

CALIFORNIA DEPARTMENT OF TRANSPORTATION

DISTRICT 8

ROUTE CONCEPT REPORT

STATE ROUTE 177



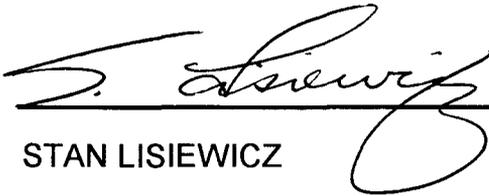
FEBRUARY 1998

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ROUTE CONCEPT REPORT
STATE ROUTE 177

I approve this Route Concept Report, as the guide toward which today's decisions and/or recommendations for highway capacity improvements should be directed.



4 Feb. '98

STAN LISIEWICZ

DATE

DISTRICT DIRECTOR

CALTRANS DISTRICT 8

1997 ROUTE CONCEPT REPORT SUMMARY STATE ROUTE 177

08-RIV-177 KP 0.0/43.5 (PM 0.0/27.0)

This Route Concept Report (RCR) covers the total length of State Route 177 (43.5 kilometers or 27.0 miles) which is located entirely within the boundaries of District 8.

ROUTE CONCEPT

<u>Segment</u>	<u>Kilometer Post (Post Mile)</u>	<u>Concept</u>	<u>1995 LOS</u>	<u>2015 LOS</u>	<u>Existing Facility</u>	<u>Special Characteristics</u>
1	0.0/0.3 (PM 0.0/0.2)	Maintain Only	A	A	2-Lane Conventional	None
2	0.3/43.5 (PM 0.2/27.0)	Maintain Only	A	B	2-Lane Conventional	None

The Route Concept for SR-177 is to “maintain only” (no capacity or operational improvements) through the year 2015. The existing Route 177 facility is projected to provide very good levels of service (See chart above) through 2015.

ULTIMATE TRANSPORTATION CORRIDOR (UTC)

State Route 177 is planned to remain a two-lane conventional highway well beyond 2015. Caltrans will work with Riverside County through the IGR/CEQA process to preserve right of way and access control for future use. The County General Plan does not designate Route 177 in any category in their circulation element, but the Route is addressed in the Comprehensive Transportation Plan (CTP) within the Palo Verde area. This area is too remote and unpopulated to be included in the County’s plans.

