



ROUTE 299 TCR



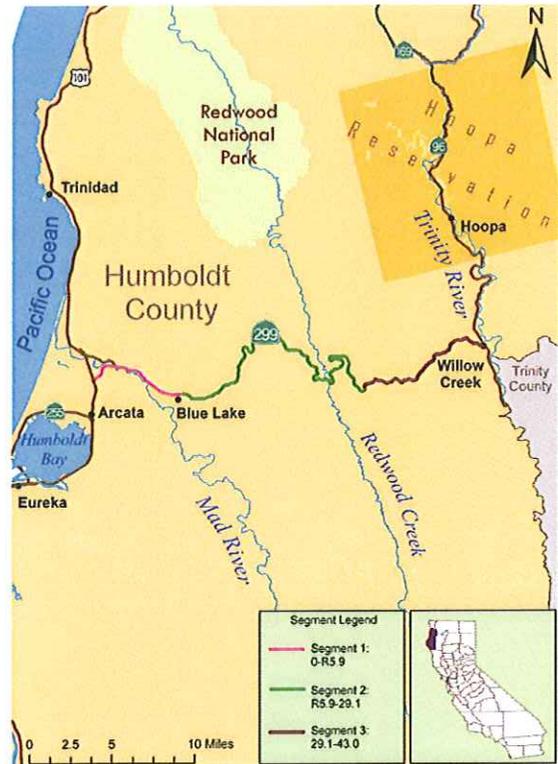
TRANSPORTATION CONCEPT REPORT

ROUTE 299 CORRIDOR

01-HUM-PM 0.0/43.0

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

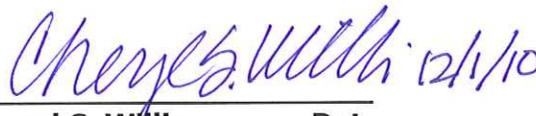
I approve this Transportation Concept Report as a conceptual guide for development decisions.



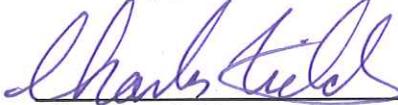
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December 2010



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EXECUTIVE SUMMARY TRANSPORTATION CONCEPT REPORT ROUTE 299 (01-HUM-PM 0.0/43.0)

Existing Facility

Route 299 is a principal arterial route, connecting Route 101 north of the City of Arcata to Interstate 5 at the City of Redding in the northern Sacramento valley. Route 299 has interregional and interstate importance, and is included in the National Highway System, the Strategic Highway Network, and the Interregional Road System. It is an important Route for commerce, especially forest products and goods needed by residents of the California north coast. Most of Route 299 in California is designated as the Trinity River Scenic Byway, a Forest Service Scenic Byway. It carries high volumes of recreational traffic, particularly during the summer months.

Route 299 in District 1 is primarily a 2-lane highway, with shoulder widths that generally vary from 0- to 4-foot wide (occasionally wider). According to Caltrans' *2007 Traffic Volumes on California State Highways*, Annual Average Daily Traffic (AADT) volumes range from 3,500 to 10,600 along the entire route. A map of the route with current operating conditions is provided on the following page.

Route Planning

Development of Route 299 as a truck route with reduced travel times to support the development of Humboldt Bay as a port is a goal of the Humboldt Bay Harbor, Recreation and Conservation District. The Humboldt County Association of Governments (HCAOG) continues to support the Buckhorn Grade project in Shasta County as a means to help achieve that goal. Upon completion of the Buckhorn Grade project, only minor improvements will be necessary to open Route 299 to large Surface Transportation Assistance Act (STAA) trucks.

Environmental Considerations

Principal environmental considerations include water quality as it pertains to state- and federally-listed fish species including Salmon and Steelhead in the watercourses adjacent to Route 299. The highway follows regionally important rivers and streams including the Trinity River, the New River and Willow Creek, among others. Naturally occurring asbestos, cultural resources and other rare and/or endangered plant and animal species are other environmental concerns that exist along the route.

