services. For example, Amtrak or Metrolink monthly pass holders may travel on either Amtrak or Metrolink at no additional cost to destinations within limits of the pass.

Future Considerations

Recent county legislation ("MTA Reform and Accountability Act of 1998"), which has discontinued funding for all future rail projects, has given the 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 MTA's long-range Transportation Plan is the preparation of a Bus System Improvement Plan to improve and augment transit services on overcrowded routes throughout Los Angeles County.

In addition, several projects are in development stages including the followings: extension of the El Monte Busway to the San Bernardino County line, a distance of approximately twenty miles is in the planning stage. A universal fare system called EZ-Pass, which will allow unlimited travel on Metro Bus and Metro Rail Systems and 12 municipal bus operators. Introduction of 272 60-foot long compressed natural gas (CNG) buses with more seats to high ridership lines, and the new Metro Rail Gold line from Los Angeles to Pasadena.

Current/Future Deficiencies

The following table shows the current transit deficiencies for I-10. This information utilizes the "Sketch Plan" (RCR Guidelines, 1987) method to roughly estimate the amount of transit service (if any) that would be necessary to achieve the desired route concept. The formula employed can be summarized as follows:

The “sketch plan” formula is based on the above 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 use the 1.3 PPV value for illustrative purposes only). This indicates the amount of people movement.
- Peak hour volumes are taken from the segment summaries found in Section III. Both current and 2020 deficiencies do not incorporate HOV lane volumes in the calculations.

Excess Demand = (PK – MSF @ “D”) x 1.3 (ppv)
Transit Required = (PK – MSF @ “D”) x 1.3 (ppv) ÷ 50 (ppv)

The formula was used to calculate both current and future transit deficiencies. Where negative values occur for hourly bus requirements, the value is equal to zero.

Current Deficiencies

Segment	Highest Peak Hour Volume (vehicle)	# Lanes (Each Dir.)	Vehicle Capacity Hr/Lane	LOS "D" (0.93) Capacity	0.93 x # Lanes	Demand Exceeding Capacity @ LOS "D" (people)	Buses per Hour Required to Achieve Concept
1	7700	3	2000	1860	5580	2756	**55**
2	13500	4	2000	1860	7440	7878	**158**
3	8600	4	2000	1860	7440	1508	**30**
4	4950	3	2000	1860	5580	0	**0**
5	11100	6	2000	1860	11160	0	**0**
6	8700	4	2000	1860	7440	1638	**33**
7	8400	4	2000	1860	7440	1248	**25**
8	11250	4	2000	1860	7440	4953	**99**
9	8500	4	2000	1860	7440	1378	**28**

2020 Deficiencies

Segment	Highest Peak Hour Volume (vehicle)	# Lanes (Each Dir.)	Vehicle Capacity Hr/Lane	LOS "D" (0.93) Capacity	LOS "D" x # Lanes	Demand Exceeding Capacity @ LOS "D" (people)	Buses per Hour Required to Achieve Concept
1	8600	4	2000	1860	7440	1508	**30**
2	13500	5	2000	1860	9300	5460	**109**
3	14200	5	2000	1860	9300	6370	**127**
4	8500	3	2000	1860	5580	3796	**76**
5	13400	6	2000	1860	11160	2912	**58**
6	10200	4	2000	1860	7440	3588	**72**
7	9000	4	2000	1860	7440	2028	**41**
8	11000	4	2000	1860	7440	4628	**93**
9	13550	5	2000	1860	9300	5525	**111**

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, safe, clean, well-maintained buses and Park-and-Ride facilities, and attractive fare pricing (similar to the Proposition "A" 41% fair reduction from July 1982 to July 1985[2]) will 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.

Transportation System Management/Travel Demand Management

With the passage of SB-45 in 1998, the Transportation System Management program funds were consolidated with other program funds to provide for a broad range of

[2] 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, p. 16.

transportation improvements through the Interregional Improvement Program (IIP), which include transportation system and demand management projects.

A major element of the I-10 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.

HOV RAMP METERING AND HOV BYPASS LANES

There are 859 ramps that are metered in Los Angeles and Ventura Counties, including freeway connector ramps. Of these, 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 numbers 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 125 ramp meters on Route 10 in District 7, of which 40 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 in the Caltrans district office.

Transportation Demand Management

This strategy attempts to divert highway demand before it reaches the highway system by offering alternatives that will discourage solo driving. Included are congestion measures such as ridesharing, home or satellite telecommuting, variable work hours, employee transportation allowances, and low-cost parking for car and vanpools.

INTERSTATE 10

Park and Ride/Bicycle Facilities

Lot Name	#	PM	City	Operator	Bike Lockers	# Stalls	Transit Service
St. John's Church	82	5.8	Palms	St. John's Presbyterian Church	0	35	Culver City Bus, Santa Monica Municipal Bus
Washington/Fairfax	62	9.3	Los Angeles	Department of Water and Power	0	42	Commuter Express, Culver City Bus, MTA
Civic Auditorium	95	24.8	San Gabriel	San Gabriel	0	100	MTA
Del Mar	94	25.3	San Gabriel	San Gabriel	0	105	MTA
El Monte Busway	28	28.7	El Monte	El Monte Bus Station	0	2,073	El Monte Trolley, Foothill Transit, MTA
Fire Station	29	28.7	El Monte	El Monte Fire Station	0	23	El Monte Trolley, Foothill Transit, MTA
Pioneer Park	30	28.7	El Monte	El Monte	0	20	El Monte Trolley, Foothill Transit, MTA
El Monte	31	29.0	El Monte	Metrolink	0	243	El Monte Trolley, Foothill Transit, MTA, Metrolink Services
West Covina VFW	112	34.3	West Covina	VFW	0	200	MTA, Foothill Transit, West Covina Shuttle, Metrokink Services
Baldwin Park Metrolink	6	34.4	Baldwin Park	Metrolink	0	210	MTA, Foothill Transit, West Covina Shuttle
Badillo/Ramona	5	34.5	Baldwin Park	Baldwin Park	0	94	none
West Covina Plaza	113	35.1	West Covina	West Covina Plaza	0	253	Foothill Transit, West Covina
United Methodist Church	115	36.5	West Covina	United Methodist Church	0	95	Foothill Transit, West Covina Transit
United Methodist Church of Covina	20	37.0	Covina	United Methodist Church of Covina	0	12	Foothill Transit, MTA
Covina Metrolink	21	37.4	Covina	Metrolink	0	255	Foothill Transit, MTA, Metrolink Services
Eastland Shopping Center	114	38.0	West Covina	Eastland Shopping Center	0	500	Foothill Transit, MTA, West Covina Shuttle
Via Verde/10	93	40.5	San Dimas	Los Angeles County	0	239	Foothill Transit, MTA
Fairplex	85	45.3	Pomona	Los Angeles County	10	553	Foothill Transit, MTA
Garey/10	88	45.7	Pomona	State	6	62	Foothill Transit, MTA
Pomona	89	45.7	Pomona	Metrolink	0	244	Foothill Transit, Metrolink Services
Indian Hills Market Place	87	47.7	Pomona	Indian Hills Market Place	0	25	Foothill Transit, MTA
Claremont	15	47.8	Claremont	Metrolink	0	417	Foothill Transit, Metrolink Services
					16	**5,800**	

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. Total Goods movement traffic is expected to grow by more than 80% in the next 25 years as international trade volume triple. 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 of the specific conditions affecting Route 10 are as follows:

Truck: Route 10 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 Passage Multi-Modal Corridor for goods movement between Los Angeles and Houston, Texas. As such, it will carry increasing truck traffic from the ports of Los Angeles and Long Beach. Los Angeles International Airport is nearby, is accessible via Route 405 and La Cienega Blvd., and will also produce increasing truck traffic on Route 10. Ontario International Airport to the east in San Bernardino County is also nearby and will likewise impact Route 10. Truck volume in 2000 ranges from 2.1% to 9.5% of ADT. Regionally, truck traffic is expected to increase by over 40% by 2020, with virtually no capacity available to handle this added volume (see SCAG RTP). However, a National I-10 Freight Corridor study is under way that anticipates the deployment of new technologies and other improvements which, among other benefits, will enhance capacity and safety. Also, the next phase of the SR-60 Corridor Study examining truck lane alternatives includes the I-10 as a possible alignment.

