Transportation Concept Report
State Route 46
District 06
August 2013

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 6 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
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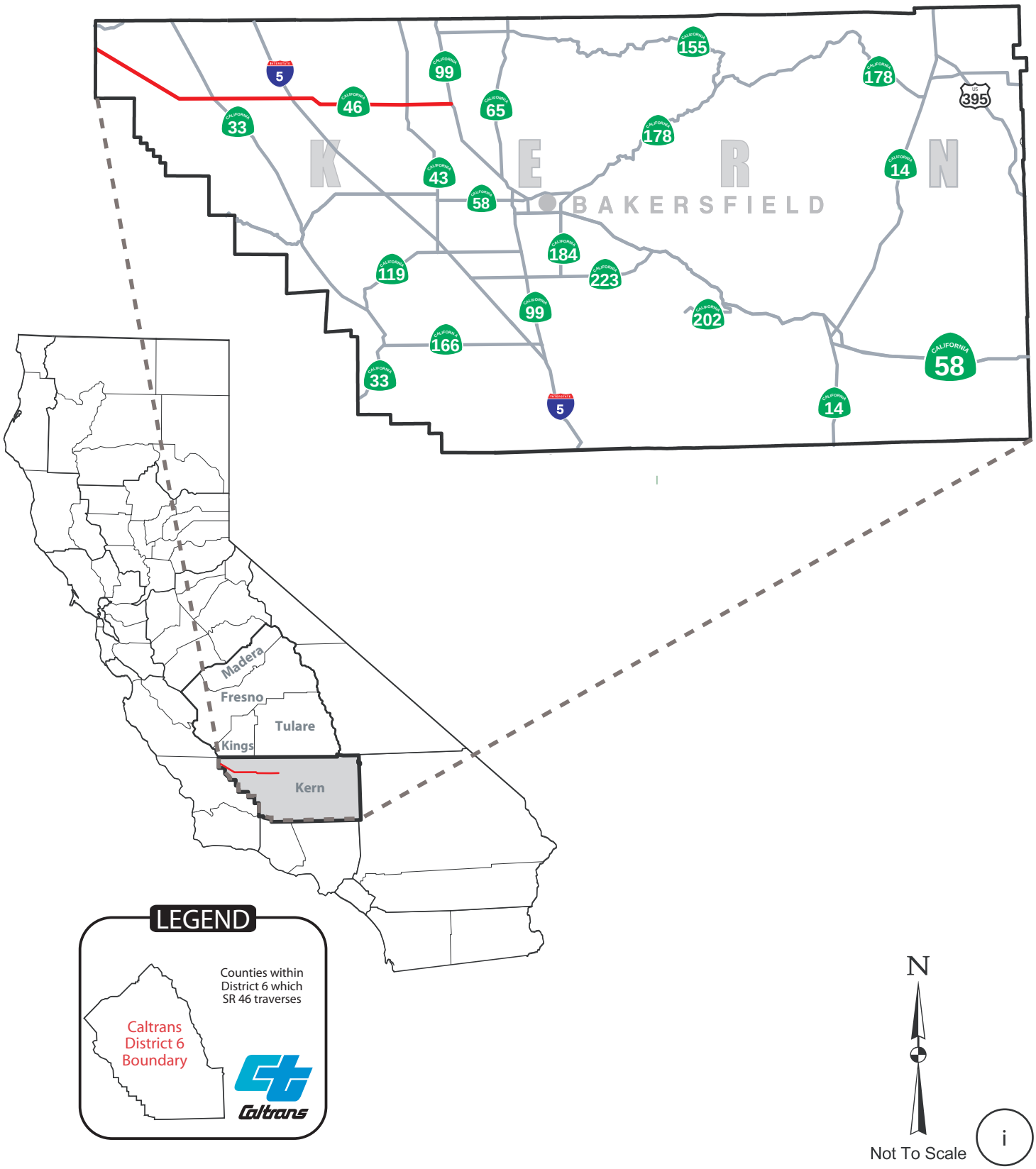
Front cover photo: The newly constructed four-lane expressway of State Route 46

STATE ROUTE 46
TRANSPORTATION CONCEPT REPORT
LOCATION MAP



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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 identifying deficiencies and proposing improvements to the SHS. Through System Planning, Caltrans focuses on developing an integrated multimodal transportation system that meets Caltrans' goals of safety, mobility, delivery, stewardship, and service.

The System Planning process 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 Transportation System Development Plan (TSDP). 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 **TSDP** 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 law and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to evaluate current and projected conditions along the route and communicate the vision for the development of each route in each Caltrans District during a 20-25 year planning horizon. The TCR is developed with the goals of increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through 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

Stakeholders were consulted during the research phase of this TCR for their input and the accuracy of the data. Contact was done mainly via e-mail or telephone. Once a draft was completed, it was circulated for comments with internal stakeholders. These stakeholders include: the divisions of Planning, Traffic, Maintenance, Environmental, Design, Right of Way, and the Native American Liaison. As comments were collected, the TCR was further edited and revised. As the TCR became more finely tuned, it was then sent out via e-mail or regular mail for input from external stakeholders. These stakeholders include, within the corridor: Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Agencies (RTPAs), city and county planning and public works agencies, transit agencies, Sierra Club Chapters, California Trucking Association, San Joaquin Valley Air Pollution Control District, Chambers of Commerce, Native American Tribes, Farm Bureaus, and other transportation agencies. Upon signature of both the District 6 Planning Deputy Director and the District 6 Director, thus making the document official and final, copies were emailed, sent by regular mail, and posted to the District 6 Intranet site at: www.dot.ca.gov/dist6/planning/tcrs/.

EXECUTIVE SUMMARY

State Route (SR) 46 has been and is in the process of reaching its concept. On the western end in Kern County, the widening to four lanes has been completed. Many other projects involving widening to four lanes are programmed and currently underway.

Base year is 2011 except where noted. Horizon year is 2035.

Concept Summary

Segment	Segment Description	Existing Facility	20-25 Year Capital Facility Concept	20-25 Year System Operations and Management Concept	20-25 Year Facility Concept
1	San Luis Obispo County Line to Keck's Rd	4E	4E	Maintain Only	Maintain Only
2	Keck's Rd to SR 33	4E	4E	Remote Processing Units/Roadside Weather Information Centers, Vehicle Detection Systems	Maintain Only
3	SR 33 to I-5	4E and 2C	4E	Changeable Message Sign, Closed Circuit Television, Remote Processing Units/Roadside Weather Information Centers, Vehicle Detection Systems	Widen to 4E
4	I-5 to 1 mile west of Scofield Ave	2C	4E	Remote Processing Unit/Roadside Weather Information Center, Vehicle Detection System	Widen to 4E
5	1 mile west of Scofield Ave to the north Jct of SR 43	2C	4C	Changeable Message Signs, Closed Circuit Television, Highway Advisory Radio, Remote Processing Unit/Roadside Weather Information Center	Widen to 4C
6	North Jct of SR 43 to SR 99	2C	4E	Replace bridge at SR 99	Ramp improvements at SR 99, widen to 4C

Concept Rationale

Considering reasonable financial and physical constraints, this TCR defines the appropriate route concept level of service (LOS) and facility type(s) for SR 46. Level of service is a qualitative measure used to describe the operational conditions in a stream of traffic and the perception of conditions by users. It is a measure of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations from "A" to "F", with LOS "A" representing the best operating conditions and LOS "F" representing the worst. Each LOS represents a range of operating conditions.

Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, or whichever LOS is feasible to attain. The concept LOS is a target LOS determined by the importance of the route and environmental factors. A deficiency or a need for improvement is triggered when the actual LOS falls below the concept LOS.

Please note: The number of lanes needed to meet the target LOS for the Ultimate Transportation Concept (UTC) for this route is only a guideline. The need to widen the roadway beyond the UTC may be necessary to maintain the target LOS. The local jurisdictions should endeavor to maintain adequate right-of-way (ROW) to maintain the target LOS, which in an urban setting could exceed the UTC number of lanes. Where the State legislature has designated the route as part of the Freeway and Expressway System, interchange and freeway ROW should be part of the General Plan so as not to adversely affect development.

Proposed Projects and Strategies

State Route (SR) 46 has recently been widened and has projects underway for widening to a four (4) lane expressway and highway. Thus, most of the route has reached its concept or has projects programmed for the concept. A planned, unconstrained project to widen SR 46 to four lanes from SR 43 to SR 99, is post 2035.

CORRIDOR OVERVIEW

ROUTE SEGMENTATION

Segment #	Location Description	County_Route_ Beg. PM	County_Route_ End PM
1	San Luis Obispo County Line to Keck's Rd	KER_046_0.000	KER_046_7.330
2	Keck's Rd to SR 33	KER_046_7.330	KER_046_20.543
3	SR 33 to I-5	KER_046_20.543	KER_046_32.533
4	I-5 to 1 mile west of Scofield Ave	KER_046_32.533	KER_046_46.020
5	1 mile west of Scofield Ave to the north Jct of SR 43	KER_046_46.020	KER_046_51.215
6	North Jct of SR 43 to SR 99	KER_046_51.215	KER_046_57.785

ROUTE DESCRIPTION

Route Location: State Route (SR) 46 begins at SR 1 in San Luis Obispo County and ends in Kern County at SR 99. Within District 6, the entire route lies within Kern County.