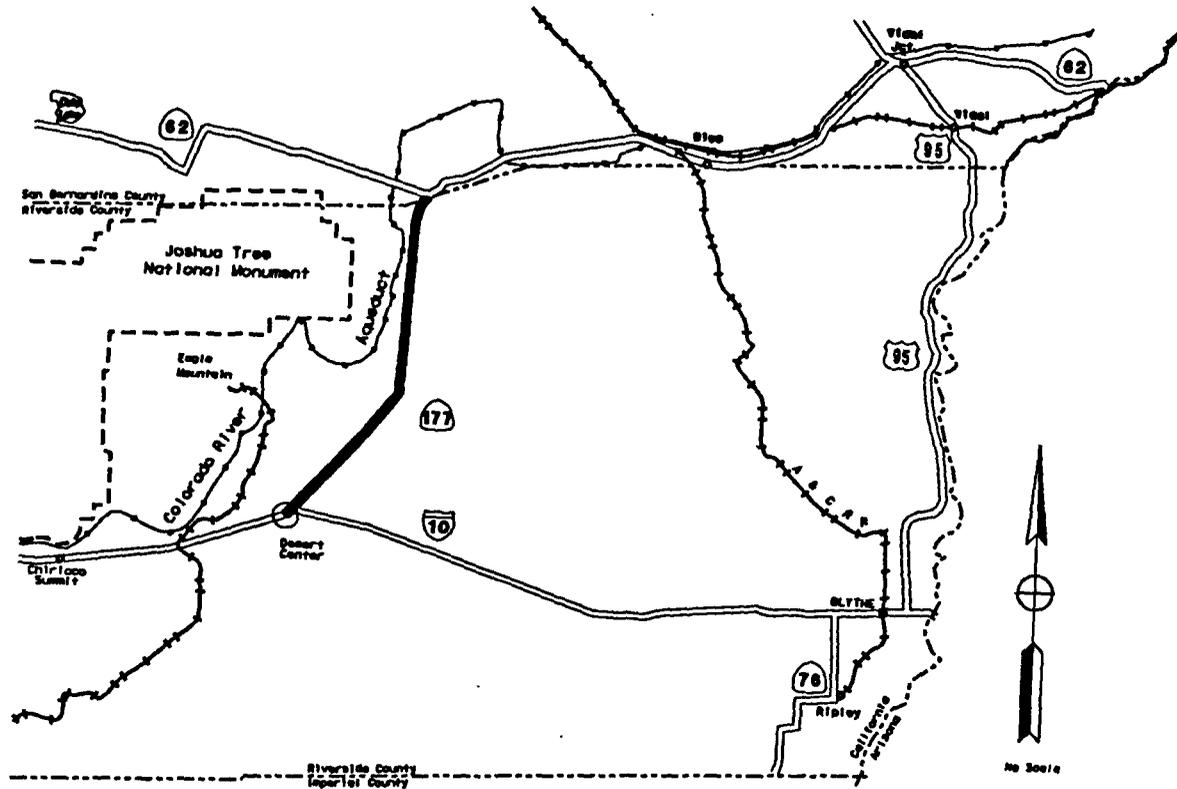
CONCEPT RATIONALE

Our analysis has shown no need for capacity or operational improvements on this route within the 20-year planning period. RCTC has developed a Strategic Plan for the programming of available State monies for capacity improvements and local half-cent sales tax, “Measure A”, funds through the year 2015. The Strategic Plan does not include any projects on Route 177. Based upon the aforementioned findings and severe financial constraints, as well as the level of service deficiency definition established in the 1995 Riverside County Congestion Management Program, Route 177 has been assigned a “maintain only” concept.

CONCERNS AND IMPROVEMENTS NECESSARY TO ATTAIN ROUTE CONCEPT

Route 177 will not need any capacity or operational improvements to attain the route concept. Maintenance and safety projects will be programmed as warranted.