Rail: Union Pacific freight lines generally serve the same areas as Route 10, while Burlington Northern Santa Fe freight lines serve the eastern end of Route 10 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 RTP). Service improvements could include enhancements to and/or additional transfer facilities, additional track, and more grade separations. The Alameda Corridor East includes an extensive list of these improvements and, as such, will significantly enhance the movement of rail freight from Downtown Los Angeles to the San Bernardino County line.

Seaports: As part of the Southwest Passage Multi-Modal Corridor, Route 10 handles 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 expect to double their cargo volume by 2020 (see SCAG RTP). As such, they are one of the major gateways to California and the U.S.

Airports: Los Angeles International Airport is near Route 10 and accessible via Route 405 and La Cienega Blvd. Ontario International Airport in San Bernardino County is also near Route 10. Overall, air passenger travel is expected to double by 2020, and air cargo activity is expected to triple regionally, with Los Angeles International currently handling 79% and Ontario International 17% of this cargo volume (see SCAG RTP). Expansion of Los Angeles International is currently being planned, and this could have a significant impact on the surrounding area.

GLOBAL GATEWAYS

The Global Gateways Development Program is an effort to improve freight mobility and identify high priority facilities and projects to foster a multimodal, safe, seamless, and efficient goods movement system. 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. (See also the Global Gateways Development Program report, January, 2002.)

TECHNOLOGY

Smart Corridor

The Santa Monica Freeway Smart Corridor is a cross-jurisdictional project to reduce congestion and increase efficiency in the Santa Monica Freeway Corridor. This corridor consists of the Santa Monica Freeway, Washington Blvd., Adams Blvd., Venice Blvd., Pico Blvd., and Olympic Blvd. The agencies involved are FHWA, Caltrans, CHP, LACMTA, LADOT, LAPD, Culver City, Beverly Hills, and Santa Monica. Numerous Intelligent Transportation System techniques are applied to achieve the objectives, including: detector loops for monitoring and control; signal timing; ramp metering; "expert systems" software for coordination and database management; Traveler Information Systems such as Highway Advisory Radio and Changeable Message Signs; incident management using emergency response teams and service patrols; and Closed Circuit Television. The effectiveness of this interagency coordination and application of advanced technologies is demonstrated by the increased traffic throughput in this corridor, and the success in easing congestion following the Northridge earthquake, which collapsed a section of the Santa Monica Freeway. A similar Smart Corridor for the San Bernardino Freeway would be equally beneficial.

Intelligent Transportation Systems

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.

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

Traffic Operations Strategies (TOPS) is a 10-year plan to optimize existing freeway system level of service through system management and utilization that maximizes service flow and reliability. This will be achieved by means of a variety of strategies, including adding HOV and auxiliary lanes, implementing bus rapid transit, making operational improvements, eliminating bottlenecks, providing real time travel information and options for travelers, and new technology implementation. The goals will be to improve safety and reduce the highway death rate by 10%, to improve mobility with a travel time reliability of 70%, and to improve system performance with investment decisions based upon consistent and supportable performance measures.

High Speed Rail

The proposed statewide high speed rail system is considering a route through the Los Angeles region that would serve Palmdale, Santa Clarita, Burbank, Los Angeles Union Station, Ontario International Airport, and Riverside. In addition, SCAG has begun a MAGLEV study that would use an I-10 alignment to connect Los Angeles International Airport, Los Angeles Union Station, Ontario International Airport, and March Air Force Base. It is anticipated that such systems, along with providing interregional travel, would have considerable patronage and provide significant traffic relief to nearby freeways.

National I – 10 Freight Corridor Study

The National I-10 Freight Corridor Study is an effort to analyze freight movements and impacts and recommend future improvements. It is being conducted by the states along the corridor, namely: California, Arizona, New Mexico, Texas, Louisiana, Mississippi, Alabama, and Florida, with Texas in the lead, and FHWA, with participants including elected and other public officials, industry representatives, academia, ITS providers, and many others. Study goals involve providing an efficient and reliable intermodal transportation system for international and domestic goods movement, including capacity improvements, increased safety and efficiency, reduced congestion and pollution, enhanced economic vitality, and fostering the development of multimodal freight transportation facilities.

Parallel Arterials

There are several arterial streets paralleling I-10 that provide alternative routes to commuters wishing to avoid peak hour congestion on the freeway. 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 for commuters. Listed below are some selected local arterials that parallel I-10

Arterial Name	Arterial Description					
	Segment No.	City or Community	Thomas Guide Page No.	Boundary Streets	Existing Lanes	Future Plans
Pico Blvd.	1, 2	Santa Monica, Los Angeles	671, 632 - 634	Jct. Rte. 1 - Figueroa St.	2; 2 - 3	none
Venice Blvd.	1, 2	Los Angeles	671, 632 - 634	Jct. Rte. 1 - Figueroa St.	2 - 3; 2 - 3	none
Olympic Blvd.	1, 2, 3	Santa Monica, Los Angeles	671, 632 - 634	Jct. Rtes. 1 & 2 - Soto St.	2 - 3; 3; 2 - 3	none
National Blvd. / Jefferson Blvd.	2, 3	Los Angeles	632 - 634, 674	Overland Ave. - Central Ave.	2; 2	none
Washington Blvd.	1, 2 ,3	Culver City, Los Angeles	632 - 634	Jct. Rte. 1 - Soto St.	2; 2 - 3; 2 - 3	none
Main St.	4	Los Angeles	634	Alameda St. - Valley Blvd.	2	none
Mission Rd.	4	Los Angeles	634	Soto St. - Valley Blvd.	2	none
Cesar Chavez Ave.	4, 5	Los Angeles, East Los Angeles	634, 635	Soto St. - Atlantic Blvd.	2; 2	none
Valley Blvd.	5, 6, 7	Los Angeles, Alhambra, San Gabriel, Rosemead, El Monte, Industry	635, 595 - 597, 637	Main St. & Mission Rd. - Puente Ave.	2; 2; 2	none
Garvey Ave.	6,7	Alhambra, Monterey Park, Rosemead, El Monte	635 - 637	S. Fremont Ave. - Durfee Ave.	2; 2	none
Puente St.	8	Baldwin Park, West Covina, Covina	637, 638, 598, 599	Valley Blvd. - Grand Ave.	2	none
Ramona Blvd. / Badillo St.	8	El Monte, Baldwin Park, West Covina, Covina, San Dimas	597 - 599	Peck Rd. - Lone Hill Ave.	2	none
Live Oak Ave. / Arrow Hwy.	8, 9	Irwindale, Baldwin Park, Azusa, Covina, Glendora, San Dimas, La Verne, Pomona, Claremont	597 - 601	Peck Rd. - County Line	2; 2-3	none
San Bernadino Ave.	9	Pomona	601	N. Towne Ave. - County Line	1	none

XI. IMPROVEMENTS

This section contains four "improvement" listings:

- **Summary of Concept Improvements:** (Page 64) This summarizes improvements from the Segment Summaries and from the final "Illustrated Improvement Section".

- **Programmed Improvements:** (Page 83) This section lists improvements that are currently programmed on I-10.

