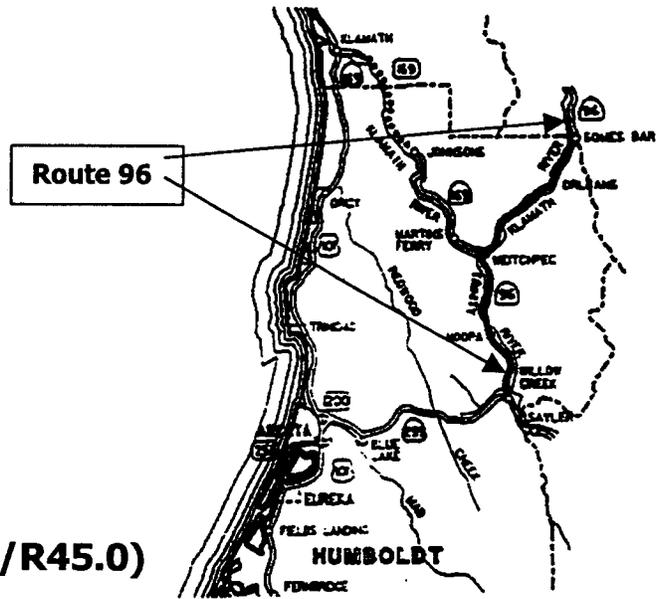


ROUTE CONCEPT REPORT

ROUTE 96 CORRIDOR

01-HUM-96-KP 0.0/R72.4 (PM 0.0/R45.0)



All information in this Route Concept Report is subject to change as conditions change and new information is obtained.

I approve this Route Concept Report to guide today's route development decisions and/or recommendations.

Approval Recommended:

Approval Recommended:

F. A. Wythe 11/19/99

F. A. WYTHE Date
 District Division Chief
 Project Coordination

Cheryl S. Willis 11/10/99

CHERYL S. WILLIS Date
 District Division Chief
 Planning

Approved:

Rick Knapp 11/25/99

RICK KNAPP Date
 District Director
 District 1

NOVEMBER 1999

ROUTE 96 RCR

ROUTE CONCEPT REPORT

Statement of Planning Intent

The Route Concept Report (RCR) is a planning document which describes the Department's basic approach to development of a given transportation route or corridor. Considering reasonable financial constraints and projected travel demand over a 20-year planning period, the RCR defines appropriate transportation facilities for each route or corridor. The objective of the effort is to provide a better basis for the development of the State Transportation Improvement Program (STIP), and for determination of the appropriate concept for future transportation projects.

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

Route Concept Reports are a preliminary planning phase that lead to subsequent programming and the project development process. As such, the specific nature of proposed improvements (e.g., roadway width, number of lanes, access control) may change in the project development stage.

Assumptions

The following assumptions form the basis for the development of Route Concept Reports:

The relative importance of State highways in the District is generally based on functional classification. In general, higher priority is given to major improvements on principal arterial routes as compared to minor arterials and collectors.

1. State highways with improvement concepts must have realistic concept levels of service. Concept levels of service are not established on State highways which will only be maintained (since improvements would not be made to address level of service concerns).
3. Level of service calculations are based on the 1994 Highway Capacity Manual (see Appendix A).
4. Determinations of future level of service for State highways in District 1 are based in part upon Statewide and Regional forecasts of State highway travel developed by Caltrans.
5. Route concepts are generally uniform for an entire route or corridor, unless there is a major change in function along the route or corridor.
6. Major projects will be developed to meet standards acceptable to the Federal Highway Administration in order to receive Federal funding for projects. Otherwise, a "design exception" will be prepared during the project development process.
7. Safety projects will be pursued on an on-going basis in order to be responsive to safety concerns as they are identified.
8. No planned or programmed improvements were assumed to be complete in analyzing present and future operating conditions. The Route Concept Report details programmed improvements in the 1998 STIP, with all costs in 1998 dollars.
9. An environmental document will not be required for Route Concept Reports. However, individual improvement projects identified in Route Concept Reports will follow the appropriate environmental process as required by law.

ROUTE CONCEPT REPORT

ROUTE 96

01-HUM-96-KP 0.0/R72.4 (PM 0.0/R45.0)

I. ROUTE CONCEPT AND RATIONALE

FACILITY CONCEPT

The concept for Route 96 in Humboldt County is 2-lane conventional highway on existing alignment.