STATE ROUTE 177
VICINITY MAP



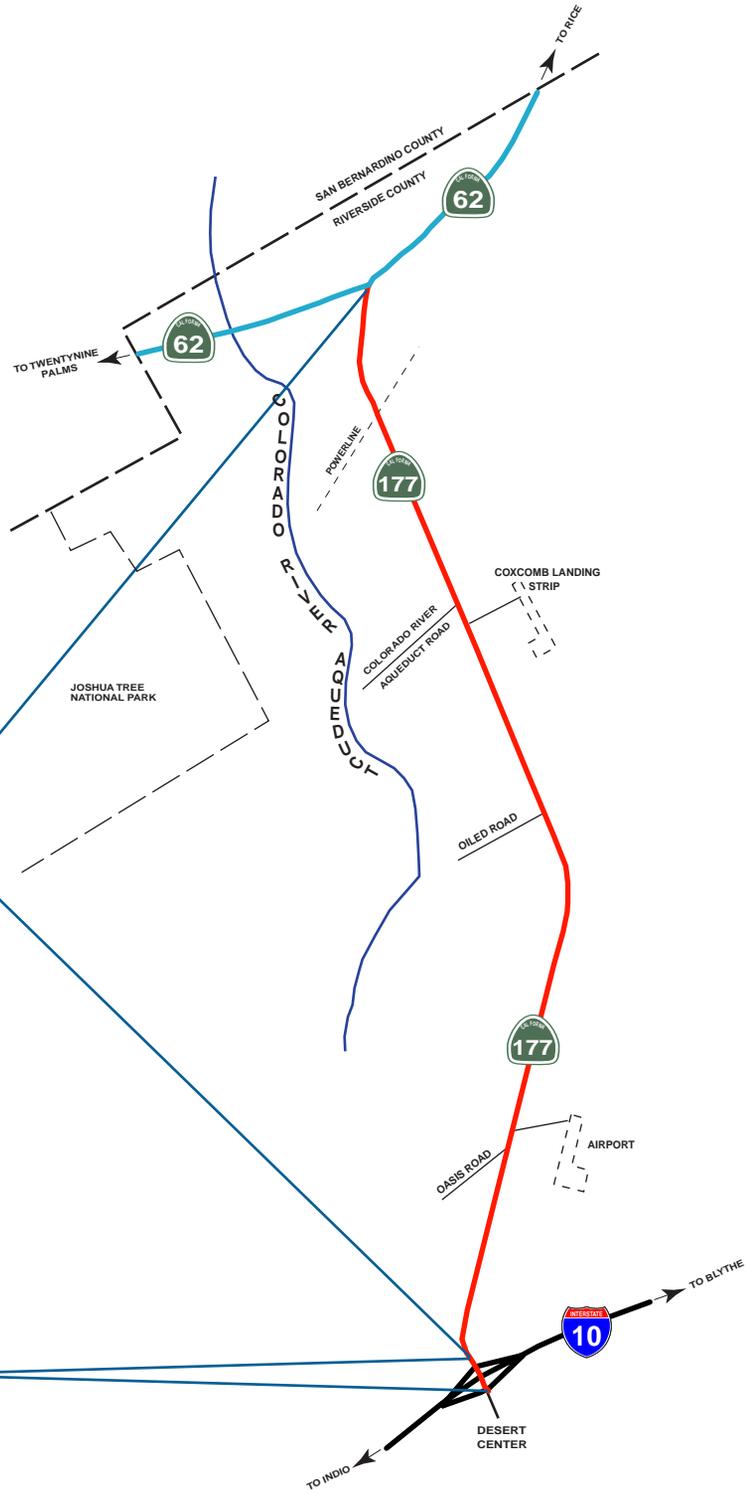
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DISTRICT 8

STATE ROUTE 177

Segment Map



Segment 2
 PM 0.18/27.02
 Ragsdale Road
 to Jct. State Route 62

Segment 1
 PM 0.0/0.18
 Jct. I-10 to
 Ragsdale Road

STATEMENT OF PLANNING INTENT

This Route Concept Report (RCR) is a planning document that describes the Department's basic approach to development of a given route. Considering financial constraints, corridor geometrics, and projected travel demand over an approximate 20-year planning period, the RCR defines the type of facility and level of service (LOS) for each route. The objective of the effort is to provide a better basis for the development of the State Transportation Improvement Program and to determine the appropriate concept for future highway projects.

Route Concept Reports are prepared by District staff in cooperation with local and regional agencies. They will be updated as necessary as conditions change or new information is obtained.

Route Concept Reports are preliminary planning documents that lead to subsequent programming and project development processes. As such, the specific nature of proposed improvements (e.g., roadway width, number of lanes, access control, etc.) may change in later project development stages, with final determinations made during the project report and design phases.

1997 STATE ROUTE 177 CONCEPT REPORT

08-RIV-177 KP 0.0/43.5

(PM 0.0/27.0)

ROUTE DESCRIPTION

State Route 177 is a two-lane conventional highway that extends from its junction with Interstate 10 in Desert Center, 43.5 kilometers (27.0 miles) northward to its junction with State Route 62. Route 177 serves the small community of Desert Center and traverses vast, remote expanses of uninhabited desert terrain. Route 177 is located entirely within the eastern Riverside County portion of District 8.