- **Illustrated Improvement Section:** From page 84 to 93, this section is intended to illustrate the scale of the congestion problem on I-10. The "Concept" illustrates the preferred Transportation Concept for the target segment. The next two illustrations describe the lane equivalents necessary to either maintain the current level of congestion or to attain LOS "D". **Neither of the latter illustrations is intended to suggest projects for programming.** They are intended to provide a visual image of the needs in the I-10 corridor.

- **Interchange Improvement Section:** From page 94 to 104, this section describes the major interchanges along I-10, as they currently exist, and identifies deficiencies and recommendations for improvements.

PROGRAMMED IMPROVEMENTS

The table on page 83 lists Interstate 10 capacity enhancement and operational improvement projects programmed for construction. Below is a brief description of seven programming documents[1] which provides 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 RTIP projects have federal funding components, they will also appear in the FTIP once selected for the STIP (see below).

Interregional Improvement Program (IIP) -- A four-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 will also appear in the FTIP and FSTIP.

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

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[1] The governor approved Senate Bill 45 on October 2, 1997. The bill significantly changes transportation funding in California. The California Department of Transportation, in cooperation with the California Transportation Commission (CTC), transportation planning agencies and county transportation commission and local governments shall develop guidelines for the development of the State Transportation Improvement Program (STIP) and the incorporation of projects into the STIP. The CTC shall adopt the guidelines by December 31, 1998.

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.

Traffic Operations Program Strategies (TOPS) -- A program 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 TOPS 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).

PROGRAMMED PROJECTS
Interstate 10

Segment	EA [2]	PPNO [3]	CO	ROUTE	POST MILE	Description	Support Cost	Capital Cost	Total Cost	Start Date	Complete [4]
1 - 3	20410K	2673	LA	10	R2.1/18.7	Long Life Rehabilitate Main Line	N/A	N/A	N/A	N/A	N/A
1, 2	147901	0237	LA	10	R4.2/14.8	Construct Pavement Access	1259K	6057K	7316K	8/23/99	2/16/04
1	20420K	2685	LA	10	R4.7/R4.8	Add Lane	N/A	N/A	N/A	N/A	N/A
2	20320K	2665	LA	10	R6.4/R6.5	Add Lane	N/A	N/A	N/A	N/A	N/A
2	023140	0250S	LA	10	R9.6/R10.1	Construct Soundwall	1626K	2609K	4235K	5/5/89	6/16/04
2, 3	22220K	2959	LA	10	14.2/18.1	Bridge Rehabilitate and Repair	N/A	N/A	N/A	N/A	N/A
5 - 7	166801	0262P	LA	10	18.8/28.2	Rehabilitate Bus and HOV Lanes	N/A	N/A	N/A	N/A	N/A
6, 7	19360K	2275	LA	10	21.5/27.1	Grind and Overlay	N/A	N/A	N/A	N/A	N/A
7	106951	0295M	LA	10	28.0/31.2	Construct HOV Lanes	N/A	N/A	N/A	N/A	N/A
8	117070	0306H	LA	10	31.2/33.4	Construct HOV Lanes	17100K	95373K	112470K	8/11/00	11/10/08
8	117080	0309N	LA	10	33.4/37.5	Construct HOV Lanes	18300K	78171K	96471K	8/11/00	6/15/02
8	111721	0309S	LA	10	33.4/37.5	Construct Soundwall	2301K	3787K	6088K	12/18/90	12/18/90
8	119340	0310B	LA	10	37.5/42.4	Construct HOV Lanes	19000K	85532K	104532K	8/11/00	11/18/11
9	122401	N/A	LA	10	42.4/48.3	Construct HOV Lanes	N/A	N/A	N/A	N/A	N/A

EA [2]: Expenditure Authorization
PPNO [3]: Planning and Program Number
Complete [4]: Target Completion Date
N/A- No Workplan Associated With Expenditure Authorization
K=Thoiusanc ds

Improvements

Legend

Concept: Proposed concept facility based on demand and policy.

Maintain Current Level Of Congestion: Freeway lane equivalents necessary to maintain the current Demand/Capacity Ratio.

LOS "D" Attainment: Freeway lane equivalents necessary to attain Level Of Service "D".

Single Occupancy Vehicle Lane = 2,000 vehicles per lane per hour

High Occupancy Vehicle Lane = 1,650 vehicles per lane per hour

Heavy Rail = 50,000 - 100,000 passenger per day*

High Speed Rail (shown for information only)

Truck Lane = 1,500 vehicles per lane per hour

* This represents the approximate range between actual ridership on the LACMTA Blue Line (47,000) and the 100,000 passengers per day estimated by SCAG in this corridor. Current ridership on the Metrolink - Santa Clarita line is approximately 3,800 daily.

Interstate 10
SEGMENT 1
Begin Route to I-405
In Each Direction

CONCEPT

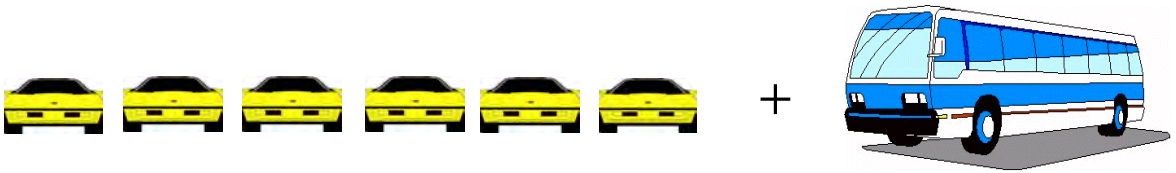
LOS = F0
D/C Ratio = 1.19

MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
D/C Ratio = 1.19

LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.80



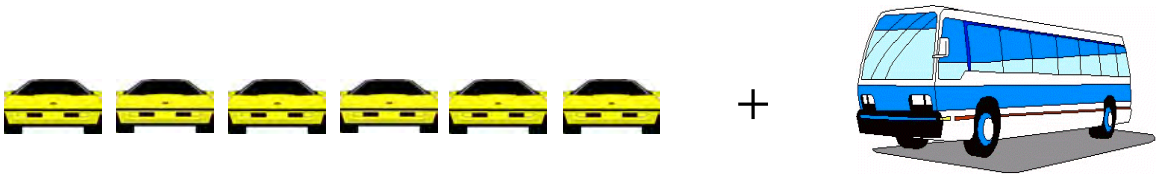
Interstate 10
SEGMENT 2
I-405 to I-110
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.66

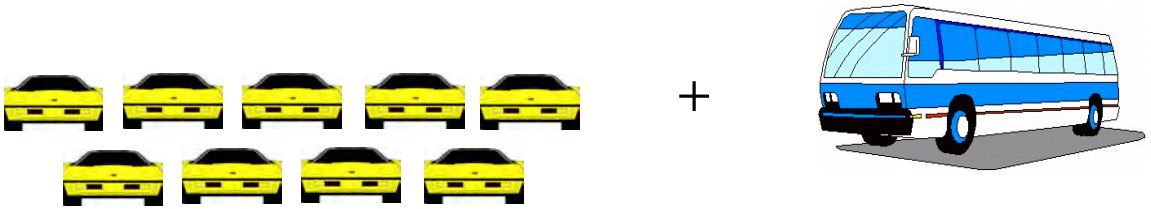
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F2
D/C Ratio = 1.38



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.92



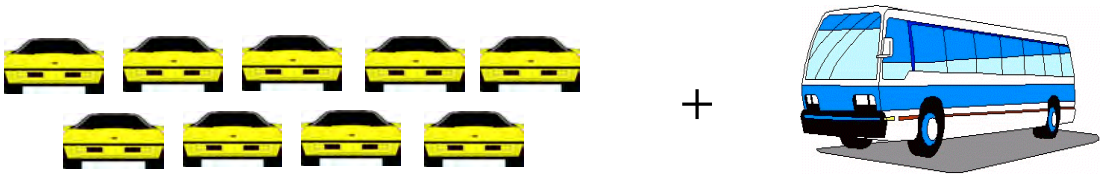
Interstate 10
SEGMENT 3
I-110 to East L. A. Interchange
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.63