Route Purpose: The route serves as a way to the Central Coast from the San Joaquin Valley. It provides for recreational traffic on weekends, and farm to market traffic during the weekdays.

Major Route Features: The route intersects SR 33, Interstate (I) 5, SR 43, and ends with its junction with SR 99. From SR 101 in San Luis Obispo County to I-5 in Kern County, the route is known as the "Paso Robles Highway. From I-5 to SR 99, in Kern County, it is known as the "Famoso Highway". Within the City of Wasco, the route is known as the "Medal of Honor Recipient Larry Stanley Pierce Memorial Highway."

In Wasco, the designation of the route in memory of Larry Stanley Pierce

Route Designations and Characteristics:

Segment #		1	2	3	4	5	6
Freeway & Expressway		Yes	Yes	Yes	Yes	Yes	Yes
National Highway System		Yes	Yes	Yes	Yes	Yes	Yes
Strategic Highway Network		Yes	Yes	Yes	Yes	Yes	Yes
Scenic Highway		No	No	No	No	No	No
Interregional Road System		Yes	Yes	Yes	Yes	Yes	Yes
High Emphasis		Yes	Yes	Yes	No	No	No
Focus Route		Yes	Yes	Yes	No	No	No
Federal Functional Classification		Other Principal Arterial	Other Principal Arterial	Other Principal Arterial	Other Principal Arterial	Other Principal Arterial	Other Principal Arterial
Goods Movement Route		Yes	Yes	Yes	Yes	Yes	Yes
Truck Designation		Terminal Access	Terminal Access	Terminal Access	Terminal Access	Terminal Access	Terminal Access
Rural/Urban/Urbanized		Rural	Rural	Rural	Rural	Urban	Rural
Metropolitan Planning Organization		KernCOG	KernCOG	KernCOG	KernCOG	KernCOG	KernCOG
Regional Transportation Planning Agency		KernCOG	KernCOG	KernCOG	KernCOG	KernCOG	KernCOG
Congestion Management Agency		KernCOG	KernCOG	KernCOG	KernCOG	KernCOG	KernCOG
Local Agency		Kern County	Kern County	Kern County	Kern County	Kern County/City of Wasco	Kern County
Tribes		South Valley Yokuts/Salinan	South Valley Yokuts/Salinan	South Valley Yokuts	South Valley Yokuts	South Valley Yokuts	South Valley Yokuts
Air District		San Joaquin Valley Air Pollution Control District	San Joaquin Valley Air Pollution Control District	San Joaquin Valley Air Pollution Control District	San Joaquin Valley Air Pollution Control District	San Joaquin Valley Air Pollution Control District	San Joaquin Valley Air Pollution Control District
Terrain		Rolling	Flat	Flat	Flat	Flat	Flat

COMMUNITY CHARACTERISTICS

Lost Hills is an unincorporated community that is found west of I-5, near the California Aqueduct. The community straddles both sides of SR 46. According to the 2010 U.S. Census, the population of Lost Hills was 2,412, with 97.6% of Hispanic origin. A majority of the people work as farm laborers.

Entrance to the City of Wasco

Further east, is the City of Wasco. Most of Wasco lies south of SR 46 with some growth on the north side. The eastern edge of Wasco is just beyond SR 43. The early years of Wasco were driven by the Santa Fe Railroad. Wasco owes its early development to Marshall V. Hartranft for the initial development of Wasco. He obtained land from the Kern County Land Company for the settlement which was called the Fourth Home Extension Colony. Wasco was originally named Dewey and Deweyville, after Admiral George Dewey. However, in 1900, William Bonham from Wasco County, Oregon, proposed the name "Wasco" for the community and it was adopted.

Wasco is an agricultural community, with cotton and orchards being prime crops. But, most noteworthy are its roses. Wasco is known as the Rose Capital, and produces 55% of all roses in the United States. The Festival of Roses takes place in September. Vintage Nursery and Weeks Roses are the main rose growers. Rows and rows of various shades of roses are found along SR 46.

Employment in Wasco is found mainly at the Wasco State Prison, local school districts and in agriculture. The prison has over 1,400 employees and is located west of the city on over 600 acres. The prison houses over 5,000 inmates. All of the schools are located south of SR 46. A few of the largest agricultural employers are Sun World, Sunny Gem, Primex Farms, LLC, and South Valley Farms. Sun World is a grower, packer, and marketer with over 10,000 acres of such agricultural products as grapes, peppers, plums, apricots, and citrus. Sunny Gem is in food production of mainly juice products and hulls and processes almonds. Primex Farms, LLC is a pistachio processor. South Valley Farms is an almond grower, packer, and shipper.

The City of Wasco had a population of 25,545 according to the 2010 U.S. Census, with 76.7% being of Hispanic origin. More than half, 66.9% speak a language other than English at home. Nearly 27% of the population lives below the poverty line.

Rows of roses grown in Wasco

LAND USE

The far western reaches of SR 46 in Kern County cover mainly grazing lands for cattle. Also, orchards and other crops are found along the route.

Oil wells and drilling are found to the west of Wasco. A recently added oil drilling rig is at 16,000 feet below the surface at SR 46 and Main Drain Road. Also, solar energy fields are found west of Main Drain Road.

The western end of Lost Hills (west of the California Aqueduct), has a frontage road, Pavilion Way, on the south side of SR 46. Located in the area are schools and the frontage road acts as a buffer and provides safety from the highway traffic.

To the east side of the California Aqueduct, Lost Hills lacks a frontage road. On the north side of SR 46 are some residences, small businesses, and commercial development. On the south side, there is mainly commercial development, utility offices, the Department of Water Resources office, and the local post office. As one heads out of the community, a park is located on the north side of the highway.

Oil wells on the western portions of SR 46

At the I-5/SR 46 Junction, there is highway commercial development. Gas stations, hotels, fast food restaurants, and a couple of sit-down restaurants can be found here. A Love's Truck Stop is located on the north side of the highway.

Further east the Semitropic Elementary School is located on the northeast corner of Gun Club Road and SR 46. This school was founded in 1895. It is a kindergarten through eighth grade school with ten teachers. Just to the east of the school, is the Semitropic Co-op Gin and Almond Huller facility. As can be imagined, almond orchards and row crops are found along the stretches of the highway. The Semitropic Electrical Substation is further east and located along the south side of the highway.

Wasco State Prison is located on the south side of SR 46 between Jumper Avenue and Scofield Avenue.

On the west end of Wasco, there are some proposed residential developments. Some are just in the initial stages. The Valley Rose Golf Course is on the north side of the highway between Valley Rose Parkway and Leonard Avenue. Interspersed along the highway as one heads into Wasco, are a cemetery and agricultural land. At Central Avenue begins the commercial corridor of Wasco. A block south of the route, on Griffith Avenue, is Thomas Jefferson Middle School. K-Mart and other retail stores, restaurants, grocery stores, and other commercial services are found from Central Avenue to "F" Street/SR 43 South. The north side of SR 46 has recently been developed with a hotel, a grocery store, and restaurants. This development is still underway. The City of Wasco's growth rate is between two and three percent and will likely continue at that rate in the future. Industrial services, mainly related to trucking and agriculture, appear on the east end of Wasco.

State Route 46 at Griffith Avenue in Wasco

Between the eastern edge of Wasco and SR 99, agricultural land is found. At the SR 43/SR 99 Junction, there is a restaurant and a stockyard, which features weekly cattle sales.

Air quality in Kern County is among the worst in the nation. However, trends show the number of days above the national standard for ozone has decreased. Unfortunately, at the same time, days above the national standard for particulate matter (PM) have increased.

Segment	Place Type
1	Agricultural lands
2	Rural settlements and Agricultural lands
3	Rural settlements and Agricultural lands/Rural Town (Lost Hills)
4	Rural settlements and Agricultural lands
5	Rural Town (City of Wasco)/Rural settlements and Agricultural lands
6	Rural settlements and Agricultural lands

SYSTEM CHARACTERISTICS

The recently widened segments of SR 46 have broad medians. Within the City of Wasco, the route has a center dual left-turn lane. As development has occurred, the City of Wasco has been proactive and attuned to Caltrans' need for right-of-way along the route. Irrevocable offers of right-of-way dedication have been documented and setbacks maintained, so that once the widening of the route occurs in the city, no businesses will be forced to relocate or be taken.

Since the route is primarily rural and semi-rural, with Wasco being the only community of reasonable size on the route, no HOV or BRT lanes are needed or are feasible.