The following segmentation has been used for route analysis:

<u>Segment</u>	<u>Urban/Rural Area</u>	<u>Kilometer Post (Post Mile)</u>	<u>Limits</u>
1	Rural	0.0/0.3 (PM 0.0/0.2)	Junction I-10 to Ragsdale Road
2	Rural	0.3/43.5 (PM 0.2/27.0)	Ragsdale Road to Junction Route 62

ROUTE PURPOSE AND CLASSIFICATION

The primary purposes of Route 177 are to serve interregional and recreational traffic. This route is used by travelers accessing desert and Colorado River recreation areas. This includes access to public and private lands in the vicinity of Desert Center and recreational opportunities in the Joshua Tree National Monument. The route also serves as a connector between State Route 62 and Interstate 10, both of which link southern California with Colorado River and Arizona destinations.

Traffic volumes are quite low with the Average Daily Traffic (ADT) maximizing at approximately 3,600 vehicles in Desert Center. The ADT north of Desert Center, approximately 1,600 vehicles, is more typical of the route as a whole.

Route 177 is not included in the State Freeway and Expressway (F&E) System, the Interregional Road System (IRRS), or the State Scenic Highway System. The Route's

Federal Functional Classification is MA, Rural Minor Arterial. The Federal Surface Transportation Assistance Act (STAA) classifies this highway as a terminal access route. The National Highway System (NHS), the Department of Defense Priority Network, and the Strategic Highway Network (STRAHNET) do not include Route 177.

ROUTE CONCEPT

“Maintain only” has been established as the concept for Route 177 through 2015. The concept facility will remain a two-lane conventional highway. Caltrans will perform maintenance and provide safety improvements as warranted. This Route has been classified as a Maintenance Service Level (MSL) 3 facility. The MSL is intended to promote consistent Maintenance Practices statewide while recognizing the differences in traffic types and volumes and the differing needs of rural and urban areas. Class 3 routes are those State highways that are low volume, local or collector roads, with other logical segments added for continuity.

CONCEPT RATIONALE

As established in the “Statement of Planning Intent” the objective of the RCR is to define the type of facility and projected level of service for a 20-year time frame in order to provide a better basis for the development of the STIP. Considering the levels of service established by the Federal Functional Classifications, Route 177, in its entirety, should have a 2015 concept level of service of “B”. The analysis done for the RCR shows that projected 2015 levels of service will meet the Federal standard. The reason for this good level of service is that Route 177 is a lightly traveled, remote, rural highway with a very low traffic volume growth forecast.

Despite the projection that shows level of service “B” is achievable on this particular route in 2015, the District has assigned a concept of “maintain only”. We have assigned this concept based upon severe financial constraints and the level of service deficiency definition established in the 1995 Riverside County Congestion Management Program.

Interregional Improvement Program (IIP) funding is expected to be severely limited on routes such as 177 that are not classified as “High Emphasis” in the Interregional Road System (IRRS). Because of the nature of the “High Emphasis” routes (greater traffic volumes, truck corridors, national defense, etc.) the current and projected deficiencies on “High Emphasis” routes will compete better for the scarce capacity improvement resources.

The Riverside County Transportation Commission (RCTC) is responsible for programming highway capacity improvement projects. RCTC has developed a Strategic Plan for the programming of available State monies for capacity improvements and local half-cent sales tax, “Measure A”, funds through the year 2015. The RCTC Strategic Plan does not include any projects on Route 177.

Funding is not adequate to improve all of the currently identified, existing condition and future projected, transportation system deficiencies. Given, this lack of resources and intense competition to fund projects, it is unreasonable to expect to maintain the stringent federal functional classification level of service on all state highways within Riverside County.

RCTC is, also, responsible for preparing the County's Congestion Management Program (CMP). The 1995 CMP established level of service "E" as the minimum LOS standard for intersections and segments along the CMP system of highways and roadways. Due to the transportation financing program in Riverside County established through Measure A, there are no advantages to setting a higher minimum LOS standard than required by the CMP legislation which is LOS "E" unless the intersection or segment had a lower LOS or LOS "F" in 1991.

Therefore, the concept for Route 177 is to provide no capacity or operational improvements within the approximate 20-year planning framework of this RCR.

