Transportation Concept Report

U. S. Highway 95

District 8

Disclaimer: The information and data contained in this document are for planning purposes only and should not be relied upon for final design of any project. Any information in this Transportation Concept Report (TCR) is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, the District 8 System Planning Division makes every effort to ensure the accuracy and timeliness of the information contained in the TCR. The information in the TCR does not constitute a standard, specification, or regulation, nor is it intended to address design policies and procedures.

California Department of Transportation

Mission: Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

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TABLE OF CONTENTS

ABOUT THE TRANSPORTATION CONCEPT REPORT

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (Gov. Code §65086) by evaluating conditions and proposing enhancements to the SHS. Through System Planning, Caltrans focuses on its mission to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

The System Planning process (See Appendix E: System Planning Flow Chart) is primarily composed of four parts: the District System Management Plan (DSMP), the Transportation Concept Report (TCR), the Corridor System Management Plan (CSMP), and the DSMP Project List. The district-wide **DSMP** is strategic policy and planning document that focuses on maintaining, operating, managing, and developing the transportation system. The **TCR** is a planning document that identifies the existing and future route conditions as well as future needs for each route on the SHS. The **CSMP** is a complex, multi-jurisdictional planning document that identifies future needs within corridors experiencing or expected to experience high levels of congestion. The CSMP serves as a TCR for segments covered by the CSMP. The **DSMP Project List** is a list of planned and partially programmed transportation projects used to recommend projects for funding. These System Planning products are also intended as resources for stakeholders, the public, and partner, regional, and local agencies.

TCR Purpose

California's State Highway System needs long-range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to document the evaluation of current and projected conditions along the route and to communicate the vision for the development of the route in each Caltrans District during a 20-25 year planning horizon. The TCR is developed with the goals of increasing safety and health; providing good stewardship and system efficiency; making Smart Mobility decisions that sustainably improve the environment and a vibrant economy; and providing reliable and accessible mobility options through an integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements, and travel demand management components of the corridor.

STAKEHOLDER PARTICIPATION

The United States Highway 95 TCR involved a collaboration between agency staff as well as outside stakeholders from local, county and regional public agencies, advocacy organizations, nonprofits and community members at large. Feedback from the stakeholders helped solidify the findings of the performance assessment, bottleneck identification, and causality analysis given their intimate knowledge of local conditions. Moreover, stakeholders have provided support and insight, and shared valuable field and project data without which this study would not have been possible. The stakeholders included representatives from the following organizations: the Southern California Association of Governments; the Riverside County Transportation Commission; San Bernardino Associated Governments; the Counties of Riverside and San Bernardino; the Cities of Blythe and Needles; and Native American tribes.

EXECUTIVE SUMMARY

United States Highway 95 (US-95) is a north-south highway that begins at its junction with Interstate 10 (I-10) in the City of Blythe and runs north through the Colorado River Reservation, Needles, other small communities along the Colorado River, and terminates at the CA-NV state line. Most of US-95 traverses the desert where there are few services, residents, and businesses along the route. US-95 makes connections with I-10, SR-62, I-40, and Nevada US-95. Shoulders are narrow along most of the route and there are no sidewalks along the length of the route. Tourism and agriculture are the main economy of the area.

CONCEPT SUMMARY

Seg.	Segment Description	Existing Facility	2035						
			Capital Facility Concept	System Operations and Management Concept	No-Build		Planned SCAG-RTP		Minimum to attain LOS "D"
1	I-10 to Sixth Ave.	2L, C	2L, C	Operational improvements	2 MF		2 MF		2 MFE
					V/C	LOS	V/C	LOS	
					0.25	C	0.25	C	
2	Sixth Ave. to SBd/Riv County Line	2L, C	2L, C	Operational improvements	2 C		2 C		2 MFE
					V/C	LOS	V/C	LOS	
					0.18	C	0.18	C	
3	SBd/Riv County Line to Havasu Lake Rd.	2L, C	2L, C	Operational improvements	2 MF		2 MF		2 MFE
					V/C	LOS	V/C	LOS	
					0.22	C	0.22	C	
4	Havasu Lake Rd. to East I-40 Junction	2L, C	2L, C	Maintain Only	2 MF		2 MF		2 MFE
					V/C	LOS	V/C	LOS	
					0.32	D	0.32	D	
5	West I-40 Junction to Nevada State Line	2L, C	2L, C	Maintain Only	2 MF		2 MF		2 MFE
					V/C	LOS	V/C	LOS	
					0.30	C	0.30	C	

Source: Caltrans District 8 District System Management Plan Update, 2016

C = Conventional Highway
L = Number of mainline lanes

MF = Mixed Flow Lane
V/C = Volume to Capacity Ratio
LOS = Level of Service
MFE = Mixed Flow Equivalent Lane