Route Concept

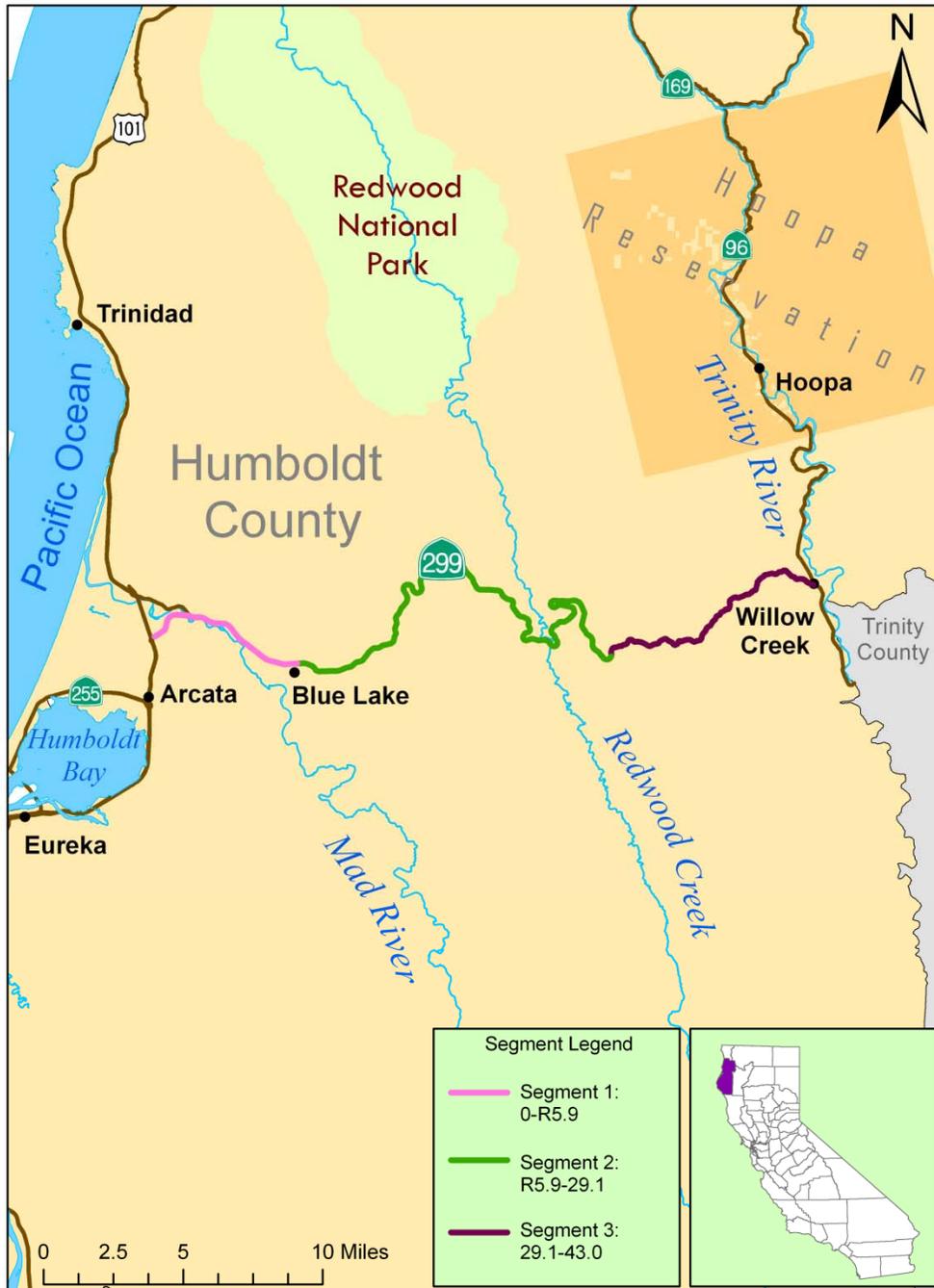
The concept for Route 299 is a 2-lane conventional highway/expressway, with intermittent passing lanes. The selected concept level of service for Route 299 is "C".