ROUTE ANALYSIS

Land Use

Route 177 traverses mostly vacant desert terrain. Small areas in the vicinity have been mined for various minerals and ores. The Colorado River Aqueduct roughly parallels Route 177 to the west. There is sparse residential development along the route, mostly located at Desert Center and Lake Tamarisk. There is, also, some limited agricultural land use adjacent to the roadway.

A few miles northwest of Desert Center there is large proposed project, known as the Eagle Mountain Landfill, that is proceeding through the approval processes. As of May 1997, the landfill project had received approval from the Riverside County Planning Commission and was awaiting approval from the Riverside County Board of Supervisors.

The Riverside County General Plan Open Space Element designates three land uses in this area: "agriculture, desert areas, and areas not designated as open space". The area immediately surrounding the junction of I-10 and Route 177 is not designated as open space. The agricultural designation lies on either side of the route and covers several square miles north of Desert Center. The remaining lands fall into the desert area classification. Most of the land surrounding this route is under Federal jurisdiction by the Bureau of Land Management.

Existing Facilities

The existing Route 177 is a two-lane undivided conventional Highway. The lanes are a standard 12-foot width with unpaved outside shoulders ranging from 6 to 8 feet. The

shoulders are graded, but there is no curb or gutter.

The following chart provides detailed information on the existing facility's geometric and traffic conditions.

Present and Future Operating Conditions

<u>PRESENT 1995</u>	<u>SEGMENT 1</u>	<u>SEGMENT 2</u>
County and Route	RIV-177	RIV-177
Kilometer Post	0.0/0.3	0.3/43.5
Post Mile	0.0/0.2	0.2/27.0
Type of Facility	Conventional	Conventional
No. of Lanes	2	2
No. of Passing Lanes	0	0
No. of Auxiliary Lanes	0	0
No. of HOV Lanes	0	0
No. of Truck Climbing Lanes	0	0
Highway Grade Line	Flat	Flat
Terrain	Flat	Flat
Total Traveled Way	7.2m (24 ft.)	7.2m (24 ft.)
Shoulder Half Width	1.8m (6 ft.)	1.8m (6 ft.)
Outside	1.8m (6 ft.)	1.8m (6 ft.)
Inside	0	0
Median Width	0	0
Bicycle ADT	0	0
Park N Ride Lots	None	None
Transit Centers	None	None
Rail	None	None
Average Daily Traffic (ADT)	3,600	1,600

<u>PRESENT 1995</u>	<u>SEGMENT 1</u>	<u>SEGMENT 2</u>
% Trucks in the Peak Hour	9%	13%
Peak Hour Volume	192	140
Directional Split	50%	60%
D/C Ratio	0.09	0.06
Level of Service	A	A

FUTURE (2015) NO BUILD

Average Daily Traffic (ADT)	5,100	3,670
Peak Hour Volume	275	320
D/C Ratio	0.12	0.15
Level of Service	A	B

Accident Rates

The following accident data was obtained from the Caltrans District 8, Office of Traffic Operations. The data is from TASAS Table B, and covers the time from January 21, 1993, to November 29, 1996. The accident rates shown are the actual rates for Route 177 and the average rates for similar highways statewide.

		<u>Actual Acc. Rate</u>			<u>Average Acc. Rate</u>		
		<u>Fatal</u>	<u>F & I</u>	<u>Total</u>	<u>Fatal</u>	<u>F & I</u>	<u>Total</u>
Segment 1	KP 0.0/0.3	0.000	0.00	1.06	0.030	0.78	1.49
Segment 2	KP 0.3/43.5	0.053	0.37	0.63	0.033	0.86	1.63

In the preceding chart "Fatal" represents the total number of fatalities per million vehicle miles of travel. "F & I" represents the total number of fatality plus injury accidents per million vehicle miles of travel. The "Total" column shows the total number of all accidents per million vehicle miles of travel.