CONCEPT RATIONALE

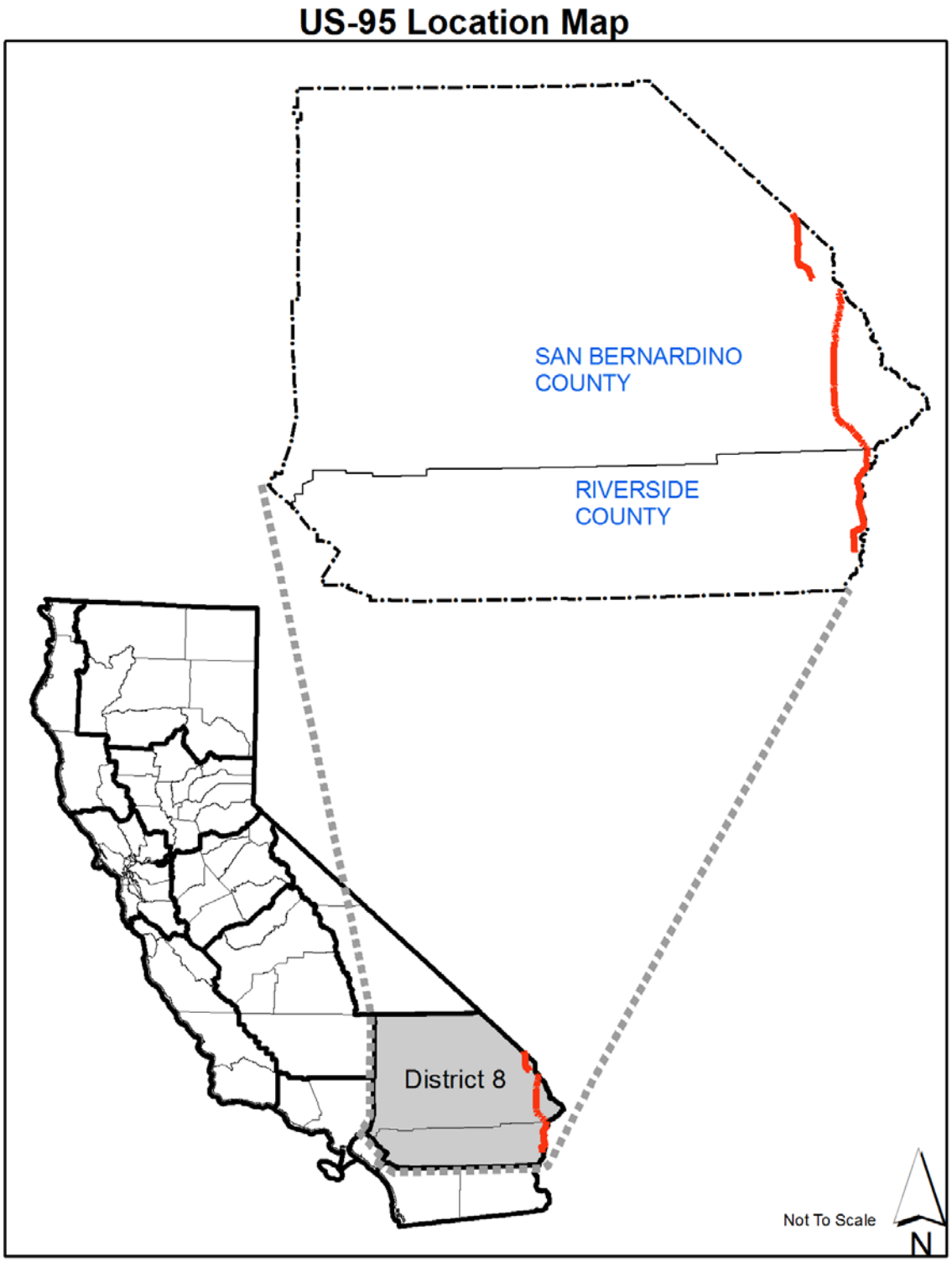
This Transportation Concept Report serves as a guide for long-range planning of route improvements. Because significant traffic growth is not anticipated, the facility is expected to operate at the concept LOS "D" or better through 2035. US-95 may need other projects to achieve strategic plan goals such as providing adequate shoulders for bicycle and pedestrian travel along the route.