SYSTEM CHARACTERISTICS							
Segment #		**1**	**2**	**3**	**4**	**5**	**6**
Existing Facility							
Facility Type		E	E	E/C	C	C	C
General Purpose Lanes		4	4	4 - 2	2	2	2
Lane Miles		29.32	52.852	37.894	26.974	10.39	13.14
Centerline Miles		7.33	13.213	11.99	13.487	5.195	6.57
Median Width		61	61	0 – 61	0 - 12	0 – 14	0 - 22
Median Characteristics		Unpaved	Unpaved	Unpaved and undivided – single stripe	Undivided – single stripe	Undivided – single stripe and from PM 49.524 – PM 50.829 center dual left turn lane	Undivided – single stripe
HOV Lanes		0	0	0	0	0	0
HOV Characteristics		N/A	N/A	N/A	N/A	N/A	N/A
HOT/Express Lanes		0	0	0	0	0	0
HOT/ Express Lanes Characteristics		N/A	N/A	N/A	N/A	N/A	N/A
Toll Lanes		0	0	0	0	0	0
Toll Lane Characteristics		N/A	N/A	N/A	N/A	N/A	N/A
BRT Lanes		0	0	0	0	0	0
Auxiliary Lanes		0	0	0	0	0	0
Passing Lanes		0	0	0	0	0	0
Truck Climbing Lanes		0	0	0	0	0	0
Concept Facility 2035							
Facility Type		E	E	E	E	C	E
General Purpose Lanes		4	4	4	4	4	4
Lane Miles		29.32	52.852	47.96	53.948	20.78	26.28
Centerline Miles		7.33	13.213	11.99	13.487	5.195	6.57
HOV Lanes		0	0	0	0	0	0
HOT Lanes		0	0	0	0	0	0
BRT Lanes		0	0	0	0	0	0
Toll Lanes		0	0	0	0	0	0
Aux Lanes		0	0	0	0	0	0
Passing Lanes		0	0	0	0	0	0
Truck Climbing Lanes		0	0	0	0	0	0

TMS Elements							
TMS Elements (BY)		Remote Processing Unit/Roadside Weather Information Center, Traffic Count Station, Vehicle Detection System	Changeable Message Sign, Highway Advisory Radio, Traffic Count Station, Vehicle Detection System	Changeable Message Sign, Signals, Traffic Count Stations,	Changeable Message Sign, Traffic Count Stations	Signals, Traffic Count Stations	Traffic Count Stations
TMS Elements (HY)		None	Remote Processing Units/Roadside Weather Information Centers, Vehicle Detection Systems	Changeable Message Sign, Closed Circuit Television, Remote Processing Units/Roadside Weather Information Centers, Vehicle Detection Systems	Remote Processing Unit/Roadside Weather Information Center, Vehicle Detection System	Changeable Message Signs, Closed Circuit Television, Highway Advisory Radio, Remote Processing Unit/Roadside Weather Information Center	None

State Route 46 in Wasco showing the preservation of right-of-way

BICYCLE FACILITY

State Route 46 is open to bicycle traffic, but has no separate designated bike routes. In the rural stretches, there is really little need for a separate bike path. Shoulders are wide in most segments, due to the recent widening projects. The 2010 Kern County Regional Bicycle Plan identifies a proposed bikeway from Gun Club Road to Magnolia Avenue as a shared Caltrans shoulder. Currently, the entire route is permitted for bicycles and the shoulder is shared. The City of Wasco has parallel streets to SR 46 that may be used as alternate routes. Please see Appendix C: Bicycle Information for further details.

Segment	State Bicycle Facility							
	Segment ID	Post Mile	Location Description	Bicycle Access Prohibited	Facility Type	Outside Paved Shoulder Width	Facility Description	Posted Speed Limit
1	A	0.00 – 7.33	San Luis Obispo County Line to Kecks Rd	No	Shared	10 ft.	No or few structures nearby, rolling terrain, arid climate (grassland, sage, and/or scrub brush), 3 call boxes, rumble strip	65 mph
2	B	7.33 – 20.54	Kecks Rd to SR 33	No	Shared	10 ft.	Gas station/food store, flat terrain, arid climate, agricultural and grazing land, 6 call boxes	55 mph
3	C	20.54 – 27.48	SR 33 to Brown Material Rd	No	Shared	10 ft.	No or few structures nearby, flat terrain, arid climate (grassland, sage, and/or scrub brush), some agricultural land, rumble strip	65 mph
3, 4, 5	D	27.48 – 49.52	Brown Material Rd to Central Ave	No	Shared	0-8 ft.	Unincorporated area of Lost Hills, numerous oil wells, restaurants and truck stop, flat terrain, arid climate, agricultural and grazing land	45-55 mph

Segment	State Bicycle Facility							
	Segment ID	Post Mile	Location Description	Bicycle Access Prohibited	Facility Type	Outside Paved Shoulder Width	Facility Description	Posted Speed Limit
5,6	E	49.52 – 57.78	Central Ave to SR 99	No	Shared	6-8 ft.	City of Wasco, urban and agricultural land, flat terrain, arid climate, call boxes	40-55 mph

PEDESTRIAN FACILITY

Pedestrians are permitted along the route. However, many of the junctions, especially in the rural areas, are at grade with no signals, no crosswalks, no sidewalks, and no curbs. Only at I-5 and SR 99 are there grade separations. Within the community of Lost Hills and the City of Wasco, some sidewalks and crosswalks exist.

PEDESTRIAN FACILITY								
Seg	Ped. Seg	Post mile	Location Description	Ped. Access Prohibited	Sidewalk Present	Facility Description	Junction	
							Location	Type
1	E	0.0 – 13.212	South junction of I-5 to SR 269	No	No	Expressway	Annette Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							Kecks Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
2	F	7.3 – 20.5	Keck's Rd to SR 33	No	No	Expressway	Bitterwater Valley Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
3	G	20.5 – 32.5	SR 33 to I-5	No	Varies	Expressway and Highway	SR 33/Westside Highway	Signalized, at-grade
								No crosswalks, no sidewalks, has curb
							Brown Material Rd	Not signalized, at-grade
								No crosswalks, no sidewalks

PEDESTRIAN FACILITY								
Seg	Ped. Seg	Post mile	Location Description	Ped. Access Prohibited	Sidewalk Present	Facility Description	Junction	
							Location	Type
							Pavilion Wy	Not signalized, at-grade
								No crosswalks, no sidewalks
							Bruning Ave	Not signalized, at-grade
								Crosswalk, sidewalks on south side, curb
							Farnsworth Ave	Not signalized, at-grade
								No crosswalk, sidewalk on south side
							Giddings Ave	Not signalized, at-grade
								No crosswalks, sidewalk on south side
							Universal St/Martin Ave	Not signalized, at-grade
								No crosswalks, no sidewalks, curb
							Lost Hills Rd/Woodward St	Signalized, at-grade
								Crosswalk, no sidewalk, curb
							Powers St	Not signalized, at-grade
								No crosswalks, sidewalk on south side
							Warren St	Signalized, at-grade
								Crosswalk, sidewalk on south side
							Aloma St	Not signalized, at-grade
								No crosswalks, partial sidewalk on south side
4	H	32.5 – 46.0	I-5 to 1 mile west of Scofield Ave	No	No	Highway	I-5	Signalized, grade-separated
								No crosswalks,

PEDESTRIAN FACILITY								
Seg	Ped. Seg	Post mile	Location Description	Ped. Access Prohibited	Sidewalk Present	Facility Description	Junction	
							Location	Type
								no sidewalks
							Buford St	Not signalized, at-grade
								No crosswalks, no sidewalks, curb
							Main Drain Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							McCombs Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							Dairy Ave/Corcoran Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							Kurt Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							McCoy Ave	Not signalized, at-grade
								No crosswalks, no sidewalks
							Gun Club Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							Rowlee Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
							Wildwood Rd	Not signalized, at-grade
								No crosswalks, no sidewalks
5		46.0 – 51.2	1 mile west of Scofield Ave to the north Jct of SR 43	No	Varies	Highway	Scofield Ave	Not signalized, at-grade
								No crosswalks, no sidewalks
							Valley Rose Pkwy	Not signalized, at-grade
								No crosswalks, no sidewalks
							Leonard Ave	Not signalized, at-grade

PEDESTRIAN FACILITY								
Seg	Ped. Seg	Post mile	Location Description	Ped. Access Prohibited	Sidewalk Present	Facility Description	Junction	
							Location	Type
								No crosswalks, no sidewalks
							Central Ave	Not signalized, at-grade
								No crosswalks, sidewalk on southside
							Beckes St	Not signalized, at-grade
								No crosswalks, sidewalk on southside
							Peters St	Not signalized, at-grade
								No crosswalks, sidewalks
							Palm Ave	Signalized, at-grade
								Crosswalks, sidewalks
							Maple Ave	Not signalized, at-grade
								No crosswalks, sidewalks
							Poplar Ave	Not signalized, at-grade
								No crosswalks, 3 corners with sidewalks, one with curb
							Birch Ave	Not signalized, at-grade
								One crosswalk, some sidewalk, curb
							Griffith Ave	Signalized, at-grade
								Some crosswalks, some sidewalks, curb
							Broadway Ave	Not signalized, at-grade
								No crosswalks, some sidewalks, curb
							Annin Ave	Not signalized, at-grade
								No crosswalks, some sidewalks, curb