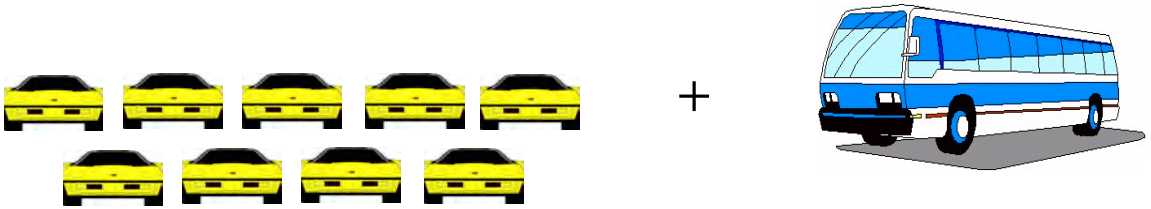
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = D
D/C Ratio = 0.90



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.90



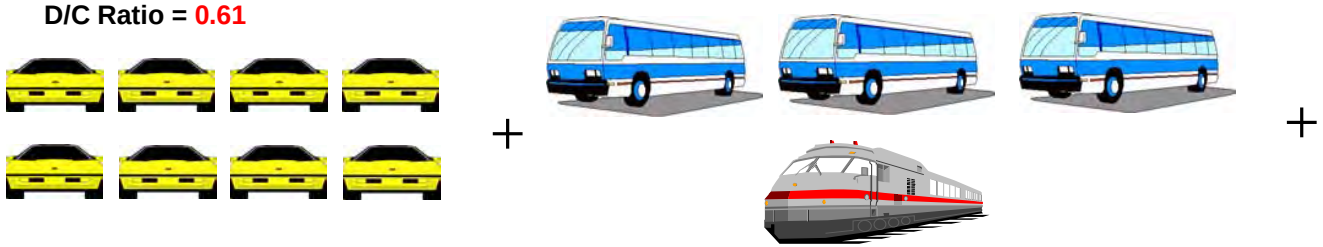
Interstate 10
SEGMENT 4
US-101 to I-5
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.62

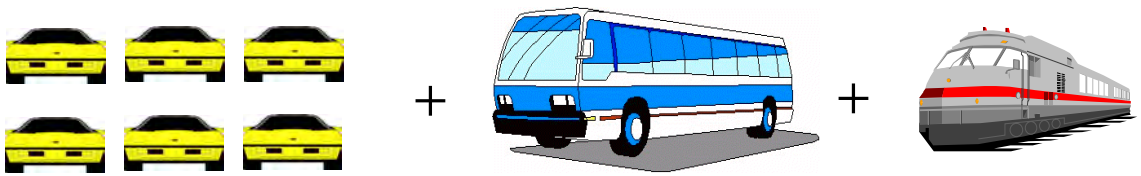
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = C
D/C Ratio = 0.61



LOS "D" ATTAINMENT

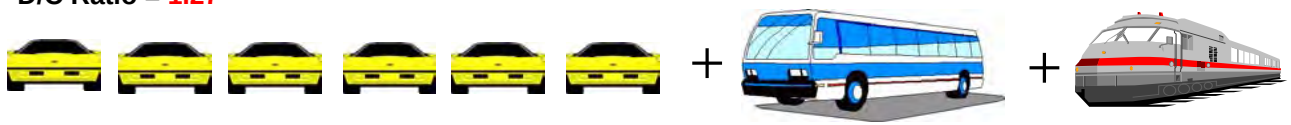
LOS = D
D/C Ratio = 0.81



Interstate 10
SEGMENT 5
I-5 to I-710
In Each Direction

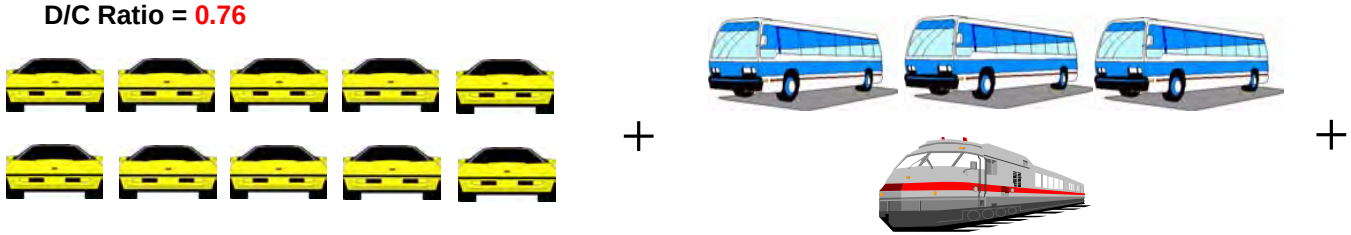
CONCEPT

LOS = F1
D/C Ratio = 1.27



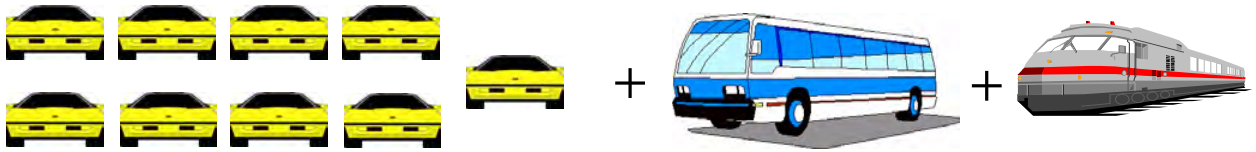
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = C
D/C Ratio = 0.76



LOS "D" ATTAINMENT

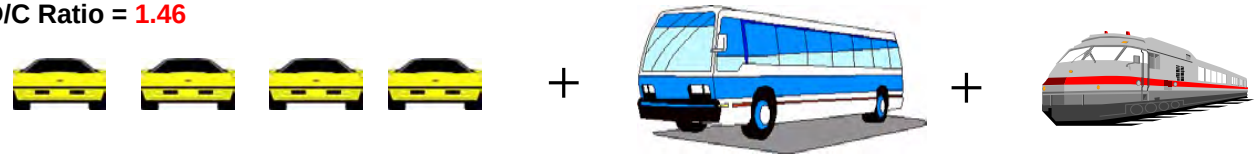
LOS = D
D/C Ratio = 0.84



Interstate 10
SEGMENT 6
I-710 to SR-19 (Rosemead Blvd.)
In Each Direction

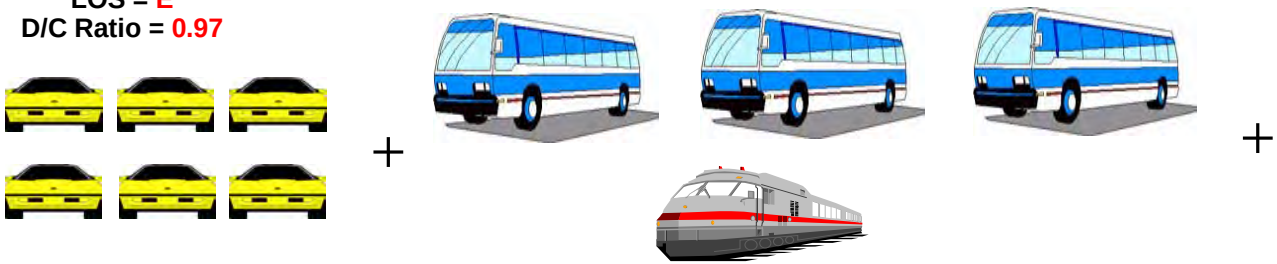
CONCEPT

LOS = F3
D/C Ratio = 1.46



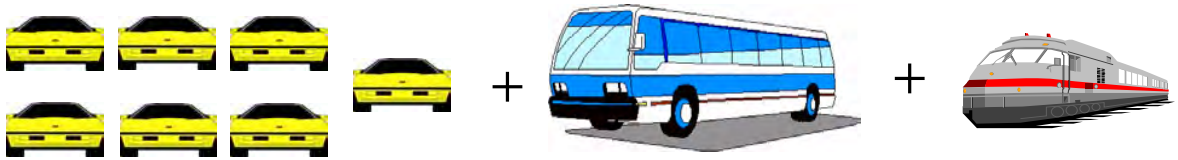
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = E
D/C Ratio = 0.97