PROPOSED PROJECTS AND STRATEGIES

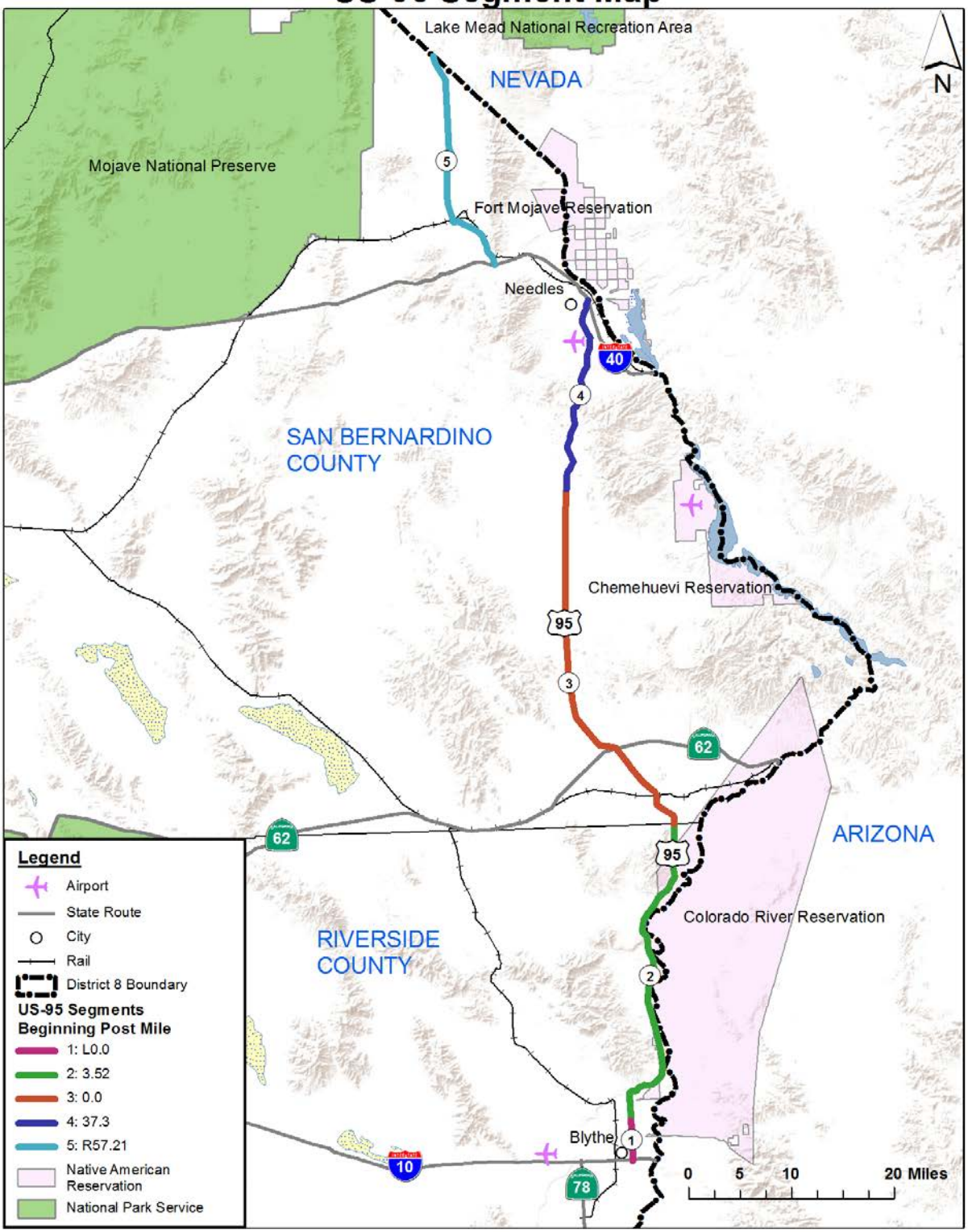
No proposed capacity or major operational projects or strategies are proposed for US-95 in District 8.

CORRIDOR OVERVIEW

ROUTE SEGMENTATION



US-95 Segment Map



Segment	Location Description	County_Route_ Begin PM	County_Route_ End PM
1	I-10 to 6th Avenue	RIV_95_L0.0	RIV_95_3.52
2	6th Avenue to San Bernardino/Riverside County Line	RIV_95_3.52	RIV_95_37.3
3	San Bernardino/Riverside County Line to Havasu Lake Road	SBD_95_0.0	SBD_95_37.3
4	Havasu Lake Road to East I-40 Junction	SBD_95_37.3	SBD_95_R57.28
5	West I-40 Junction to Nevada State Line	SBD_95_R57.21	SBD_95_80.45

ROUTE DESCRIPTION

Route Location
US-95 is located in the south eastern part of California. The route parallels and runs close to the California-Arizona border. The route is 117.75 miles in length.

Route Purpose
US-95 servers as a corridor for goods movement, local residents, and visitors heading north to Las Vegas and Laughlin or south to Imperial and El Centro. US-95 provides inter-regional connectivity among small towns with Interstates 40 and 10 to the larger metropolitan areas to the east and west. US-95 can be used as an alternate route when there is a service disruption on one of the interstates. There are also public land recreational opportunities in the area.

Major Route Features
US-95 is a north-south, a two-lane conventional highway though largely undeveloped desert connecting several east-west routes (I-15, I-40, SR-62, and I-10).