PEDESTRIAN FACILITY								
Seg	Ped. Seg	Post mile	Location Description	Ped. Access Prohibited	Sidewalk Present	Facility Description	Junction	
							Location	Type
							“E” St	Not signalized, at-grade
								No crosswalks, some sidewalks, curb
							“F” St/SR 43 South Jct	Signalized, at-grade
								Crosswalks, no sidewalks, curb
6		51.2 – 57.8	North Jct of SR 43 to SR 99	No	No	Highway	“J” St	Warning light, at-grade
								No crosswalks, no sidewalks, curb
							Root Ave	Not signalized, at-grade
								No crosswalks, no sidewalks
							Smith Ave	Not signalized, at-grade
								No crosswalks, no sidewalks
							Beech Ave	Not signalized, at -grade
								No crosswalks, no sidewalks
							SR 99	Not signalized, grade separated
								No crosswalks, no sidewalks, curb

TRANSIT FACILITY

Transit located along the SR 46 corridor includes: City of Wasco demand-response service, two Kern Regional Transit's intercity routes, and Amtrak service at the Wasco transit center. Ridership numbers are from the 2011/2012 fiscal year (Amtrak is under the federal fiscal year).

Kern Regional Transit provides intercity service into Bakersfield, which provides for transfers to further destinations beyond. It also covers many locations and stops with bicycles allowed on the service.

Wasco's demand-response service (Dial-A-Ride) only covers the city. They do not allow bicycles on the service.

The Amtrak station in Wasco has limited amenities.

The California High Speed Rail Authority (CHSRA) is a State agency responsible for planning, designing, building, and operating the first high-speed rail system in the nation. As such, CHSRA has developed a plan to build a high-speed rail line to service the major metropolitan areas of California by connecting San Diego and Los Angeles to San Francisco and Sacramento via the Central Valley. Extensive portions of the system will lie within, or adjacent to, existing rail or highway right-of-way to reduce potential environmental impacts and minimize land acquisition. A large part of the Initial Operating Section (IOS) will be constructed in the San Joaquin Valley and will connect proposed stops in Fresno, Kings County (servicing Hanford/Tulare/Visalia), and Bakersfield, all of which lie within Caltrans District 6.

A Kern Regional Transit bus heading to Wasco

The future of California's High-Speed Rail (HSR) service will be a part of the State's transportation system and should be considered in concert with local and regional non-motorized transportation, transit, airports, and highways. Moreover, the HSR stations are envisioned to be multimodal transportation hubs, and the success of the HSR service will be critically affected by the degree to which healthy, sound multimodal transportation connections are established.

The Caltrans Division of Transportation Planning's High-Speed Rail Transit Connectivity Program was created on July 1, 2012 to assist Caltrans California Intercity Rail (CIR), CHSRA, regional and local agencies, and transit operators in providing connectivity to HSR and feeder services. Caltrans District contacts are available to provide support of connectivity activities.

City of Wasco Multi-modal Center with Amtrak

TRANSIT FACILITY										
Seg	Mode & Collateral Facility	Name	Route End Points	Ridership	Operating Period	Stations		Bikes Allowed on Transit	Location Description	# Parking Spaces
						Cities	Postmiles			
3 - 5	Traditional Bus	Kern Regional Transit	Lost Hills to Bakersfield-Lost Hills Route	3,021	Thursdays and Saturdays	Lost Hills (multiple stops), Shafter, Wasco (multiple stops), and Bakersfield (transit center)	30.24, 49.58	Y	NA	NA
4 - 5	Traditional Bus	City of Wasco Dial-A-Ride	City of Wasco	22,190	Monday through Friday	Wasco	VAR	N	Wasco	36
4 - 6	Traditional Bus	Kern Regional Transit	Delano to Bakersfield – North Kern Express Route	85,006	Monday through Sunday	Delano (multiple stops by request), McFarland, Wasco, Shafter (multiple stops on request), and Bakersfield (multiple stops)	NA	Y	NA	NA
5	Rail	Amtrak: San Joaquin	San Francisco to Southern California	1,144,616 (Entire San Joaquin Route)	Daily	San Francisco(multiple stops), Emeryville, Oakland,Richmond, Martinez, Antioch-Pittsburg, Davis, Sacramento (multiple stops), Elk Grove, Lodi, Stockton (multiple stops) , Modesto, Denair, Merced, Madera, Fresno,	NA	Y	NA	Wasco Station - 36

TRANSIT FACILITY										
Seg	Mode & Collateral Facility	Name	Route End Points	Ridership	Operating Period	Stations		Bikes Allowed on Transit	Location Description	# Parking Spaces
						Cities	Postmiles			
						Hanford, Corcoran, Wasco, Bakersfield, Newhall-Santa Clarita, Burbank, Glendale, Los Angeles, Fullerton, Anaheim, Santa Ana, Irvine, San Juan Capistrano, Oceanside, Solano Beach, San Diego				

FREIGHT

This route is an STAA terminal access route, and a major east-west connector for the Valley, from I-5 to SR 99. There are no "Weight in Motion" or weight scales of any type on this route.

There is a large cluster of agricultural related businesses near the SR 46/SR 33 Junction. The Lost Hills Pilot Truck Stop is a small truck stop (80 spaces) at the junction of SR 46 and I-5. Mining, retail, and manufacturing are found on both sides of SR 46 from east of Rowlee Road through Wasco and to SR 99. Near the SR 46 and SR 43 intersection, an intermodal facility is located, and the Burlington Northern and Santa Fe (BNSF) rail line bisects SR 46. The Union Pacific Railroad (UPRR) lies just to the end of the route at SR 99. The Flying J Travel Plaza is located a little over five miles south of the route off of SR 99.

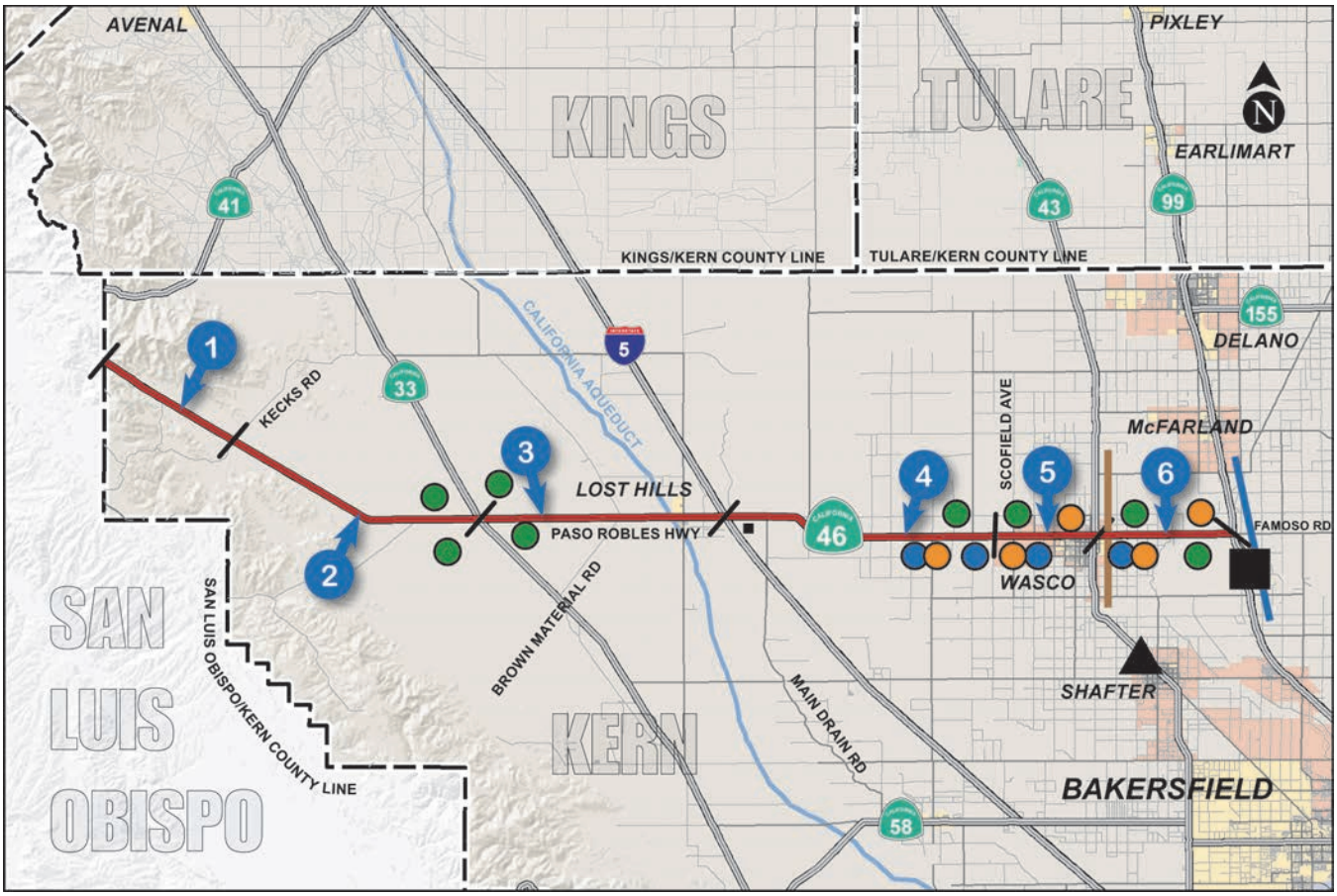
On average, 26% of the total traffic on this route is trucks and 65% of all of these trucks are 5-axle trucks. A typical highway is considered to have significant regional goods movement traffic if 10% of the total traffic on a highway is composed trucks, and is considered to be a significant interregional goods movement route if 30% of the total trucks on a particular route are 5-axle, or "big haul" trucks. Thus, SR 46 is a significant interregional goods movement route.