Parallel Routes

Route 177 has no nearby parallel routes. Approximately 50 miles to the east, in Blythe, lies Route 95 that connects I-10 with State Route 62. Approximately 75 miles west of the Route 177 junction with I-10, near Desert Hot Springs, is the junction of I-10 with State Route 62.

IMPROVEMENTS NECESSARY TO OBTAIN THE ROUTE CONCEPT

Route 177 will not need any capacity or operational improvements to attain the route concept. Maintenance and safety projects will be programmed as warranted.

HOV/TRANSIT CONSIDERATION

HOV and transit are not considerations for this route. This is a remote, low traffic volume route that services population densities that make transit and HOV lanes nonviable.

ULTIMATE TRANSPORTATION CORRIDOR

The intent of the ultimate transportation corridor is to keep right-of-way options open beyond the 20-year planning period by identifying long-term needs and working with local agencies to implement protection measures. Caltrans will work with Riverside County through the IGR/CEQA process to preserve as the ultimate transportation corridor, the County General Plan facility. However, due to the remote location of this route and the dearth of existing or proposed development, Route 177 is not included in the General Plan. There is no County General Plan Circulation Element designation for this route. Therefore, Caltrans will preserve the existing corridor as the ultimate transportation corridor. As Riverside County develops and this RCR is updated the ultimate transportation corridor may be expanded to a four-lane highway.

INTERNAL AND EXTERNAL CIRCULATION

All affected Divisions have reviewed this RCR within Caltrans District 8. The route lies entirely within District 8 eliminating the need for coordination with other Districts.

RCTC has been consulted about this RCR and given the opportunity to review a draft copy of the report. RCTC did not offer any comments.

The Riverside County Transportation and Land Management Agency has found this RCR to be consistent with their General Plan and Circulation Element.

This RCR was reviewed by the Coachella Valley Association of Governments and was determined to be consistent with their plans.

The Southern California Association of Governments (SCAG) was given the opportunity to review this RCR and did not offer any comments.

OTHER ITEMS

Access Spacing

Excessive access points, driveways, and signalization diminish the vehicle carrying capacity of a highway. Efforts will be made to minimize new connections to the State highway. Caltrans will actively pursue access control goals by monitoring new development, combining access points where feasible, and encouraging development of local traffic circulation systems that carry vehicles to previously designated State highway access points.

Environmental Considerations

Caltrans will work closely with the State Department of Fish and Game, the United States Fish and Wildlife Service, and the Bureau of Land Management on identification and mitigation of significant impacts prior to any improvement of State Route 177. Environmental concerns include archaeological, paleontological, and historical, as well as biological resources.

Following is an inventory of Federal and State listed and candidate species occurring within the vicinity of Route 177:

<u>Common Name</u>	<u>Scientific Name</u>
<u>Fish</u>	
Desert Pupfish	Cyprinodon macularius
<u>Reptiles and Amphibians</u>	
San Diego horned lizard	Phrynosoma coronatum blainvillei
Flat-tailed horned lizard	Phrynosoma mcallii
Colorado Desert fringe-toed lizard	Uma notata notata
Desert tortoise	Gopherus agassizii
Desert tortoise	Xerobates agassizii

Common Name

Scientific Name

Mammals

California leaf-nosed bat	Macrotus californicus
Townsend's western big-eared bat	Plecotus townsendii townsendii
Spotted bat	Eudermas maculatum
California mastiff bat	Eumops perotis californicus
Arizona Myotis	Myotis lucifygus occultus
Arizona cave myotis	Myotis velifer velifer
Yuma mountain lion	Felis concolor
Nelson's bighorn sheep	Ovis canadensis nelsoni