Route Designations and Characteristics

Segment	1	2	3	4	5
Freeway & Expressway	Yes	Yes	Yes	Yes	No
National Highway System	No	No	No	No	Yes
Strategic Highway Network	No	No	No	No	No
Scenic Highway	No	No	No	No	No
Interregional Road System	Yes	Yes	Yes	Yes	Yes
High Emphasis	No	No	No	No	No
Focus Route	No	No	No	No	No
Federal Functional Classification	Minor Arterial	Minor Arterial	Minor Arterial	Minor Arterial	Other Principal Arterial
Goods Movement Route	Yes	Yes	Yes	Yes	Yes
Truck Designation	Terminal Access Route (STAA)	Terminal Access Route (STAA)	Terminal Access Route (STAA)	Terminal Access Route (STAA)	National Network Route (STAA)
Rural / Urban / Urbanized	Urban	Rural	Rural	Rural	Rural
Metropolitan Planning Organization	SCAG	SCAG	SCAG	SCAG	SCAG
Regional Transportation Planning Agency	SCAG	SCAG	SCAG	SCAG	SCAG
Congestion Management Agency	CVAG	CVAG	SANBAG	SANBAG	SANBAG
County Transportation Commission	CVAG	CVAG	SANBAG	SANBAG	SANBAG
Local Agency	City of Blythe	City of Blythe/ County of Riverside	County of San Bernardino / Colorado Indian Reservation	County of San Bernardino / City of Needles	County of San Bernardino
Tribes	Colorado River Indians Tribes	Colorado River Indians Tribes	Colorado River Indians Tribes, Chemehuevi Indian Tribe	Chemehuevi Indian Tribe, Fort Mojave Indian Tribe	Fort Mojave Indian Tribe
Air District	MDAQMD	MDAQMD	MDAQMD	MDAQMD	MDAQMD
Terrain	Level	Level	Rolling	Rolling	Rolling

COMMUNITY CHARACTERISTICS

Jurisdiction	Blythe	Needles
Total Population	20,817	4,844
Median Income	$41,856	$31,226
Drive Alone to Work	78.7%	83.5%

Source: 2010 U.S. Census

US-95 is a rural route with few communities in the area. To the north, US-95 continues into the Nevada communities of Palm Gardens, Cal-Nev-Ari, and Searchlight, and the Las Vegas metropolitan area. In District 8, Blythe and Needles are the only incorporated cities along the route. There are several small residential communities along the Colorado River whose only access route is US-95. US-95 runs through some of the Colorado River Reservation lands.

The City of Blythe in San Bernardino County is the biggest city along US-95 in District 8 and celebrated 100 years of incorporation in 2016. Blythe has many restaurants, a country club, an airport, and single family homes. Blythe boasts being a gateway city to California and has experienced growth in the past few years. The city has many recreation opportunities such as golfing, camping, hunting, fishing, dune buggying, rock hounding, and off-road exploring, boating, water-skiing, and canoeing. Blythe also has many civic and outdoor events throughout the year.

The City of Needles in San Bernardino County is the second biggest community along US-95 in District 8 and celebrated 100 years of incorporation in 2013. Needles has many restaurants, hotels, and single family homes. Historical Route 66 runs though the city. The Fort Mojave Indian Tribe is a federally designated tribe in the area. The Santa Fe Railroad traverses the city carrying goods from California to the east. The Burlington Northern Santa Fe Railroad (BNSF) has a hub in the city. The historic El Garces Hotel/Santa Fe Depot in Needles was recently renovated and is the intermodal transportation center for Amtrak, and regional and local bus lines.

LAND USE

Most of the land along US-95 is either undeveloped desert or agricultural farmland. Blythe and Needles have some residential communities around the highway. The Bristol Mountains Wilderness Area is located close to US-95. Much of the land along US-95 is owned by the U.S. Bureau of Land Management and has never been privately owned. No major growth is anticipated along the corridor.

SYSTEM CHARACTERISTICS

Segment #	1	2	3	4	5
Existing Facility					
Facility Type	C	C	C	C	C
General Purpose Lanes	2	2	2	2	2
Lane Miles	7.04	65.354	74.6	39.95	46.49
Centerline Miles	3.52	32.677	37.3	19.975	23.245
HOV Lanes	0	0	0	0	0
HOT/ Express Lanes	0	0	0	0	0
Concept Facility 2035					
Facility Type	C	C	C	C	C
General Purpose Lanes	2	2	2	2	2
Lane Miles	7.04	65.354	74.6	39.95	46.49
Centerline Miles	3.52	32.677	37.3	19.975	23.245
HOV Lanes	0	0	0	0	0
HOT/ Express Lanes	0	0	0	0	0
TMS Elements					
TMS Elements 2008	None	Call boxes	Call boxes	Call boxes	Call boxes
TMS Elements 2035	None	Call boxes	Call boxes	Call boxes	Call boxes

C = Conventional Highway

US-95 within District 8 is a two-lane Conventional Highway without center turn lanes.