Improving the movement of goods in California is a high priority. The State's economy and quality of life depend upon the efficient, safe delivery of goods to and from our ports and borders. It is important to ensure a dependable level of service for movement into and through major gateways and to ensure connectivity to key intermodal transfer facilities, seaports, air cargo terminals, and freight distribution centers. Improving goods movement infrastructure is also pivotal to relieve congestion on freeways and increase mobility for everyone in California.

Love's Truck Stop at SR 46 and I-5

Caltrans has the responsibility for developing, maintaining, and operating a multi-modal transportation network. This network must function at a high-level with respect to goods movement, interregional, interstate, and cross-border travel. In addition to continuing support for the regional Blueprint Planning programs, Caltrans is developing a statewide interregional, multi-modal blueprint to be known as the *California Interregional Blueprint (CIB).* It will be incorporated into the existing California Transportation Plan (CTP) at the time that plan is updated. The CIB will analyze the benefits of multi-modal, interregional projects on the transportation system, and will expand understanding of the interactions between land use and transportation investments in meeting critical strategic growth and sustainability goals. The benefit of this effort will be stronger partnerships with regional and local agencies and tribal governments, as well as better data for improved decision making at the State, regional, and local level. The CIB will establish a basis for integrating the interregional system into the Smart Mobility Framework, and to deliver support for economic stewardship, connectivity, and reliability valued by freight shippers and carriers. The Inter-regional Blueprint will synthesize the Blueprint Planning work by regional agencies while focusing on the interregional system that is Caltrans' responsibility.

GOODS MOVEMENT				
Facility Type/Freight Generator	**Location**	**Mode**	**Name**	**Major Commodity/ Industry**
Large truck stop	Just south of SR 99 and SR 46 intersection	Truck	Flying J Travel Plaza	NA
Intermodal Freight Facility	Just north of SR 43 and SR 46 intersection	Truck, Rail	NA	NA
Small truck stop	At the I-5 and SR 46 intersection	Truck	Lost Hills Pilot Travel Center and Love's Travel Stop	NA
Rail Line	Alongside of SR 43 as it crosses SR 46	Rail	Burlington Northern and Santa Fe (BNSF) Railroad/Class I	NA
Rail Line	Alongside of SR 99 as it crosses SR 46	Rail	Union Pacific Railroad/Class I	NA
Freight Generator	Segments 4, 5, 6	Truck	NA	Forestry, mining, agriculture, manufacturing, retail
Freight Generator	SR 33 and SR 46 intersection	Truck	NA	Forestry, mining, agriculture



LEGEND

- Intermodal Facility (Truck/Train Exchange)
- Large sized truck stop (200-500 spaces)
- Medium sized truck stop (100-200 spaces)
- Small sized truck stop (less than 100 spaces)
- Truck Company
- Rail Yard
- BNSF railine
- UP railine
- Forestry, mining, agriculture
- Transportation, Warehousing
- Retail
- Manufacturing
- Wholesale
- Construction

ENVIRONMENTAL CONSIDERATIONS

Specific sensitive biological species include, but are not limited to, the following flora and fauna:

FLORA - California Jewel-Flower, San Joaquin Woolly Threads, Recurved Larkspur, Slough Thistle, Subtle Orache

FAUNA – Giant Kangaroo Rat, Tipton Kangaroo Rat, San Joaquin Kit Fox, San Joaquin Antelope Squirrel, San Joaquin Pocket Mouse, Giant Garter Snake, Valley Elderberry Longhorn Beetle, Swainson's Hawk, Western Burrowing Owl, Myotis Bat, Blunt-Nosed Leopard Lizard, Bald Eagle, Vernal Pool Fairy Shrimp

A Scenic Resource Evaluation and/or a Visual Impact Assessment of the project area would need to be done by the Landscape Architect Branch.

Native American coordination may be necessary due to the high potential of cultural resource findings and assessment of potential archaeological sites and architectural history (known as built environmental resources).

An evaluation of Section 4(f) resources, defined as "park and recreational lands, wild life and waterfowl refuges and historic sites" would be required if such resources are found to exist.

Paleontological Resource studies may need to be conducted on projects where sensitivity is unknown or excavation exceeds depths known to contain fossil remains.

Hazardous waste issues may require additional work including searches of databases for underground storage tanks, testing for aerial deposited lead, asbestos and/or heavy metals, and pesticides.

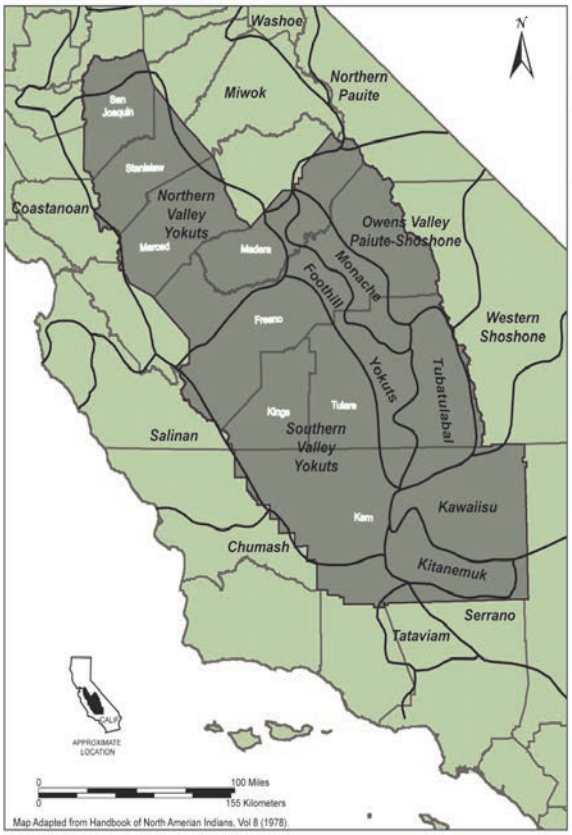
Based on individual project types, additional studies may include air quality, noise and water assessments, community impact assessment, environmental justice, and farmland evaluations.

CORRIDOR PERFORMANCE

Traffic growth rates along the route in most segments exceed 2.5% annually, with an average of 3% annually throughout the route. Level of service (LOS) is expected to drop on the eastern half of the route to "D" and "E". With improvements, the LOS should be at "C" and "D".

Being a goods movement route, there is a significant amount of truck traffic, with as much of 40% of total AADT being trucks. The route has over 30% of the total AADT being trucks. The majority of these trucks are five or more axles.

CORRIDOR PERFORMANCE							
Segment #		**1**	**2**	**3**	**4**	**5**	**6**
Basic System Operations							
AADT (BY) 2012		7,300	10,000	12,000	7,300	15,900	9.600
AADT (HY) 2035		15,300	17,700	23,400	16,400	30,200	26,200
AADT: Growth Rate/Year		3%	2.3%	2.7%	3.3%	2.6%	4.1%
LOS Method		HCM	HCM	HCM	HCM	HCM	HCM
LOS (BY) 2012		B	B	B	C	C	C
LOS (HY) 2035		B	B	B	E	E	E
LOS Concept		C	C	C	C	D	D
Truck Traffic							
Total Average Annual Daily Truck Traffic (AADTT) (BY) 2012		1787	1386	1910	2378	2463	2777
Total Trucks (% of AADT) (BY) 2012		30%	30%	39%	34%	34%	40%
5+ Axle Average Annual Daily Truck Traffic (AADTT)(BY) 2012		1074	1142	1168	1546	1688	1848
5+ Axle Trucks (as % of AADT)(BY) 2012		60.4%	57.5%	62.1%	65.4%	69.6%	67.1%



Map of Ethnographic Territories in Eight County Study Area

NATIVE AMERICAN CONSIDERATIONS

Many California roads and highways originated along Tribal hunting and trading routes. The study, "*California Central Valley Tribal Transportation Environmental Justice Collaborative Project,*" identified a number of Tribes that consider portions of the counties of Fresno, Kern, Kings, Madera, and Tulare as their ancestral lands. This study was funded by a Caltrans Environmental Justice grant and was prepared for the Kern County Council of Governments (KCOG) and the Tubatulabals of Kern Valley Tribe on behalf of the eight San Joaquin Valley Metropolitan Planning Organizations (MPOs). These consist of the San Joaquin Council of Governments (SJCOG), Stanislaus Council of Governments (StanCOG), Merced County Association of Governments (MCAG), Madera County Transportation Commission (MCTC), Fresno Council of Governments (FCOG), Kings County Association of Governments (KCAG), KCOG, and the Tulare County Association of Governments (TCAG), in coordination with the tribal governments and communities of the region. The final report is available at: www.catribalej.com.