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.83



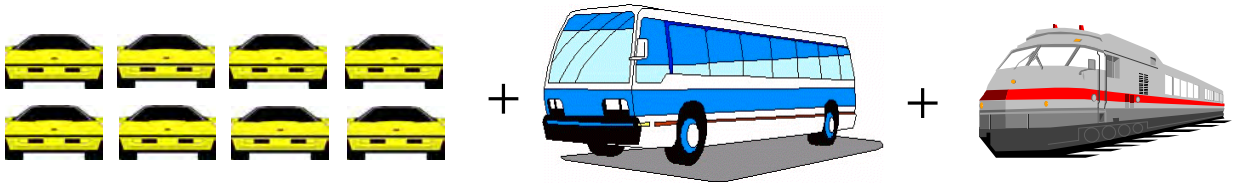
Interstate 10
SEGMENT 7
SR-10 (Rosemead Blvd.) to I-605
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.52

MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = C
D/C Ratio = 0.76



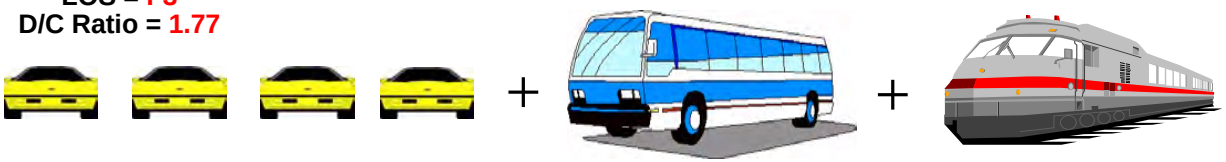
LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.87

Interstate 10
SEGMENT 8
I-605 to I-210/SR-57/SR-71
In Each Direction

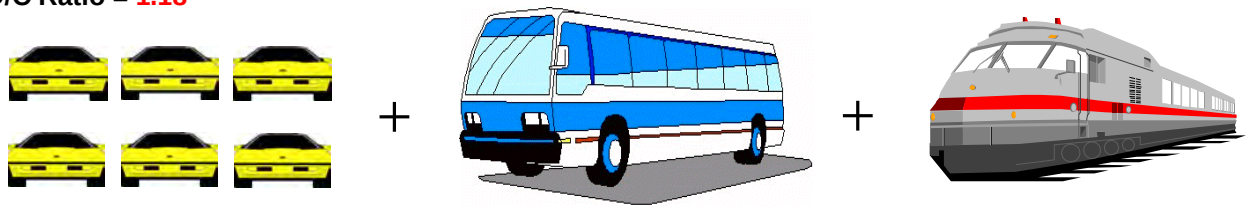
CONCEPT

LOS = F3
D/C Ratio = 1.77



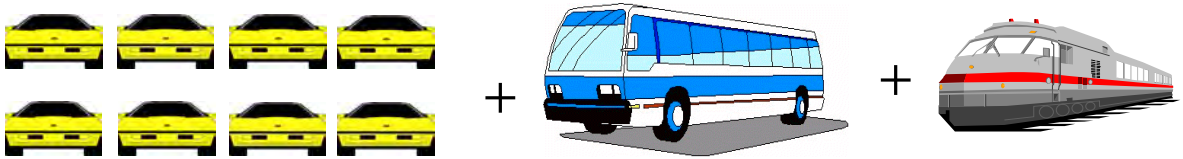
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
D/C Ratio = 1.18



LOS "D" ATTAINMENT

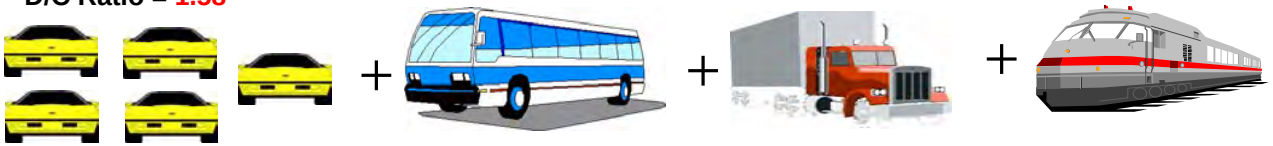
LOS = D
D/C Ratio = 0.88



Interstate 10
SEGMENT 9
I-210/SR-57/SR-71 to San Bernardino County Line
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.58

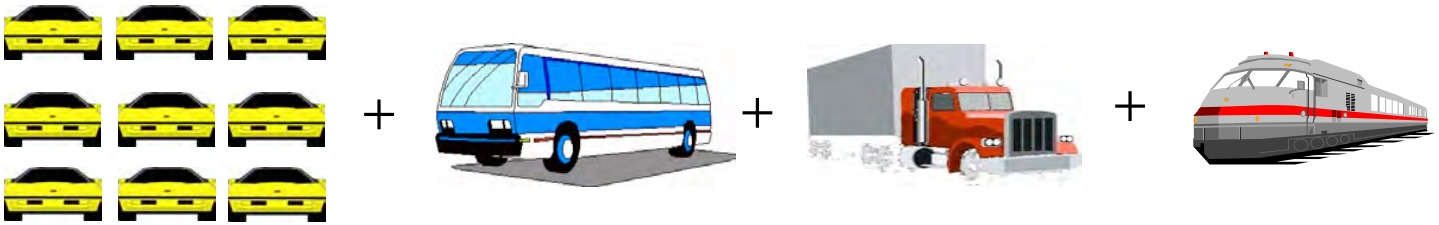


MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
D/C Ratio = 1.13

LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.88



I-10 / SR-1 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
SR-1 to E/B 10	27578/1999	2	2	1905		F-2061 F-2062		
W/B 10 to SR-1	22665/1999	2	1	1593	12			

I-10 / I-405 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B 405	25581	1	1	1848	74	F-1930 F-1931 F-2066 F-2067		
E/B 10 to S/B 405	27182/1999	1	1	2032	22			
W/B 10 to N/B 405	36413/1999	2	2	2662	20			
W/B 10 to S/B 405	28575/1999	2	2	1953	64			
N/B 405 to E/B 10	25581/1999	2	1	1848	16			
N/B 405 to W/B 10	28706/1999	2	1	2348	13			
S/B 405 to E/B 10	35189/1999	1	1	2503	13			
S/B 405 to W/B10	21972/1999	1	1	2148	5			

I-10 / LA BREA AVE. EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B LA BREA	10863 / 1999	1	1	773	36	F-2073 F-2074		
E/B 10 to S/B LA BREA	4307 / 1999	1	1	413	8			
W/B 10 to N/B LA BREA	11144 / 1999	1	1	775	56			
W/B 10 to S/B LA BREA	9426 / 1999	1	1	803	6			
N/B LA BREA to E/B 10	10123 / 1999	2	1	756	14			
N/B LA BREA to W/B 10	4831 / 1999	1	1	404	24			
S/B LA BREA to E/B 10	12436 / 1998	1	1	932	32			
S/B LA BREA to W/B10	10223 / 1999	2	1	661	6			