BICYCLE FACILITY

Segment	Bicycle Access Prohibited	Facility Type
1	No	No designated facility
2	No	No designated facility
3	No	No designated facility
4	No	No designated facility
5	No	No designated facility

Bicycles are allowed along the whole length of US-95. However, shoulders are narrow along most of the route and vary from 1-8 feet.

PEDESTRIAN FACILITY

Segment	Pedestrian Access Prohibited	Sidewalk Present
1	No	No
2	No	No
3	No	No
4	No	No
5	No	No

Due to the rural nature of US-95, sidewalks are not present along the route. Pedestrians may walk along the edge of the pavement.

TRANSIT FACILITY

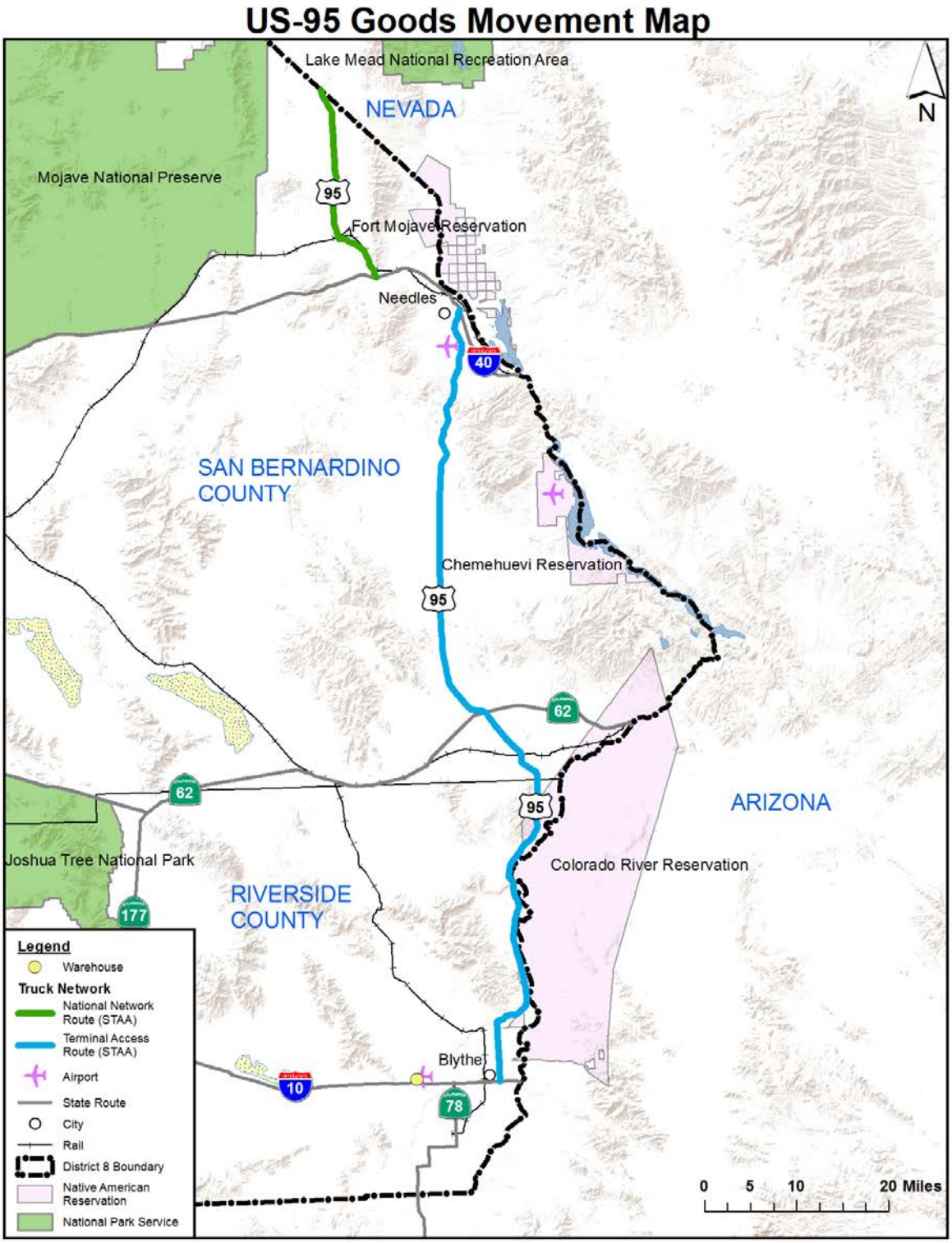
Segment	Mode & Collateral Facility	Name	Route End Points	Operating Period	Station Cities	Bikes Allowed On Transit	Location Description	# Parking Spaces
1	Traditional Bus	Palo Verde Valley Transit Agency Blue Route 1	Kmart Transfer Center	7am – 5pm weekdays	Blythe	2	N/A	N/A
1	Traditional Bus	Palo Verde Valley Transit Agency Silver Route 5	Kmart Transfer Center	8am-12:30pm Saturday and Holidays	Blythe	2	N/A	N/A
4	Traditional Bus	Needles Area Transit	G Street at Broadway	7am – 7pm weekdays; 10am-2pm Saturday	Needles	2	N/A	N/A
4	Train	Amtrak	Los Angeles and Chicago	Daily	Needles	No	N/A	N/A

Palo Verde Valley Transit Agency (PVVTA) provides public transportation service for the City of Blythe. PVVTA also provides route service deviations.