Improvements Necessary to Achieve the Route Concept

Additional turnouts for passing or an additional passing lane in Segment 3 (HUM-299-29.1/43.0) will be necessary to achieve the Level of Service concept through the 20-year period. The estimated cost of these improvements is not expected to exceed \$5 million in 2010 dollars.

PRESENT AND FUTURE OPERATING CONDITIONS MAP ROUTE 299

TCR: Route 299 Overview





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PLANNING INTENT & PURPOSE

Statement of Planning Intent

The Transportation Concept Report (TCR) is a planning document, prepared by the System Planning Division, which describes the Department of Transportation's (Caltrans) conceptual improvement options and management strategies for a given transportation route or corridor. System Planning is Caltrans' long-range transportation planning branch which operates under such legislation as California Government Code §65086, as well as a variety of federal mandates including 49 USC 5304, 23 USC 134 and 23 USC 135, all of which have to do with planning for the transportation needs of the citizens of California. Considering reasonable financial constraints and projected travel demand over a 20-year planning period, the TCR considers transportation facility needs for each route or corridor. Long-term or "Ultimate" concepts – concepts that extend beyond the 20-year planning period – may be discussed to identify and support long-term needs that may not be feasible within the 20-year planning period.

The TCR is a tool for implementing interregional and statewide continuity of the State's Transportation network, and will be updated as needed as conditions change or new information is obtained.

Purpose of the Transportation Concept Report

The objective of the TCR is to have local, regional, state and tribal consensus on route or corridor concepts, improvement goals and strategies. This document provides concept information only and does not determine policy nor establish a course of action. TCRs are prepared by District staff, in cooperation with local/regional agencies and Tribal governments.

Assumptions

The following assumptions form the basis for the development of TCRs:

1. The improvement concept of State highways in the District is generally based on functional classification.
2. State highways with improvement concepts must have realistic concept levels of service. Concept levels of service are not established on State highways that will only be maintained (since improvements would not be made to address level of service concerns).
3. Level of service calculations (LOS) are based on the 2000 Highway Capacity Manual.
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. Transportation Concepts generally apply to an entire route or corridor, unless there are overriding considerations (e.g., a major change in function along the route or feasibility concerns).
6. Major projects will be developed to meet design standards acceptable to the Federal Highway Administration in order to receive Federal funding for projects. Otherwise, a "design exception" must be secured during the project development process.
7. Safety and operational improvement projects will be pursued on an on-going basis in order to be responsive to safety and operational concerns as they are identified.
8. Projects under construction and projects programmed for construction were assumed to be complete in analyzing future operating conditions.
9. Environmental documents are not required for Transportation Concept Reports. Individual improvement projects identified in Transportation Concept Reports will follow established environmental processes when development is proposed, as required by law.



Eastbound Highway 299 through downtown Willow Creek. Photo: Caltrans

I. EXISTING ROUTE

ROUTE DESCRIPTION

Route 299 originates at Route 101 north of the City of Arcata, and extends easterly along the Mad River, then crosses over coastal mountains to the Trinity River, which it follows through District 1, to the Trinity County border and beyond (nearly to the community of Weaverville). After crossing Buckhorn Mountain, Route 299 intersects with Interstate 5 in the City of Redding.

Route 299 in District 1 is approximately 43 miles in length, and has a post mile description of 01-HUM-299-0.0/43.0.

ROUTE PURPOSE

Route 299 is functionally classified as a principal arterial, providing a connection between North Coastal cities and communities and the Interstate system in the northern Sacramento valley.

Route 299 has significant interregional and interstate importance and is included in the National Highway System (NHS). It is also included in the Strategic Highway Network (STRAHNET), and in the Interregional Road System (IRRS) as a “high emphasis” and “focus” route. Route 299 is an important Route for commerce, especially forest products and goods needed by residents along the northern California Coast. The feasibility of Route 299 as a truck route is considered critical to the development of Humboldt Bay as an active port. This is especially true in the advent of short-sea shipping, a concept which has been gaining traction locally in the last several years.