I-10 / I-110 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B 110	56900 / 1999					F-1357 F-1358 F-2078 F-2079		
E/B 10 to S/B 110	33600 / 1999	1	1		12			
W/B 10 to N/B 110	17800 / 1999	2	2		64			
W/B 10 to S/B 110	28300 / 1999	2	1		52			
N/B 110 to E/B 10	27700 / 1999	1	1		52			
N/B 110 to W/B 10	20500 / 1999	1	2		24			
S/B 110 to E/B 10	27000 / 1999							
S/B 110 to W/B 10	14400 / 1999	3	2					

I-10 / I-5 / US-101 / SR-60 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to E/B 60	47900 / 1999	3	3		12	F-1281 F-1282 F-1283 F-1777		
E/B 10 to N/B 101							Missing freeway to freeway connector	For free traffic flow, construct freeway to freeway connector.
E/B 10 to N/B 5	49091/1995	2	3		2			
S/B 101 to W/B 10							Missing freeway to freeway connector	For free traffic flow, construct freeway to freeway connector.
S/B 5 to W/B 10	45500 / 1993	3	3					
W/B 60 to W/B 10	92500 / 1999							

I-10 / I-10N / I-5 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
N/B 5 to E/B 10	38400 / 1999	2	2			F-1283 F-1849 F-1850		
W/B 10 to N/B 5	35500 / 1999	2	1		62			
W/B 10 to S/B 5	40200 / 1999	2	2	3200				
S/B 5 to E/B 10	33400 / 1999				78			

I-10 / I-710 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B 710	6300 / 1999	1	1		4	F-1528 F-1529 F-1852		
E/B 10 to S/B 710	21900 / 1999				10			
W/B 10 to N/B 710	1900 / 1999	1	1					
W/B 10 to S/B 710	32800 / 1999	2	1		18			
N/B 710 to E/B 10	24700 / 1999	1	1		72			
N/B 710 to W/B 10	21700 / 1999	1	1		18			
S/B 710 to E/B 10	2000 / 1999	2	1		14			
S/B 710 to W/B10	4000 / 1999	1	1		4			

I-10 / SR-19 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B 19	7909 / 1998	1	1		20	F-1856 F-1857 P_2-5469 P_2-5684		
E/B 10 to S/B 19	7565 / 1999	1	1		8			
W/B 10 to N/B 19	5209 / 1998	1	1					
W/B 10 to S/B 19	5409 / 1998	1	1					
N/B 19 to E/B 10	3609 / 1998	1	1		40			
N/B 19 to W/B 10	6700 / 1999	1	1		40			
S/B 19 to E/B 10	5809 / 1998	1	1		18			
S/B 19 to W/B 10	7409 / 1998	1	1		40			

I-10 / I-605 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B 605	16200 / 1998	1	1		22	F-1859 F-1860 F-1969	Excessive congestion and tight loop	Reconstruct interchange
E/B 10 to S/B 605	17100 / 1998	1	1		20		Excessive congestion and weaving	Reconstruct interchange
W/B 10 to N/B 605	13100 / 1998	2	1		4		Excessive congestion	Reconstruct interchange
W/B 10 to S/B 605	34000 / 1998	2	2		57		Excessive congestion and weaving	Reconstruct interchange
N/B 605 to E/B 10	32100 / 1997	2	2		50		Excessive congestion	Reconstruct interchange
N/B 605 to W/B 10	12200 / 1998	1	1		44		Excessive congestion and tight loop	Reconstruct interchange
S/B 605 to E/B 10	43700 / 1998	1	1		18		Excessive congestion and weaving	Reconstruct interchange
S/B 605 to W/B 10	43700 / 1998	1	1		40		Excessive congestion	Reconstruct interchange

I-10 / SR-39 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to SR-39	14509 / 1998	2	3		44	F-1863 F-1864		
W/B 10 to SR-39	12409 / 1998	1	3		40			
N/B 39 to E/B 10	6809 / 1998	1	1					
N/B 39 to W/B 10	6609 / 1998	1	1		18			
S/B 39 to E/B 10	6109 / 1998	1	1		10			
S/B 39 to W/B 10	8409 / 1998	2	1		18			

I-10 / SR-57 / SR-71 EXISTING INTERCHANGE IMPROVEMENTS
FREEWAY CONNECTOR RAMPS

DESCRIPTION	ADT / Year	No. of Lanes		Peak hour Volume	No. of Accidents 7/1/95 to 6/30/98	R/W Files	Deficiencies	Recommendations
		Off	On					
E/B 10 to N/B 57	19209 / 1998	1	1			F-1243 F-1683 F-1867 F-1868		
E/B 10 to S/B 57	19209 / 1998	1	1		6			
E/B 10 to S/B 71	11609 / 1998	1	1		8			
W/B 10 to N/B 57	66109 / 1998	2	1		258			
W/B 10 to S/B 57	66109 / 1998	2	2		152			
W/B 10 to S/B 71	66109/1998						Missing freeway to freeway connector	For free traffic flow, construct freeway to freeway connector.
S/B 57 to E/B 10	28209 / 1998	2	1		128			
S/B 57 to W/B 10	34309 / 1998	1	2		4			
S/B 57 to S/B 71	19000 / 1997	2	2		46			
N/B 57 to E/B 10	25409 / 1998	2	1		10			
N/B 57 to W/B 10	26709 / 1998	2	1		16			
N/B 57 to S/B 71							Missing freeway to freeway connector	For free traffic flow, construct freeway to freeway connector.
N/B 71 to E/B 10	13701/1996						Missing freeway to freeway connector	
N/B 71 to W/B 10	12001 / 1996	2	2		24			
N/B 71 to S/B 57							Missing freeway to freeway connector	For free traffic flow, construct freeway to freeway connector.
N/B 71 to N/B 57	12000 / 1996	2	2		30			

XII. Transportation Concept and Conclusions

Transportation Concept

In order to achieve the desired LOS of F0, it is clear that additional measures will have to be taken beyond those included in these alternatives. We are proposing the use and routing of additional busses along the HOV lanes as one of the measures to accomplish this. Another is the encouragement of more carpooling and vanpooling. Construction and extension of the I-210 freeway from Glendora to San Bernardino will also provide some relief to I-10, as indicated in the 2020 model run. Recent experience with the El Monte Busway as a 2+ HOV facility indicates that there is already excess demand for the use and benefit of HOV lanes. Therefore, except for segment 1, **Alternative #2** (see page 64) is recommended as the Transportation Concept for I-10. For segment 1, where congestion is not as severe, **Alternative #1** is recommended as the concept. **Alternative #1** is based on existing plans--primarily the SCAG RTP, the LACMTA Long Range and HOV Plans, and the Caltrans District System Management Plan--and is the most conservative development plan. **Alternative #2** typically adds a second HOV lane to **Alternative #1** to evaluate its effectiveness. Some additional reasons for this recommendation are:

1. It provides significant congestion relief over the 20-year planning period that is consistent with the regional transportation plans, spending programs, and air quality conformity.
2. Use of a second HOV lane will not only accommodate additional demand, including busses, but will also provide for passing, which is essential for cars and busses operating in mixed traffic.
3. It completes the route's HOV facility and interacts with intersecting routes and their HOV's.