Birds

Bald eagle	Haliaeetus leucocephalus
Black-shouldered kite	Elanus caeruleus
Golden eagle	Aquila chrysaetos canadensis
Prairie falcon	Falco mexicanus
American peregrine falcon	Falco peregrinus anatum
Swainson's hawk	Buteo swansoni
Yuma clapper rail	Rallus longirostris yumanensis
California black rail	Laterallus jamaicensis coturniculus
Least bell's vireo	Vireo bellii pusillus
Arizona bell's vireo	Vireo bellii arizonae
Gila woodpecker	Melanerpes uropygailis
Elf owl	Micrathene whitneyi
Willow flycatcher	Empidonax traillii

Common Name

Scientific Name

Birds Continued

Western snowy plover

Charadrius alexandrinus

Mountain plover

Charadrius montanus

Tricolored blackbird

Agelaius tricolor

Eagle Mountain scrub jay

Aphelocoma coerulescens cana

Plants

Slender-horned spine flower

Centrostegia leptocera

Alverson's foxtail cactus

Coryphantha vivipara var. *alversonii*

California ditaxis

Ditaxis californica

Santa Ana River wooly-star

Eriastum densifolium ssp. *sanctorum*

Munz cholla

Opuntia munzii

Oricopia sage

Salvia greatai

Orcutt aster

Xylorhiza orcuttii

Habitats

Common Name

Common Name

Colorado desert scrub (CDS)

Palm oases (PO)

Freshwater marsh (FM)

Colorado River (CR)

Grasslands, pasturelands, etc. (G)

Lake shores (LS)

Migrant only (M)

Alkali flats (AF)

Mojave desert scrub (MDS)

Willow riparian woodland (WRW)

Pinyon/juniper woodland (PJ)

Coastal sage scrub (CSS)

Caves, mine tunnel (C)

Proposed Projects

There are no significant development projects proposed that would abut this route. However, the nearby Eagle Mountain Landfill project is pending and progressing toward construction. This landfill will be accessed via rail and the Eagle Mountain Road extension. Route 177 is not expected to be negatively impacted as a result of the landfill project.

Programmed Projects

There are no projects programmed in the 1996 adopted STIP or 1998 PSTIP for Route 177.

RCTC has not programmed any "Measure A" projects on Route 177.

The 1996 SHOPP does not contain any programmed projects for Route 177.

Methodology and Data

The 1994 *Highway Capacity Manual*, Special Report 209, Third Edition, was used for the highway capacity and level of service calculations in this report.

The data source for the 1995 traffic volumes and peak hour volumes was the Caltrans *1995 Traffic Volumes on California State Highways*. Roadway geometric data was taken from the Caltrans *1995 California State Highway Log*.

Traffic Volume Forecast

The traffic volume forecast used in this report was prepared by the Caltrans District 8, Office of Public Transportation, Regional Planning, and Forecasting.

Route 177 is too geographically remote to be included in any readily available traffic growth modeling efforts. The traffic volume forecast was based upon historical trend lines of traffic growth. The 2015 traffic volume, peak hour volume, and truck percentage reflect current conditions, extrapolated over 20 years.

ACRONYMS, AGENCIES, and TERMS

ADT	Average Daily Traffic
BLM	Bureau of Land Management
CMP	Congestion Management Program
D/C	Demand/Capacity Ratio
F&E	Freeway and Expressway System

FATAL	Fatal accident per one million vehicle miles of travel
F&I	Fatality plus injury accident rate
HOV	High Occupancy Vehicle
I-10	Interstate 10
IGR/CEQA	Intergovernmental Review/California Environmental Quality Act
IRRS	Interregional Road System
LOS	Level of Service
MA	Minor Arterial
MSL	Maintenance Service Level
PM	Post Mile
PSTIP	Proposed State Transportation Improvement Program
RCR	Route Concept Report
RCTC	Riverside County Transportation Commission
RIV-177	State Route 177 in Riverside County
SHOPP	State Highway Operation and Protection Plan
SR-177	State Route 177
STAA	Surface Transportation Assistance Act
STIP	State Transportation Improvement Program
STRAHNET	Strategic Highway Network
TASAS	Traffic Accident Surveillance and Analysis System