According to the *"Map of Ethnographic Territories in Eight County Study Area*" from the "*California Central Valley Tribal Transportation Environmental Justice Collaborative Project"*

report, SR 46 passes through areas considered to be the traditional indigenous territories of the Southern Valley Yokuts and the Salinan territory. Please note that many of the ethnographic territories overlap.

Caltrans consulted and coordinated with Tribal Governments and Communities in developing the TCR. The Tribal Governments and Communities are listed above.

KEY CORRIDOR ISSUES

Growth will always be an issue along the route. As Wasco continues to grow and develop, impacts to the route are inevitable. However, the City of Wasco has been proactive and has pursued setbacks to new development along the route. But, more traffic with additional movements within the city will slow the flow of traffic and result in lower levels of service. Also, with the city's close proximity to rail, proposed industrial parks, and the route designated as a goods movement route, truck traffic will increase. Possible damage to the route's surface from truck traffic is another concern.

While it is always Caltrans intent to achieve UTC, the UTC may not be achievable in some areas due to existing development. In urban areas, it is also possible that the UTC may not reflect the local jurisdiction's vision for community, and that they may not want the highway to be widened. Maintaining the route as it currently exists would necessitate the local jurisdiction accepting a lower level of service. Caltrans will work with our local partners to develop context sensitive solutions for those sections of the route that serve local communities.

CORRIDOR CONCEPT

CONCEPT RATIONALE

The first two segments of SR 46 in Kern County are now built-out to the corridor concept of a four-lane expressway. The third segment is partially built-out to a four-lane expressway. Most of the eastern portion of this segment and part of segment four will be completed as a four-lane conventional highway or expressway in 2016. However, the portion from post mile 27.5 to 30.5 has no completion date, as the cost for the necessary right-of-way is prohibitive at this time. The fifth segment is also programmed for a four-lane conventional highway. However, at this time, no planned or programmed projects exist for widening the easternmost segment.

Since most of the route has been recently widened, no maintenance projects are needed. Only in segment six is there a maintenance project; the bridge replacement at SR 99. Also in this segment, is a local project for on-ramp improvements. However, this project is on hold due to a request for a new design of the project. This improvement is a local developer-driven project.

PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES

If a segment is not listed, there is no project planned or programmed at this time.

Seg.	Description	Planned or Programmed	Location	Source
3, 4	Widen to four-lane expressway/conventional highway	Programmed	East of Brown Material Rd to east of the I-5 I/C	District 6 Status of Projects
5	Widen to four lanes	Partially programmed/funded	Near Wasco, from west of Scofield Ave to SR 43	District 6 Status of Projects
5, 6	Widen to four lanes	Planned unconstrained	In and near Wasco, from SR 43 to SR 99	Kern COG 2011 RTP
6	Bridge replacement (SHOPP)	Programmed	At the SR 46/SR 99 Sep	District 6 Status of Projects
6	On-ramp improvements	Inactive	SR 46 and SR 99 eastbound off-ramp and SB on-ramp	District 6 Status of Projects

PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT

Seg.	Description	Location
3, 4	Widen to 4C and 4E	East of Brown Material Rd to east of I-5 – PM 27.0/33.5
4, 5	Widen to 4C	Near Wasco, from west of Scofield Ave to SR 43 – PM 46.0/51.215
5, 6	Widen to 4C	In and near Wasco, from SR 43 to SR 99 – PM 51.215/57.785

APPENDIX A
GLOSSARY OF TERMS AND ACRONYMS

Acronyms

AADT- Annual Average Daily Traffic
ADA – Americans with Disabilities Act of 1990
ADT- Average Daily Traffic
BRT-Bus rapid transit
CALTRANS – California Department of Transportation
CAPM-Capital Preventative Maintenance
CCTV-Closed Circuit Television Cameras
CEQA- California Environmental Quality Act
CMA- Congestion Management Agencies
CMAQ-Congestion Mitigation and Air Quality
CMIA-Corridor Mobility Improvement Account
CMS-Changeable Message Sign
COG-Council of Governments
CSMP-Corridor System Management Plan
CSS – Context Sensitive Solutions
CT-Caltrans
CTC-California Transportation Commission
FHWA – Federal highway Administration
FSR – Feasibility Study Report
FSTIP- Federal Statewide Transportation Improvement Program
FTIP – Federal Transportation Improvement Program
GHG- Green House Gas
GIS – Geographic Information System
HAR-Highway Advisory Radio
HCP- Habitat Conservation Plan
HOT-High occupancy toll lane
HOV-High occupancy vehicle lane
IIP-Interregional Improvement Plan
IGR-Intergovernmental Review
IRRS-Interregional Road System
ITIP-Interregional Transportation Improvement Program
ITMS-Intermodal Transportation Management System
ITS – Intelligent Transportation System
ITSP-Interregional Transportation Strategic Plan
LOS – Level of Service
MOU-Memorandum of Understanding
MPO- Metropolitan Planning Organizations
MTC-Metropolitan Transportation Commission
MTCE-Maintenance (State program)
NA-Not available
NHS-National Highway System
NOA – Naturally Occurring Asbestos
NCCP- Natural Community Conservation Plan
NEPA- National Environmental Policy Act
OC-Overcrossing

OH-Overhead
PID-Project Initiation Document
PM-Post mile
PSR- Project Study Report
PSSR-Project Scope Summary Report
RCR-Route Concept Report
RHNA- Regional Housing Needs Allocation
RIP-Regional Improvement Program
ROW or R/W-Right-of-Way
RPU-Remote Processing Unit – was known as RWIS (Remote Weather Information Station)
RTIP – Regional Transportation Improvement Program
RTP- Regional Transportation Plan
RTPA- Regional Transportation Planning Agencies
SAFETEA - Safe, Accountable, Flexible and Efficient Transportation Equity Act of 2005
SCS- Sustainable Community Strategies
SHOPP- State Highway Operation Protection Program
SJVUAPCD-San Joaquin Valley Air Pollution Control District
STIP – State Transportation Improvement Program
TASAs-Traffic Accident Surveillance and Analysis System
TCM-Transportation Control Measure
TCR-Transportation Concept Report
TCS-Traffic Count Station
TDM – Transportation Demand Management
TEA-21 Transportation Equity Act for the 21st Century
TMC-Transportation Management Center
TMS – Transportation Management System
TSN- Transportation System Network
UC-Undercrossing
UTC-Ultimate Transportation Concept
VDS-Vehicle Detection System
VHT-Vehicle Hours Traveled
VMT – Vehicle Miles Traveled

Definitions

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.

Base year – The year that the most current data is available to the Districts

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.

Bottlenecks – A bottleneck is a location where traffic demand exceeds the effective carrying capacity of the roadway. In most cases, the cause of a bottleneck relates to a sudden reduction in capacity, such as a lane drop, merging and weaving, driver distractions, a surge in demand, or a combination of factors.

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 Guideway etc.), grade separation, and new managed lanes.

Concept LOS – The minimum acceptable LOS 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 fiscally 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 as informational purposes and not analyzed in the TCR.

Facility Concept – Describe 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.

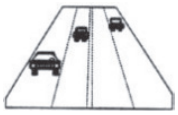
Headway – The time between two successive vehicles as they pass a point on the roadway, measured from the same common feature of both vehicles.

Horizon Year – The year that the future (20-25 years) data is based on.

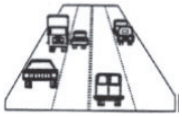
Intermodal Freight Facility – Intermodal transport requires more than one mode of transportation. An intermodal freight facility is a location where different transportation modes and networks connect and freight is transferred (or “transloaded”) from one mode, such as rail, to another, such as truck.

ITS – Intelligent Transportation System 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.

LOS – Level of Service 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. Six levels of 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 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.

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

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

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 6 percent and 10 percent of the ADT. The lower values are generally found on roadways with low volumes.

Peak Period – Is a part of the day during which traffic congestion on the road is at its highest. Normally, this happens twice a day, once in the morning and once in the evening; the time periods when the most people commute. Peak Period is defined for individual routes, not a District or statewide standard.

Planned Project – A planned improvement or action is a project in a fiscally 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 – 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. Milepost values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The milepost 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, "milepost equations" are introduced at the end of each relocated portion so that mileposts 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.