Route 96 originates at a junction with Route 299 in the community of Willow Creek and proceeds along the Trinity and Klamath River Canyons to the District 1/District 2 boundary (Humboldt/Siskiyou County line) about 13 miles north of Weitchpec. Route 96 continues north from the District 1 boundary to Interstate 5 about ten kilometers (six miles) above the City of Yreka. The Route is approximately 71 kilometers (44 miles) in length within District 1.

LEVEL OF SERVICE CONCEPT

No level of service concept has been selected for Route 96.

Level of service decreases are anticipated as traffic volumes increase, however, no improvements will be made to address level of service reductions.

ROUTE CONCEPT FUNCTION

This Route Concept should serve as a guide for long range planning of Route improvements. It recognizes financial considerations and competing priorities both on this Route and other routes in the District. Efforts have been made to consider local and regional concerns regarding development of the route. It will protect the state's investment in Route 96, while recognizing financial constraints, which will not allow the programming of extensive improvements for all highways.

II. ROUTE MANAGEMENT STRAGIES

REHABILITATION STRATEGY

Route 96 should be maintained as necessary, and rehabilitated as necessary from Route 299 to 6.5 kilometers (4 miles) north of the community of Hoopa.

ROUTE 96 RCR

Based on functional classification, traffic volumes, and maintenance service levels, Route 96 in District 1 should be rehabilitated as necessary at its present width and on existing alignment (HUM-96-KP 0.0/25.7 (PM 0.0/16.0)) and the remainder (HUM-96-KP 25.7/R72.4 (PM 16.0/R45.0)) should be maintain only (portions of the Route may be rehabilitated on an exception basis, when maintenance of the route would be less cost effective than rehabilitation).

Current (3-R) rehabilitation standards in the Caltrans Highway Design Manual indicate that Route 96 is wide enough to permit rehabilitation at present width over most of segments with "rehabilitate as necessary" concepts. Widening segments, which do not meet 3-R width standards, is generally not considered prudent for the following reasons:

1. Costs to widen narrow sections would be inordinately high because of rugged terrain.
2. Existing vertical and horizontal alignment does not meet current standards.
3. Environmental impacts would be significant. There are several locations along Route 96 where there are old growth redwood trees and Hoopa, Karuk and Yurok archaeological and cultural sites.
4. Committing extensive funds for widening in conjunction with correcting pavement deficiencies would divert funds from higher priority capital improvement on other routes.

Widening Route 96 to accommodate non-motorized traffic may be appropriate in some communities along the Route.

This Route may be resurfaced, as necessary, through the Capital Preventative Maintenance Program (CAPM).

SAFETY AND OPERATIONAL IMPROVEMENT STRATEGY

While no segment of Route 96 has an accident rate greater than 1.5 times (150% of) the Statewide average (based on similar facilities), further, **safety improvements at spot locations will be considered as necessary.**

Bridge replacement, storm damage and operational improvement projects will also be considered as necessary. These projects, in addition to safety projects, should be constructed to appropriate State and Federal standards.

In the late 1980's, Caltrans barrier striped two-lane highways to comply with Federally mandated standards. This reduced the number of passing opportunities (and the level of service) on most two-lane State highways, including Route 96. The impact of barrier striping is expected to be less severe on Route 96 than on some

ROUTE 96 RCR

other Routes within the District, since few passing opportunities existed prior to barrier striping.

GOODS MOVEMENT STRATEGY

Route 96 is the only major all-weather Route serving the Trinity and Klamath River Valleys. It is used to transport food and other essential supplies to communities along this corridor, and to transport goods (primarily forest products) to market.

Consistent with the relatively low truck traffic volumes on this Route, goods movement improvement emphasis is on Route safety and reliability.

NON-MOTORIZED FACILITIES STRATEGY

Shoulders on Route 96 are relatively narrow in many locations and not well suited to non-motorized traffic.

Bicycle and pedestrian activity is generally concentrated in communities along the Route, (e.g. Hoopa, Weitchpec, and Orleans).

As needs are identified, we will work with local Regional Transportation Planning Agencies (RTPAs) to improve bicycle and pedestrian facilities in the Route 96 corridor.

CORRIDOR PRESERVATION STRATEGY

It is anticipated that Route 96 will remain a conventional 2-lane highway, on existing alignment. No substantial long-term right of way needs are anticipated.

III. ALTERNATIVE CONCEPTS CONSIDERED

No alternative concepts were considered for Route 96 in District 1.