Needles Area Transit is the transit agency in Needles. All buses are equipped with bike racks that can hold two bicycles and wheelchair lifts. Busses run once an hour. Deviations from the fixed-route are available by request.

Amtrak's Southwest Chief is a train line that runs from Los Angeles to Chicago. Trains run once a day in each direction with many stops along the route.

FREIGHT



Freight generators, terminals, and/or inter-modal facilities are not present on the constructed portion of US-95 within District 8. US-95 can serve as an alternate route if I-10 or I-40 are closed. US-95 is the primary route for shipping goods between rural communities in the area.

CORRIDOR PERFORMANCE

Traffic volumes on US-95 are expected to increase slightly over the next 20 years. Even with the forecasted increase in traffic volumes, LOS is expected to remain acceptable in all segments.

Segment #	1	2	3	4	5
Basic System Operations					
AADT 2008	3,500	2,100	2,600	5,600	3,300
AADT 2035	5,600	3,300	3,400	7,600	4,400
LOS Method	HCM	HCM	HCM	HCM	HCM
LOS 2008	C	C	C	D	C
LOS 2035	C	C	C	D	C
LOS Concept	D	D	D	D	D
VMT 2008	15,550	68,670	96,980	112,000	76,760
VMT 2035	18,480	107,910	126,820	152,000	102,080
Truck Traffic					
Total Average Annual Daily Truck Traffic (AADTT) 2008	420	378	504	1,038	429
Total Average Annual Daily Truck Traffic (AADTT) 2035	670	589	683	1,523	396
Total Trucks (% of AADT) 2008	12.0%	18.0%	19.4%	18.5%	13.0%
Total Trucks (% of AADT) 2035	12.0%	18.0%	20.0%	20.0%	12.0%
5+ Axle Average Annual Daily Truck Traffic (AADTT) 2008	36	36	78	75	77
5+ Axle Trucks (% of AADT) 2008	1.0%	1.7%	3.0%	1.3%	2.3%
Peak Hour Traffic Data					
Peak Hour Directional Split 2008	74%	74%	74%	74%	74%
Peak Hour Directional Split 2035	60%	60%	60%	60%	63%
Peak Hour % 2008	11.0%	14.0%	10.0%	10.0%	13.0%
Peak Hour % 2035	11.0%	13.5%	20.0%	10.0%	15.5%
Peak Hour V/C 2008	0.21	0.16	0.19	0.30	0.24
Peak Hour V/C 2035	0.25	0.18	0.22	0.32	0.30

Source: Caltrans District 8 Forecast Unit forecast based on SCAG 2012 RTP traffic model

KEY CORRIDOR ISSUES

Corridor-wide issues along US-95 include narrow shoulders that do not accommodate bicycles and pedestrians. Another issue is frequent flooding during winter rain storms since much of the route crosses across alluvial fans and is not elevated above the surrounding land.

CORRIDOR CONCEPT

CONCEPT RATIONALE

This Transportation Concept Report serves as a guide for long-range planning of route improvements. Because significant traffic growth is not anticipated, the facility is expected to operate at the concept LOS "D" or better through 2035. US-95 may need other projects to achieve strategic plan goals such as providing adequate shoulders for bicycle and pedestrian travel along the route.

PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES

No major operational or capacity increasing projects are planned or programmed.

PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT

No projects or strategies are proposed for US-95.