Railroad Class I – The Surface Transportation Board (STB) defines a Class I railroad in the U.S. as a carrier having annual operating revenues of $250 million or more. This class includes the nation's major railroads. In California, Class I railroads include Union Pacific Railroad (UP) and Burlington Northern Santa Fe Railway (BNSF).

Railroad Class II – STB defines a Class II railroad in the U.S. as having annual carrier operating revenues of less than $250 million but more than $20 million. Class II railroads are considered mid-sized freight-hauling railroad in terms of operating revenues. They are considered "regional railroads" by the Association of American Railroads.

Railroad Class III – Railroads with annual carrier operating revenues of $20 million or less. The typical Class III is a short line railroad, which feeds traffic to or delivers traffic from a Class I or Class II railroad.

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), 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

Segment – A portion of a facility between two points.

TDM – Transportation Demand Management 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.

TMS – Transportation Management System 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.

VMT – Is the total number of miles traveled by motor vehicles on a road or highway segments.

Transportation Concept Report

State Route 46

SUMMARY CHART 1B

LEGEND

Existing Lanes

Planned or Programmed by 2035

Add Through Lanes

Conventional

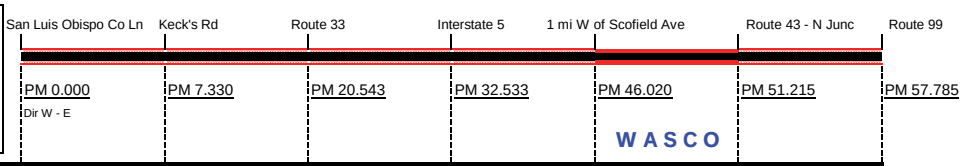
Expressway

2

4

* Length of segments not to scale

Dir = Direction



Segment: Is self-explanatory except for several data sets:

Functional Classification: A process by which streets and highways are grouped into or classification systems.

Freeway/Expressway System: The Statewide system of highways declared to be essential to the future development of California.

Regionally Significant: Serves regional transportation needs including at a minimum all principal arterial highways and all fixed guideway transit facilities.

STRAHNET: A highway that provides defense access, continuity, and emergency capabilities for movements of personnel and equipment in both peace and war.

Lifeline: A route on the State highway system that is deemed so critical to emergency response/life-saving activities of a region or the state that it must remain open.

IRRS: (Interregional Road System): A series of State highway routes, outside the urbanized areas, that provide access to the State's economic centers, major recreational areas, and urban and rural regions.

STAA (Surface Transportation Assistance Act): This act required states to allow larger trucks on the National Network. "Terminal Access" routes are State highways that can accommodate STAA trucks. Other designations i,e., California Legal offer more limited access.

Scenic: A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers.

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

NHS (National Highway System): Included is all interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

SEGMENT	1	2	3	4	5	6
County / Route	KERN / 46	KERN / 46	KERN / 46	KERN / 46	KERN / 46	KERN / 46
Description Begin	SAN LUIS OBISPO CO LINE	KECK'S RD	ROUTE 33	INTERSTATE 5	1 MI W OF SCOFIELD AVE	ROUTE 43 - N JUNCTION
Description End	KECK'S RD	ROUTE 33	INTERSTATE 5	1 MI W OF SCOFIELD AVE	ROUTE 43 - N JUNCTION	ROUTE 99
Postmile Limits Begin/End/L/DM	0.000 / 7.330	7.330 / 20.543	20.543 / 32.5	32.533 / 46.020	46.020 / 51.215	51.215 / 57.785
Length (MI)	7.3	12.5	12.7	13.5	5.2	6.6
Functional Classification	Principal Arterial	Principal Arterial	Principal Arterial	Minor Arterial	Principal Arterial	Minor Arterial
National Highway System (NHS) (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Freeway/Expressway System (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Regionally Significant (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
STRAHNET (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Lifeline (Y/N)	No	No	No	No	No	No
IRRS (Yes: HE=High Emphasis, F=Focus, G=Gateway or No)	HE, F	HE, F	HE, F	No	No	No
TRUCK NETWORK, STAA: (NN=National Network, TA=Terminal Access, CL= California Legal, R= Special Restrictions, or A=Advisory)	TA	TA	TA	TA	TA	TA
Scenic (Yes: Officially Designated, Eligible or No)	No	No	No	No	No	No
ICES (Intermodal Corridor of Economic Significance) (Y/N)	No	No	No	No	No	No
General Plan/RTP LOS Standard	Kern Co LOS D for CMP & RTP Regionally Significant System	Kern Co LOS D for CMP & RTP Regionally Significant System	Kern Co LOS D for CMP & RTP Regionally Significant System	Kern Co LOS D for CMP & RTP Regionally Significant System	Kern Co LOS D for CMP & RTP Regionally Significant System	Kern Co LOS D for CMP & RTP Regionally Significant System
General Plan/RTP Standard Highway Classification	Expressway	Expressway	Expressway	Expressway	Expressway	Expressway
Passing Lanes (Y/N)	No	No	No	No	No	No
Bike Use Allowed (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes

APPENDIX B
SUMMARY CHARTS

Transportation Concept Report — State Route 46

SUMMARY CHART 1A

LEGEND

Existing Lanes

Planned or Programmed by 2035

Add Through Lanes

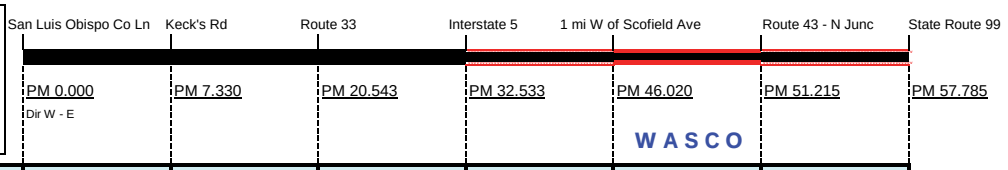
Conventional

Expressway

Number of Lanes: 2, 4

* Length of segments not to scale

Dir = Direction



Segment: Is self-explanatory except for several data sets:

Rural/Urban: Indicates whether the segment is in a rural area or city limits.

Terrain: Shows the general highway grade: minimal grade = level; moderate grade = rolling; and severe grade = mountainous.

ROW: Portrays Right-of-Way (ROW) and geometric data in feet.

Shoulder Range: Range of treated surface (8' standard) for both inside and outside shoulders.

Ultimate Transportation Corridor (UTC): Typical ROW needed for the ultimate facility. Feet is the standard typical measure. UTC ROW will be updated upon corridor plan lining on specific sections of highway.

Facility: Shows the Existing Facility and the desired facility type (2035 Concept) by 2035. RTPA's and Caltrans discuss Ultimate Facility to preserve ROW and plan line beyond 2035. 2C(I) indicates that the highway has been improved in select locations with operational and safety improvments.

LOS: The current LOS (level of service), along with the expected calculated LOS in 2020 and 2035. The 2035 Concept is the target LOS desired, i.e., LOS C, for attainment by 2035.

Deficiency: Occurs when the target LOS is degraded, i.e., LOS D worse than LOS C, with the year of occurrence shown. It also shows whether a capacity improving project is in the STIP, and what the LOS would be with the 2035 Concept improvement.

Directional Split: Denotes the split in the peak hour traffic flow on a directional basis (NB/SB or WB/EB) either in the morning (AM) or evening (PM).

AADT: signifies Annual Average Daily Traffic.

Peak Hour: Indicates a representation of the maximum hour of traffic flow during the day.
N/A : Not deficent, no project recommended/not applicable.

N/A- : Deficent, no project recommended.

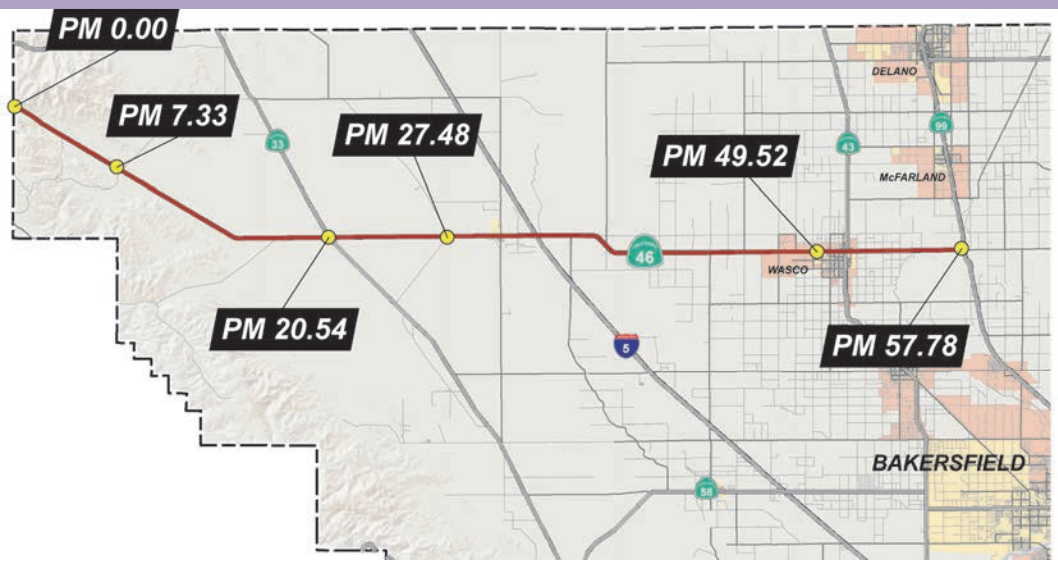
\+ In 20 years, widened from 80' to 110' - Wasco