Conclusions

Along its path from Santa Monica through Hollywood, Downtown Los Angeles, East Los Angeles, the San Gabriel Valley, and Pomona to San Bernardino County, I-10 serves a highly developed and heavily congested swath of Los Angeles County and is part of the Santa Monica Freeway "Smart" Corridor. A disproportionate share of very important Southern California institutions, including several large universities and colleges, the Convention and Staples Centers, Downtown Los Angeles, numerous major shopping centers, and the Pomona Fairplex are along this route. To a greater or lesser degree, all of these institutions depend on commuters for their existence or prosperity. With traffic demand in the region projected to increase by approximately 40% over the next 20 years, aggressive action is required. Otherwise, the institutions that can move – particularly businesses and industrial employers – may be tempted to do so in search of better commutes and other more attractive experiences which equate to an improved quality of life. Failure to anticipate the potential economic and cultural damage of increased congestion may cost the county some of its nationally and internationally significant institutions.

Alternative #2 is the most cost-effective solution to the ever increasing problem of congestion. As it is no longer possible to build our way out of congestion, a balanced multi-modal approach is required to provide relief. Adding both mixed flow and HOV lanes will offer some congestion relief, as any capacity improvements will benefit both the route and the area surrounding it. Increased utilization of transit, ridesharing, demand and system management, and other new technologies will further contribute to a cost-effective approach for successfully contending with future transportation needs.

XIII. APPENDICES

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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 Sate 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.

System Planning:
The Legislative Mandate

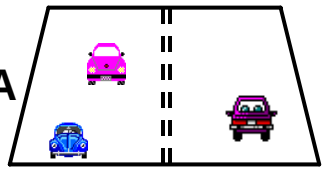
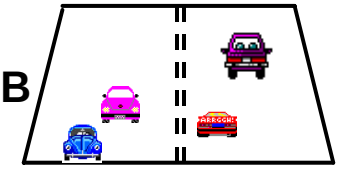
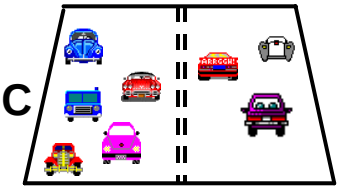
Long-Term System Planning

Added: Statutes of 1987, Chapter 878

65086 (a) The Department of Transportation shall carry out long-term state highway system planning to identify future highway improvements and new transportation corridor 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.

Level of Service

Level of Service	Flow Conditions	Operating Speed	Delay	Service Rating
A 	Highest quality of Service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed.	55+	None	Good
B 	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.	50	None	Good
C 	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing	45	Minimal	Adequate
D	Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.	40	Minimal	Adequate
E	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and lower driver comfort.	35	Significant	Poor
F	Forced traffic flow. Speed and flow may drop to zero with high densities.	<20	Considerable	Poor

SUMMARY SHEET SOURCES

Summary sheet data entries and their sources are as indicated below:

1. Segment limits - System Planning
2. Post Miles/Kilometers - 1995 Traffic Volume book, 1995 State Highway Log, 1995 Route Segment Report, 1996 Highway Inventory
3. Functional Classification - 1992 Functional Classification System Map, NHS Map
4. MPAH Designation - County Master Plan of Arterial Highways Map
5. Other Systems - STAA Map, STRAHNET Map, IRRS Map, ICES List, Lifeline Map
6. Terrain - 1995 Route Segment Report, 1996 Highway Inventory
7. Mainline R/W - 1995 State Highway Log, 1996 Highway Inventory, R/W Maps
8. Median/Shoulder - 1995 State Highway Log, 1996 Highway Inventory
9. Design Speed - 1995 Route Segment Report, 1996 Highway Inventory
10. Bridge Structures - Office of Structure, Maintenance and Investigations
11. Trucks (% of ADT) - 1995 Daily Truck Traffic on State Highway System, 1996 Highway Inventory
12. Express Transit (lines) - 1996 MTA Route Maps, Individual Route Schedules (Various Operators)
13. Operators - Individual Route Schedules (Various Operators)
14. Rail Service - 1996 MTA Route Maps, 1996 Metrolink Schedules, 1996 AMTRAK Schedules
15. Park & Ride Lots (Spaces) - 1996 Park & Ride Map
16. Purpose - System Planning
17. Ultimate Mainline ADT - Not applicable
18. Ultimate Mainline Lanes - System Planning, 1991 Route Concept Report
19. Ultimate HOV ADT - Not applicable
20. Ultimate HOV Lanes - System Planning, 1991 Route Concept Report
21. Actual Fatal & Injury Accidents - 1997 TASAS Traffic Data
22. Actual Total Accidents - 1997 TASAS Traffic Data
23. Average Fatal & Injury Accidents - 1997 TASAS Traffic Data
24. Average Total Accidents - 1997 TASAS Traffic Data

25. Existing Mainline ADT - 1995 Traffic Volume book, 1995 Traffic Count Data

26. Existing Mainline Lanes - 1995 State Highway Log, 1996 Highway Inventory, 1995 Route Segment Report, 1996 Video Log

27. Existing HOV ADT - 1995 Traffic Volume book, 1995 Traffic Count Data

28. Existing HOV Lanes - 1995 State Highway Log, 1996 Highway Inventory, 1995 Route Segment Report, 1996 Video Log

29. 2020 Null without I-710 Mainline ADT - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

30. 2020 Null without I-710 Mainline Lanes -1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

31. 2020 Null without I-710 HOV ADT - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

32. 2020 Null without I-710 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

33. 2020 Null with I-710 Mainline ADT - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

34. 2020 Null with I-710 Mainline Lanes - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

35. 2020 Null with I-710 HOV ADT - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

36. 2020 Null with I-710 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

37. 2020 Concept Alternate 1 Mainline ADT - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

38. 2020 Concept Alternate 1 Mainline Lanes - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

39. 2020 Concept Alternate 1 HOV ADT - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

40. 2020 Concept Alternate 1 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

41. 2020 Concept Alternate 2 Mainline ADT - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

42. 2020 Concept Alternate 2 Mainline Lanes - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

43. 2020 Concept Alternate 2 HOV ADT - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

44. 2020 Concept Alternate 2 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

45. Existing Mainline AM Peak Hour Volume (North/East) - 1995 Traffic Volume book, 1995 Traffic Count Data

46. Existing Mainline AM Peak Hour Volume (South/West) - 1995 Traffic Volume book, 1995 Traffic Count Data

47. Existing Mainline PM Peak Hour Volume (North/East) - 1995 Traffic Volume book, 1995 Traffic Count Data

48. Existing Mainline PM Peak Hour Volume (South/West) - 1995 Traffic Volume book, 1995 Traffic Count Data

49. Existing HOV AM Peak Hour Volume (North/East) - 1995 Traffic Volume book, 1995 Traffic Count Data

50. Existing HOV AM Peak Hour Volume (South/West) - 1995 Traffic Volume book, 1995 Traffic Count Data

51. Existing HOV PM Peak Hour Volume (North/East) - 1995 Traffic Volume book, 1995 Traffic Count Data

52. Existing HOV PM Peak Hour Volume (South/West) - 1995 Traffic Volume book, 1995 Traffic Count Data

53. 2020 Null without I-710 Mainline AM Peak Hour Volume (North/East) -1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

54. 2020 Null without I-710 Mainline AM Peak Hour Volume (South/West) -1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

55. 2020 Null without I-710 Mainline PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

56. 2020 Null without I-710 Mainline PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

57. 2020 Null without I-710 HOV AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

58. 2020 Null without I-710 HOV AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

59. 2020 Null without I-710 HOV PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

60. 2020 Null without I-710 HOV PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations

61. 2020 Null with I-710 Mainline AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

62. 2020 Null with I-710 Mainline AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

63. 2020 Null with I-710 Mainline PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

64. 2020 Null with I-710 Mainline PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

65. 2020 Null with I-710 HOV AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

66. 2020 Null with I-710 HOV AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

67. 2020 Null with I-710 HOV PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

68. 2020 Null with I-710 HOV PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

69. 2020 Concept Alternate 1 Mainline AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

70. 2020 Concept Alternate 1 Mainline AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

71. 2020 Concept Alternate 1 Mainline PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