APPENDICES

APPENDIX A: GLOSSARY OF TERMS AND ACRONYMS

Acronyms

AADT – Annual Average Daily Traffic
ADT – Average Daily Traffic
AQMD – Air Quality Management District
Caltrans – California Department of Transportation
CMA – Congestion Management Plan
CSS – Context Sensitive Solutions
FHWA – Federal Highway Administration
GHG – Green House Gas
HCM – Highway Capacity Manual
HCP – Habitat Conservation Plan
HCS – Highway Capacity Software
HOV – High Occupancy Vehicle Lane (2 or more occupants per vehicle)
HOT – High Occupancy Toll Lane
IC – Interchange
ITS – Intelligent Transportation System
LOS – Level of Service
MF – Mixed-Flow Lane
MFE – Mixed-Flow Lane Equivalent
ML – Managed Lane
MPO – Metropolitan Planning Organizations
NOA – Naturally Occurring Asbestos
NCCP – Natural Community Conservation Plan
OC – Overcrossing
PID – Project Initiation Document
PM – Post Mile
PSR – Project Study Report
RCTC – Riverside County Transportation Commission
Riv – Riverside County
RTP – Regional Transportation Plan
RTIP – Regional Transportation Improvement Program
RTPA – Regional Transportation Planning Agency
SANBAG – San Bernardino Associated Governments
SBd – San Bernardino County
SCAG – Southern California Association of Governments
SCS – Sustainable Community Strategies
SHOPP – State Highway Operation Protection Program
STIP – State Transportation Improvement Program
T – Truck Lane
TDM – Transportation Demand Management
TMS – Transportation Management System
TSN – Transportation System Network
UC – Undercrossing
V/C – Volume to Capacity Ratio
VMT – Vehicle Miles Traveled

Definitions

Annual Average Daily Traffic (**AADT)** – Annual Average Daily Traffic is the total volume for the year divided by 365 days. The traffic count year is from October 1st through September 30th. Traffic counting is generally performed by electronic counting instruments moved from location throughout the State in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways, and other purposes.

Bikeway Class I (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow by motorists minimized.

Bikeway Class II (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway.

Bikeway Class III (Bike Route) – Provides for shared use with pedestrian or motor vehicle traffic.

Capacity – The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions.

Capital Facility Concept – The 20-25 year vision of future development on the route to the capital facility. The capital facility can include capacity increasing, state highway, bicycle facility, pedestrian facility, transit facility (Intercity Passenger rail, Mass Transit Guide way etc.), grade separation, and new managed lanes.

Concept LOS – The minimum acceptable level of service over the next 20-25 years.

Conceptual Project – A conceptual improvement or action is a project that is needed to maintain mobility or serve multimodal users, but is not currently included in a financially constrained plan and is not currently programmed. It could be included in a General Plan or in the unconstrained section of a long-term plan.

Corridor – A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, bicycle, pedestrian, and transit route alignments. Off system facilities are included for informational purposes and not analyzed in the TCR.

Facility Concept – Describes the facility and strategies that may be needed within 20-25 years. This can include capacity increasing, state highway, bicycle facility, pedestrian facility, transit facility, non-capacity increasing operational improvements, new managed lanes, conversion of existing managed lanes to another managed lane type or characteristic, TMS field elements, transportation demand management, and incident management.

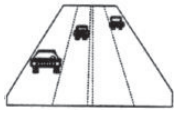
Facility Type – The facility type describes the state highway facility type. The facility could be freeway, expressway, conventional, or one-way city street.

Freight Generator – Any facility, business, manufacturing plant, distribution center, industrial development, or other location (convergence of commodity and transportation system) that produces significant commodity flow, measured in tonnage, weight, carload, or truck volume.

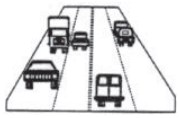
Headway – The time between two successive vehicles as they pass a point on the roadway, measured from the same common feature of both vehicles.

Intelligent Transportation System (ITS) – Improves transportation safety and mobility and enhances productivity through the integration of advanced communications technologies into the transportation infrastructure and in vehicles. Intelligent transportation systems encompass a broad range of wireless and wire line communications-based information and electronics technologies to collect information, process it, and take appropriate actions.

Level of Service (LOS) – It is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. LOS can generally be categorized as follows:



LOS A describes free flowing conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway.



LOS B is also indicative of free-flow conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.

LOS C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.

LOS D demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.

LOS E reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.

LOS F is a stop and go, low speed conditions with little or poor maneuverability. Speed and traffic flow may drop to zero and considerable delays occur. For intersections, LOS F describes operations with delay in excess of 60 seconds per vehicle. This level, considered by most drivers unacceptable often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection.

Mainline – Includes travelway for through traffic but not freeway to freeway interchanges, local road interchanges, ramps, or auxiliary lanes.

Multimodal – The availability of transportation options using different modes within a system or corridor, such as automobile, subway, bus, rail, or air.

Peak Hour – The hour of the day in which the maximum volume occurs across a point on the highway.

Peak Hour Volume – The hourly volume during the highest hour traffic volume of the day traversing a point on a highway segment. It is generally between six percent and 10 percent of the Annual Daily Traffic (ADT). The lower values are generally found on roadways with low volumes.

PeMS – Caltrans Performance Measurement System is an archived data user service that provides over ten years of data for historical analysis. PEMS provides access to real-time and historical performance data which conducts assessment of freeway performance, base operational decisions on knowledge of the current state of the freeway network, and identifies congestion bottlenecks.

Planned Project – A planned improvement or action is a project in a financially constrained section of a long-term plan, such as an approved Regional or Metropolitan Transportation Plan (RTP or MTP), Capital Improvement Plan, or measure.