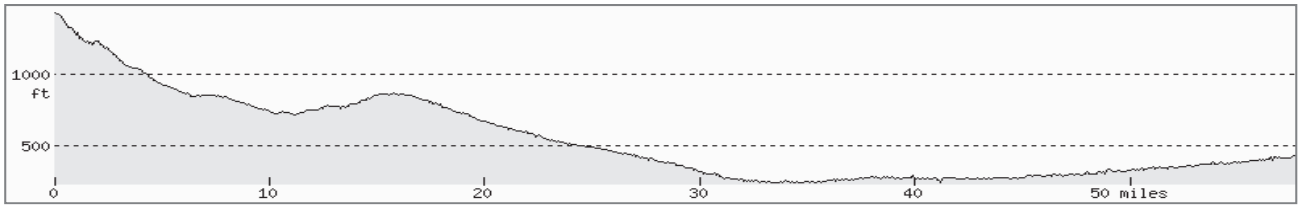
***** Concept Facility meets Concept LOS.

****** *existing* 4E (PM 20.543 - 27.480), *existing* 2C (PM 27.480 - 32.533); 2C to 4E construction completion date 2016

SEGMENT	1	2	3	4	5	6
County / Route	KERN / 46	KERN / 46	KERN / 46	KERN / 46	KERN / 46	KERN / 46
Description Begin	SAN LUIS OBISPO CO LINE	KECK'S RD	ROUTE 33	INTERSTATE 5	1 MI W OF SCOFIELD AVE	ROUTE 43 - N JUNCTION
Description End	KECK'S RD	ROUTE 33	INTERSTATE 5	1 MI W OF SCOFIELD AVE	ROUTE 43 - N JUNCTION	ROUTE 99
Postmile Limits Begin/End (PM)	0.000 / 7.330	7.330 / 20.543	20.543 / 32.533	32.533 / 46.020	46.020 / 51.215	51.215 / 57.785
Length (MI)	7.3	12.5	12.7	13.5	5.2	6.6
Rural / Urban	Rural	Rural	Rural	Rural	Urban	Rural
Terrain	Rolling	Flat	Flat	Flat	Flat	Flat
ROW Range: Existing (FT)	215	215	215	100 / 215	100	80
Median Range (FT)	61	0 / 12	61	0 / 12	0 / 14	0 / 22
Shoulder Range (FT) - Treated	10	0 / 2	10	0 / 8	6 / 15	6 / 8
Lane Width (FT)	12	12	12	12	12	12
Ultimate ROW (FT)	215	215	215	215	110+	186 / 196
Facility: Existing	4E	4E	4E/2C**	2C	2C	2C
2035 Concept	4E	4E	4E	4E	4C	4E
UTC	4E	4E	4E	4E	4E	4E
LOS: 2012	B	B	B**	C	C	C
LOS: 2020	B	B	B**	D	E	D
LOS: 2035	B	B	B**	E	E	E
LOS: Concept 2035	C	C	C	C	D	D
Deficiency/Year Deficient	N/A	N/A	N/A	2020	2020	2035
Included in STIP/RTP (Y/N)	No	No	Yes	Yes	Yes	Yes
LOS W/ Concept Improvement	N/A	N/A	B*	B*	B*	B*
Directional Split (Peak Hour)	63/37	67/33	63/37	61/39	61/39	60/40
AADT: 2012	7,300	10,000	12,000	7,300	15,900	9,600
AADT: 2020	10,400	13,100	16,500	10,800	21,600	15,600
AADT: 2035	15,300	17,700	23,400	16,400	30,200	26,200
Peak Hour: 2012	680	910	1,200	660	1,250	720
Peak Hour: 2020	970	1,200	1,650	970	1,700	1,170
Peak Hour: 2035	1,420	1,610	2,340	1,490	2,380	1,560
% Trucks: AADT	30%	30%	39%	34%	34%	40%
% Trucks: Peak Hour	15%	15%	20%	17%	15%	18%

STATE ROUTE 46 Kern County Bicycle Map





SLO-Kern	Kecks Rd	SR 33	Brown Material Rd	Central Ave	SR 99
Co Line PM 0.0	PM 7.33	PM 20.54	PM 27.48	PM 49.52	PM 57.78

Location *(Postmile)*	Facility (Lanes)	Rural/ Urban	Shoulder (Treated)	Terrain	Speed Limit Posted	Facility Description
SLO-Kern County Line to Kecks Road *(PM 0.00 – 7.33)*	4 Lane Expressway	Rural	10 feet	Rolling	65	Wide shoulders, Few structures nearby, Arid (grassland, sage or scrub bush), 3 Call boxes available
Kecks Road to State Route 33 *(PM 7.33 – 20.54)*	4 Lane Expressway	Rural	10 feet	Rolling/ Level	65	Wide Shoulders, Gas Station/Food Store, Agricultural and grazing land, 6 Call boxes available
State Route 33 to Brown Material Road *(PM 20.54 - 27.48)*	2/4 Lane Expressway	Rural	8 - 10	Level	55 - 65	Wide shoulders mostly, [Existing 4E (PM 20.543 - 27.480), 2C (PM 27.480 - 32.533), 2C to 4E CONSTRUCTION COMPLETION DATE 2016], Few structures nearby, Arid grassland, Some agricultural land use
Brown Material Road to Central Avenue *(PM 27.48 – 49.52)*	2 lane Highway	Rural	0 – 8 feet	Level	45 - 55	Wide shoulders mostly but narrow from I-5 *PM 32.80* to *PM 37.15,* Unincorporated area of Lost Hills, Numerous oil wells, Restaurant and truck stop; Agricultural and grazing land use
Central Avenue to State Route 99 *(PM 49.52 – 57.78)*	4 to 2 lane Highway	Urban/ Rural	6 - 8 feet	Level	40 - 55	Wide shoulders, City of Wasco, 4 lanes with city limits *PM 49.52 – 51.21*, Agricultural Land, 5 Call boxes available

APPENDIX D
RESOURCES

1) Alta Planning + Design, "Kern County Bicycle Master Plan and Complete Streets Recommendations," prepared for Kern Council of Governments, October 2012
2) Amtrak News Release, "Amtrak Sets New Ridership Record," October 10, 2012
3) California Department of Corrections and Rehabilitation (CDCR), Wasco State Prison – Reception Center (WSP) – Institution Statistics, http://www.cdcr.ca.gov/Facilities_Locator/WSP-Institution_Stats.html
4) California Department of Finance, Demographic Research Unit, "Table 3A: Total Population by Race (1) and Hispanic or Latino: April 1, 2010 – Incorporated Cities and Census Designated Places (CDP) by County in California," Census 2010
5) California Department of Transportation: District 6, "California State Highway Log," 2002
6) California Department of Transportation: District 6, "Corridor System Management Plan (CSMP) State Route 46," October 2008
7) California Department of Transportation: District 6, "Status of Projects," January 2013
8) California Department of Transportation: District 6, Traffic Data Branch, 2011 Truck
9) California Department of Transportation: District 6, "Transportation Concept Report (TCR) State Route 46," July 2001
10) California Department of Transportation: District 6, "Transportation Management Center (TMC) Element Search Engine
11) California Department of Transportation: District, "Weight in Motion Scales," http://www.dot.ca.gov/hq/traffops/trucks/datawim/wim06.pdf
12) California Highways Organization, "California Highways, Route 46," www.cahighways.org
13) Cambridge Systemics, Inc., "San Joaquin Valley Interregional Goods Movement Plan: Task 1: Existing Conditions Assessment Technical Memorandum," January 2012
14) City of Wasco, http://www.ci.wasco.ca.us
15) Kern Council of Governments, "Regional Transportation Plan," 2011
16) Kern County, "Kern County General Plan," 2009
17) Kern Regional Transit Division, http://roads.kerndsa.com/divisions/kern-regional-transit
18) Miranda-Begay, Dr. Donna, Grant Project Manager and Tribal Chairwoman of Tubatulabals of Kern Valley, "California Central Valley Tribal Transportation Environmental Justice Collaborative Project," 2010
19) Miller, Brian, "The Life of Admiral George Dewey (1837 – 1917)," http://www.spanamwar.com/dewey.htm
20) Naval History and Heritage Command, "Biographies in Naval History – Admiral of the Navy George Dewey, USN 26 December 1837 – 16 January 1917," http://www.history.navy.mil/bios/dewey_george.htm
21) Semitropic School District, http://semitropicschool.org/