IV. ROUTE ANALYSIS

DESCRIPTION

Route 96, from Route 299 in the community of Willow Creek to the District 1 boundary (Humboldt/Siskiyou County line) is 71 kilometers (44 miles) in length. Ultimately, Route 96 leads to Interstate 5 about ten kilometers (six miles) north of the City of Yreka. Route 96 has a kilometer post (post mile) description of 01-HUM-96-KP 0.0/R72.4 (PM 0.0/R45.0).

Originating at Route 299 in the community of Willow Creek in Humboldt County, Route 96 follows the Trinity River Canyon to Weitchpec where it turns to follow the Klamath River Canyon in a northeasterly direction, traversing remote and sparsely populated areas of northwestern California. This Route, with the exception of the

ROUTE 96 RCR

portion that traverses the Hoopa Valley Reservation, is within the Six Rivers National Forest.

ROUTE PURPOSE

Route 96 bisects the Hoopa Valley Indian Reservation, providing virtually the only all weather transportation to and from the reservation. Route 96 also serves a number of small-unincorporated communities for local trips. These communities include; Willow Creek, Hoopa, Weitchpec and Orleans.

Route 96 is functionally classified as a Rural Minor Arterial. It is eligible for designation as a Scenic Highway, but has not been officially designated.

ROUTE SEGMENTATION

Route 96 is segmented as follows for System Planning purposes:

**TABLE 1
ROUTE 96 SEGMENTATION**

SEG #	HUM		DESCRIPTION
	KP	PM	
1	0.0/25.7	0.0/16.0	Rte. 299 to 1.3 km (0.8 mi) south of Rock Chute Viaduct.
2	25.7/R72.4	16.0/R45.0	1.3 km (0.8 mi) south Rock Chute Viaduct to HUM Co. line.

LAND USE

Land use adjacent to Route 96 in District 1 is expected to remain basically as it is now (primarily National Forest lands, with low intensity multiple use). Land uses adjacent to Route 96 within the Hoopa and Yurok Indian Reservations and Karuk Ancestral Lands are primarily low to moderate density rural residential, with some commercial development. The remainder of the land traversed by Route 96 is generally used for timber production, with scattered rural residences.

Minimal development is expected, generally in and adjacent to existing communities. The Route currently experiences proportionally large volumes of recreational traffic, and this traffic is expected to continue to increase.

EXISTING FACILITIES

Table II on the following page will summarize existing facility characteristics for the Route 96 corridor in District 1.

ROUTE 96 RCR

**TABLE II
EXISTING FACILITY CHARACTERISTICS
ROUTE 96**

SEG #	HUM 96		DESCRIPTION	EXISTING FACILITY
	KP	PM		
1	0.0/25.7	0.0/16.0	Rte. 299 to 1.3 km (0.8 mi) south of Rock Chute Viaduct.	2-C
2	25.7/R72.4	16.0/R45.0	1.3 km (0.8 mi) south Rock Chute Viaduct to HUM Co. line.	2-C

F = Freeway
E = Expressway
C = Conventional

Functional Classification	Rural Minor Arterial
Eligible for Federal Funding	Yes
Freeway and Expressway System:	No
Eligible for Scenic Highway Designation:	Yes
Subsystem of Highways for Extra Legal Loads (SHELL)	No
Surface Transportation Assistance Act (STAA) Trucks Allowed:	No
Strategic Highway Network:	No
National Highway System:	No
Interregional Road System:	No
Public Airports Served:	None
Rail Service	None
Intercity Bus Service:	None
Intersecting State Highway Routes:	299,169
Park and Ride Lots	None

OPERATING CONDITIONS

Present and future operating conditions, including traffic volume ranges, level of service, and volume to capacity ratios for both existing and anticipated future conditions for Route 96 are shown on Map 1 on the following page. Further information regarding specific operating and geometric conditions may be found in Caltrans source documents (e.g., the State Highway Inventory, the State Highway Log, and Traffic Volumes on California State Highways, etc.)