72. 2020 Concept Alternate 1 Mainline PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

73. 2020 Concept Alternate 1 HOV AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

74. 2020 Concept Alternate 1 HOV AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

75. 2020 Concept Alternate 1 HOV PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

76. 2020 Concept Alternate 1 HOV PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

77. 2020 Concept Alternate 2 Mainline AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

78. 2020 Concept Alternate 2 Mainline AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

79. 2020 Concept Alternate 2 Mainline PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

80. 2020 Concept Alternate 2 Mainline PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

81. 2020 Concept Alternate 2 HOV AM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

82. 2020 Concept Alternate 2 HOV AM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

83. 2020 Concept Alternate 2 HOV PM Peak Hour Volume (North/East) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

84. 2020 Concept Alternate 2 HOV PM Peak Hour Volume (South/West) - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations

85. Existing Mainline AM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

86. Existing Mainline AM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

87. Existing Mainline PM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

88. Existing Mainline PM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

89. 2020 Null without I-710 Mainline AM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

90. 2020 Null without I-710 Mainline AM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

91. 2020 Null without I-710 Mainline PM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

92. 2020 Null without I-710 Mainline PM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

93. 2020 Null with I-710 Mainline AM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

94. 2020 Null with I-710 Mainline AM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

95. 2020 Null with I-710 Mainline PM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

96. 2020 Null with I-710 Mainline PM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

97. 2020 Concept Alternate 1 Mainline AM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

98. 2020 Concept Alternate 1 Mainline AM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

99. 2020 Concept Alternate 1 Mainline PM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

100. 2020 Concept Alternate 1 Mainline PM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

101. 2020 Concept Alternate 2 Mainline AM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

102. 2020 Concept Alternate 2 Mainline AM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

103. 2020 Concept Alternate 2 Mainline PM Average Speed (North/East) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

104. 2020 Concept Alternate 2 Mainline PM Average Speed (South/West) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations

105. Existing Mainline AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

106. Existing Mainline AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

107. Existing Mainline PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

108. Existing Mainline PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

109. Existing Mainline AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

110. Existing Mainline PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

111. Existing HOV AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

112. Existing HOV AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

113. Existing HOV PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

114. Existing HOV PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

115. Existing HOV AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

116. Existing HOV PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

117. 2020 Null without I-710 Mainline AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

118. 2020 Null without I-710 Mainline AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

119. 2020 Null without I-710 Mainline PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

120. 2020 Null without I-710 Mainline PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

121. 2020 Null without I-710 Mainline AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

122. 2020 Null without I-710 Mainline PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

123. 2020 Null without I-710 HOV AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

124. 2020 Null without I-710 HOV AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

125. 2020 Null without I-710 HOV PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

126. 2020 Null without I-710 HOV PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

127. 2020 Null without I-710 HOV AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

128. 2020 Null without I-710 HOV PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

129. 2020 Null with I-710 Mainline AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

130. 2020 Null with I-710 Mainline AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

131. 2020 Null with I-710 Mainline PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

132. 2020 Null with I-710 Mainline PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

133. 2020 Null with I-710 Mainline AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

134. 2020 Null with I-710 Mainline PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

135. 2020 Null with I-710 HOV AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

136. 2020 Null with I-710 HOV AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

137. 2020 Null with I-710 HOV PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

138. 2020 Null with I-710 HOV PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

139. 2020 Null with I-710 HOV AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

140. 2020 Null with I-710 HOV PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

141. 2020 Concept Alternate 1 Mainline AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

142. 2020 Concept Alternate 1 Mainline AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

143. 2020 Concept Alternate 1 Mainline PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

144. 2020 Concept Alternate 1 Mainline PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

145. 2020 Concept Alternate 1 Mainline AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

146. 2020 Concept Alternate 1 Mainline PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

147. 2020 Concept Alternate 1 HOV AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

148. 2020 Concept Alternate 1 HOV AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

149. 2020 Concept Alternate 1 HOV PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

150. 2020 Concept Alternate 1 HOV PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

151. 2020 Concept Alternate 1 HOV AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

152. 2020 Concept Alternate 1 HOV PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

153. 2020 Concept Alternate 2 Mainline AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

154. 2020 Concept Alternate 2 Mainline AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

155. 2020 Concept Alternate 2 Mainline PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

156. 2020 Concept Alternate 2 Mainline PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

157. 2020 Concept Alternate 2 Mainline AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

158. 2020 Concept Alternate 2 Mainline PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

159. 2020 Concept Alternate 2 HOV AM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

160. 2020 Concept Alternate 2 HOV AM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

161. 2020 Concept Alternate 2 HOV PM LOS (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

162. 2020 Concept Alternate 2 HOV PM LOS (South/West) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

163. 2020 Concept Alternate 2 HOV AM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

164. 2020 Concept Alternate 2 HOV PM Directional Split (North/East) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

SUMMARY SHEET SOURCES

SEGMENT 1 SUMMARY

DESCRIPTION	
Limits:	#1
Post Mile / Kilometer:	#2

Purpose
#16

Classification	
Functional Classification:	#3
MPAH Designation:	#4
Other Systems:	#5

Ultimate Concept	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	#17	#19
Lanes Configuration (ea. direction)	#18	#20

Physical Characteristics	
Terrain:	#6
Mainline R/W	#7
Median / Outside Shoulder:	#8
Design Speed (MPH)	#9
Bridge Structures:	#10

Corridor Characteristics	
Trucks (% of ADT):	#11
Express Transit (lines):	#12
Operators:	#13
Rail Service:	#14
Park & Ride Lots (Spaces):	#15

Accident Rates			
per Million Vehicle Miles (MVM) (1/96 to 12/98)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
#21	#22	#23	#24

TRAFFIC DATA

		EXISTING (1995)		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)		#25	#27	#29	#31	#33	#35	#37	#39	#41	#43
Lanes Configuration (ea. direction)		#26	#28	#30	#32	#34	#36	#38	#40	#42	#44
Volume											
AM Peak Hour	E	#45	#49	#53	#57	#61	#65	#69	#73	#77	#81
AM Peak Hour	W	#46	#50	#54	#58	#62	#66	#70	#74	#78	#82
PM Peak Hour	E	#47	#51	#55	#59	#63	#67	#71	#75	#79	#83
PM Peak Hour	W	#48	#52	#56	#60	#64	#68	#72	#76	#80	#84

Speed (mph)						
AM Average	E	#85	#89	#93	#97	#101
AM Average	W	#86	#90	#94	#98	#102
PM Average	E	#87	#91	#95	#99	#103
PM Average	W	#88	#92	#96	#100	#104

Service Characteristics											
Level Of Service, AM	E	#105	#111	#117	#123	#129	#135	#141	#147	#153	#159
Level Of Service, AM	W	#106	#112	#118	#124	#130	#136	#142	#148	#154	#160
Level Of Service, PM	E	#107	#113	#119	#125	#131	#137	#143	#149	#155	#161
Level Of Service, PM	W	#108	#114	#120	#126	#132	#138	#144	#150	#156	#162
Directional Split (%) AM	E	#109	#115	#121	#127	#133	#139	#145	#151	#157	#163
Directional Split (%) PM	E	#110	#116	#122	#128	#134	#140	#146	#152	#158	#164

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 o 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 which 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), Transportation Concept Report (TCR) or Corridor Study

RCR's, TCR's and Corridor Studies analyze a route or corridor 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 TCR's. It covers the four-years immediately following the seven-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**	Same as the SCAG Regional Transportation Plan.
	TCR's	Ongoing; updated as conditions change.
	TSDP	Precedes STIP priority list; due from the district by March 15th of odd numbered years.

D7-12/31/01
D8 & D12-5/06/01
HOV Route Status (2001)