Post-25 Year Concept – This dataset may be defined and re-titled at the District's discretion. In general, the Post-25 Year concept could provide the maximum reasonable and foreseeable roadway needed beyond a 20-25 year horizon. The post-25 year concept can be used to identify potential widening, realignments, future facilities, and rights-of-way required to complete the development of each corridor.

Post Mile (PM) – A post mile is an identified point on the State Highway System. The milepost values increase from the beginning of a route within a count to the next county line. The milepost values start over again at each county line. Mile post values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The mile post at a given location will remain the same year after year. When a section of road is relocated, new milepost (usually noted by an alphabetical prefix such as "R" or "M") are established for it. If relocation results in a change in length, "mile post equations" are introduced at the end of each relocated portion so that mile posts on the reminder of the route within the county will remain unchanged.

Programmed Project – A programmed improvement or action is a project in a near-term programming document identifying funding amounts by year, such as the State Transportation Improvement Program or the State Highway Operations and Protection Program.

Route Designation –A route's designation is adopted through legislation and identifies what system the route is associated with on the State Highway System. A designation denotes what design standards should apply during project development and design. Typical designations include but not limited to National Highway System (NHS), Interregional Route System (IRRS), and Scenic Highway System.

Rural – Fewer than 5,000 in population designates a rural area. Limits are based upon population density as determined by the U.S. Census Bureau.

RTP Model – Forecasting model developed by Southern California Association of Governments (SCAG) prepares travel demand model approximately every 4 years in conjunction with the Regional Transportation Plan Project List. SCAG's trip based model is structured on a four-step gravity model, which includes trip generation, trip distribution, mode choice, and trip assignment.

Segment – A portion of a facility between two points.

System Operations and Management Concept – Describes the system operations and management elements that may be needed within 20-25 years. This can include Non-capacity increasing operational improvements (Auxiliary lanes, channelization's, turnouts, etc.), conversion of existing managed lanes to another managed lane type or characteristic (e.g. HOV lane to HOT lane), TMS Field Elements, Transportation Demand Management, and Incident Management.

Transportation Demand Management (TDM) – Programs designed to reduce or shift demand for transportation through various means, such as the use of public transportation, carpooling, telework, and alternative work hours. Transportation Demand Management strategies can be used to manage congestion during peak periods and mitigate environmental impacts.

Transportation Management System (TMS) – Is the business processes and associated tools, field elements, and communications systems that help maximize the productivity of the transportation system. TMS includes, but is not limited to, advanced operational hardware, software, communications systems, and infrastructure, for integrated Advanced Transportation Management Systems and Information Systems, and for Electronic Toll Collection System.

Urban – 5,000 to 49,999 in population designates an urban area. Limits are based upon population density as determined by the U.S. Census Bureau.

Urbanized – Over 50,000 in population designates an urbanized area. Limits are based upon population density as determined by the U.S. Census Bureau.

Vehicle Miles Traveled (VMT) – Is the total number of miles traveled by motor vehicles on a road or highway segments.

APPENDIX B: FACTSHEETS

There are no factsheets available for this route.

APPENDIX C: ADDITIONAL CORRIDOR DATA

There is no additional corridor data for this route.

APPENDIX D: RESOURCES

- California State Transportation Improvement Program Project List 2014
- Caltrans Earth: http://earth.dot.ca.gov/
- Caltrans TASAS Highway Sequence Listing for Caltrans District 8
- Census 2010: http://www.census.gov/2010census/
- District 8 System Management Plan 2011
- Focus Routes: http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/List_of_Focus_Routes.doc
- GIS Data Library: http://www.dot.ca.gov/hq/tsip/gis/datalibrary/gisdatalibrary.html
- High Emphasis Routes: http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/Caltrans_High_Emphasis_Routes_HER.doc
- Interregional Transportation Strategic Plan 2015
- Metropolitan Planning Organizations and RTPAs Map: http://www.dot.ca.gov/hq/tpp/offices/orip/index_files/Updated%20Files/MPO_RTPA_Map_June_2012.pdf
- Regional Transportation Planning Contacts: http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies_files/regional_6-12.xls
- SCAG FY 2011-2012 Annual Listing of Obligated Projects for State and Local Highways
- SCAG 2012 Regional Transportation Plan: http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx
- SCAG 2012 Regional Transportation Plan Level of Service Model
- Scenic Highway Routes: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm
- Streets and Highways Code §250-257: http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=00001-01000&file=250-257
- Truck Route List and Truck Network Maps: http://www.dot.ca.gov/hq/traffops/trucks/truckmap/
- Needles Area Transit: http://www.cityofneedles.com/pages/about-needles/Transportation.html
- Palo Verde Valley Transit Agency: https://sites.google.com/site/pvvtablythe/
- City of Blythe: http://www.cityofblythe.ca.gov/
- City of Needles: http://www.cityofneedles.com/index.html

APPENDIX E: SYSTEM PLANNING FLOW CHART