PROGRAMMED IMPROVEMENTS

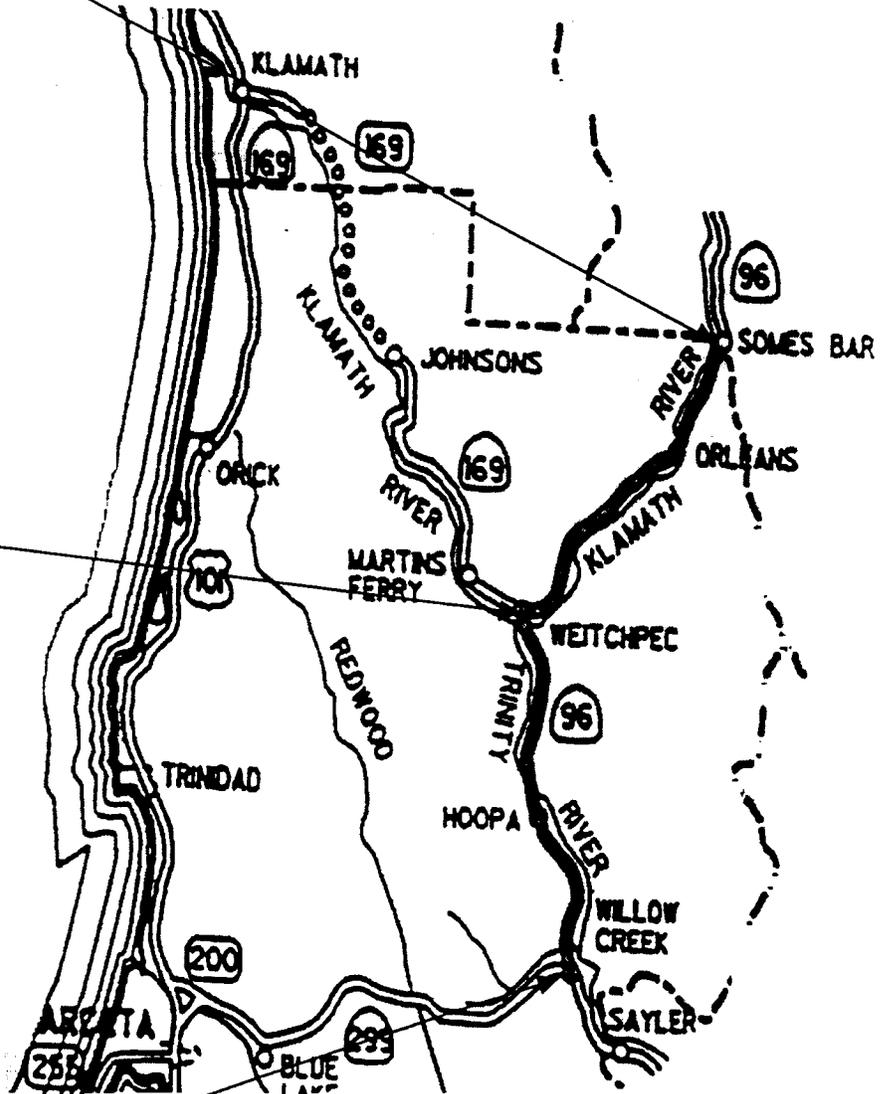
There are no programmed improvements in the 1998 State Transportation Improvement Program (STIP). The 1998 State Highway Operation and Protection Program (SHOPP) has two roadway rehabilitation projects in the totaling approximately \$ 2.1 million.

ROUTE 96 RCR

MAP 1
PRESENT AND FUTURE OPERATING CONDITIONS
ROUTE 96

HUM-96-KP 25.7/R72.4
(PM 16.0/R45.0)
Terrain: Rolling
Gradeline: Rolling
Existing (1998)
2-lane Conventional
3.6 m lanes
6.7-9.8 m paved
400-990 AADT
"B" LOS
V/C = 0.07
Accident Rate = less than 1.5 times the Statewide average
Trucks = 11 %
Future (2020)
460 - 1050 AADT
"B" LOS
V/C = 0.07

HUM-96-KP 0.0/25.7
(PM 0.0/16.0)
Terrain: Mountainous
Gradeline: Rolling
Existing (1998)
2-lane Conventional
3.6 m lanes
6.7-9.8 m paved
1750-3400 AADT
"D" LOS
V/C = 0.38
Accident Rate = less than 1.5 times the Statewide average
Trucks = 17 %
Future (2020)
2200-3900 AADT
"E" LOS
V/C = 0.46



V. ENVIRONMENTAL CONSIDERATIONS

Principal environmental concerns along Route 96 include:

- The Klamath River and Trinity Rivers, recreational wild and scenic rivers, provide important instream and riparian habitat. There are sensitive species associated with the river and its tributaries including a variety of federally listed plants and animals. There are old growth groves at several locations along the Route as well as other visual resources associated with Wild and Scenic River Corridors.
- Between the communities of Willow Creek and the north end of the Hoopa Valley there are significant archaeological and cultural sites where the local Native American tribes (Hoopa, Karuk and Yurok) gather food and materials necessary for everyday life, sites where their ancestors lived and are buried and sacred sites associated with religious activity.
- Soil stability is a factor for concern along many areas of Route 96. Soil instability may cause slides and slip outs which could result in delays and/or road closures.
- The water quality in the Klamath and Trinity Rivers is of significant concern.

VI. REGIONAL TRANSPORTATION PLANNING

The 1996/98 Humboldt County Regional Transportation Plan authored by the Humboldt County Association of Governments (HCOAG) calls for long term maintenance of State Highway Routes. Maintenance issues were noted as follow:

1. Some improvements are necessary to improve alignment, grade and safety, particularly in substandard areas.
2. Passing lanes are needed in some areas to mitigate Federal barrier striping standards.
3. Capacity improvements are recognized as not likely, except on Route 101.

VII. AREAS OF CONCERN

The following criteria are used to identify areas of concern on Route 96 based on an analysis of level of service and accident history:

1. A segment is considered to be a "level of service concern" if the concept level of service (LOS) will not be achieved under present or future traffic conditions, or the segment operates at capacity during peak hour.

ROUTE 96 RCR

2. A segment is considered to be a "safety concern" if the total accident rate for a five year period for that segment exceeds one and one-half times the Statewide average for similar facilities.

Based on these criteria, no areas of concern were identified on Route 96 in District 1.

VIII. IMPROVEMENTS NECESSARY TO ACHIEVE THE ROUTE CONCEPT

Consistent with the route concept of Maintain Only with some rehabilitation, no new facility improvements will be required. Safety improvements should be made, as necessary and operational improvements should be considered on a limited basis.

Caltrans will enter into cooperative partnerships with any Federally recognized governments (Hoopa, Karuk and Yurok tribes) when road improvements are necessary where the State Highway System passes through tribal lands.

IX. TRANSIT AND HIGH OCCUPANCY VEHICLE (HOV) CONSIDERATIONS

Low population densities make it difficult to provide cost-effective transit services for Route 96. Due to the rural nature of Route 96, and relatively low peak hour traffic volumes during commute hours, no HOV considerations are necessary.

X. ACCESS MANAGEMENT

Access management involves managing where vehicles are allowed to enter the highway, to improve highway operations and reduce accidents.

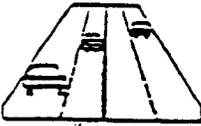
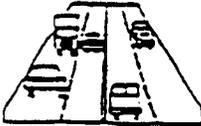
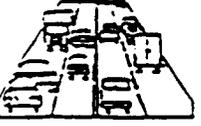
While some access openings may have less than desirable sight distance, access management is generally not a concern along most of Route 96. Further, with little change in land use anticipated, access management is not likely to be a future concern.

XI. ADOPTIONS, RESCISSIONS AND RELINQUISHMENTS

New or changed highway routings generally require adopting a new route and rescinding the previously adopted route. The Route may also be relinquished to a city, county or other public entity.

No significant adoptions, recessions, or relinquishments are anticipated on Route 96 in District 1.

**APPENDIX A
LEVEL OF SERVICE
FOR HIGHWAY SEGMENTS**

<u>Level of Service</u>	<u>Description of Typical Traffic Conditions</u>	<u>Technical Descriptors</u>	
		<u>Delay</u>	<u>Service Rating</u>
A 	Highest quality of service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed, and a high level of comfort and convenience.	None	Excellent
B 	Stable traffic flow - speed becoming slightly restricted. The presence of others in the traffic stream begins to be noticeable. Low restriction on maneuverability.	None	Very Good
C 	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Comfort and convenience decreasing as density increases.	Minimal	Good
D 	Approaching unstable flow. Speeds tolerable, but subject to sudden and considerable variation. Reduced maneuverability, driver comfort, and convenience.	Minimal	Adequate
E 	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and low driver comfort and convenience.	Significant	Fair
F 	Forced traffic flow. Speed and flow may drop to zero with high densities. Queues tend to form behind such locations since arrival flows exceed traffic discharges.	Considerable	Poor