Most of Route 299 in Humboldt County is designated as the Trinity River Scenic Byway, a Forest Service Scenic Byway. This Route carries relatively high volumes of recreational traffic, particularly in the summer months. It provides access to the wild and scenic Trinity River, the Six Rivers National Forest, and both Trinity and Whiskeytown Lakes.



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ROUTE SEGMENTATION AND EXISTING FACILITY CHARACTERISTICS

The table below describes Route 299 segmentation:

ROUTE 299 SEGMENTATION

SEG #	HUM-299 POSTMILE	DESCRIPTION	EXISTING FACILITY
1	0.0/R5.9	ROUTE 101 TO THE CITY OF BLUE LAKE	4-F
2	R5.9/29.1	CITY OF BLUE LAKE TO COMMUNITY OF WILLOW CREEK	2-E
3	29.1/43.0	COMMUNITY OF WILLOW CREEK TO HUMBOLDT/TRINITY LINE	2-C

(F = Freeway, E=Expressway, C=Conventional Highway. The corresponding number represents the typical number of lanes in that segment)

ROUTE 299 EXISTING FACILITY CHARACTERISTICS

Functional Classification:	Principal Arterial
Freeway and Expressway System:	Yes
Eligible for Scenic Highway Designation:	Yes
STAA Trucks Allowed:	No*
Strategic Highway Network:	Yes
National Highway System:	Yes
Interregional Road System:	Yes (High emphasis and focus Route)
Public Airports Served:	None directly (Hoopa Airport via Route 96)
Rail Service:	None
Intercity Bus Service:	Redwood Transit Authority & K/T Net (divisions of Humboldt Transit Authority)
Intersecting State Highway Route:	101, 200, 96
Park and Ride Lots:	None

* While no barriers to STAA truck access exist in the District 1 portion of Route 299, STAA truck access is not allowed due to narrow and curvilinear conditions on the District 2 portion of the Route (primarily, the east side of Buckhorn Summit in Shasta County).

II. SEGMENT CHARACTERISTICS

The following pages map and describe each of the three segments of Route 299, and discuss opportunities and constraints on these segments. Collision rates for the segments (total and fatality plus injury only) are included, as well as Statewide average collision rates for similar facilities, which may be used for comparison purposes.

Three types of segment characteristics are included:

- o Those describing the facility (facility type, lane width, paved shoulder width)
- o Those characterizing traffic on the facility (Annual Average Daily Traffic or AADT, peak hour traffic, trucks as a percentage of AADT)
- o Service provided by the facility (level of service)

Segment 1 Factsheet: Arcata to Blue Lake

TCR: Route 299 Segment 1

Segment Description

HUM-299-0.0/R5.9, from US 101 in the City of Arcata to immediately north of the City of Blue Lake.

This segment of Route 299 is 4-lane freeway, serving commute traffic between the City of Blue Lake and the neighboring unincorporated communities of Glendale and Fieldbrook and the Humboldt Bay region (Arcata, Eureka, and McKinleyville), as well as interregional traffic, much of which is recreational and resource-based.

Land use in this segment is primarily open space, grazing and farmland, interspersed with scattered residential and commercial development. Residential and commercial development is more predominant in and around the Cities of Arcata and Blue Lake.

Opportunities and Constraints

This segment of Route 299 carries existing peak hour traffic volumes at a very good level of service, and is expected to continue to do so well into the future.

One of the primary issues on this segment is pedestrian access and bicyclist safety. Several locations along the Route require significant out of direction travel by pedestrians prohibited from using the freeway. A rumble strip program in various locations between US 101 and the Trinity County line is intended to improve conditions for cyclists. This project is under construction.

Another issue involves scour at the Mad River Bridge (HUM-299-R1.56). Gravel mining (both upstream and downstream) has resulted in some undermining of the bridge supports.

Segment Collision Rates

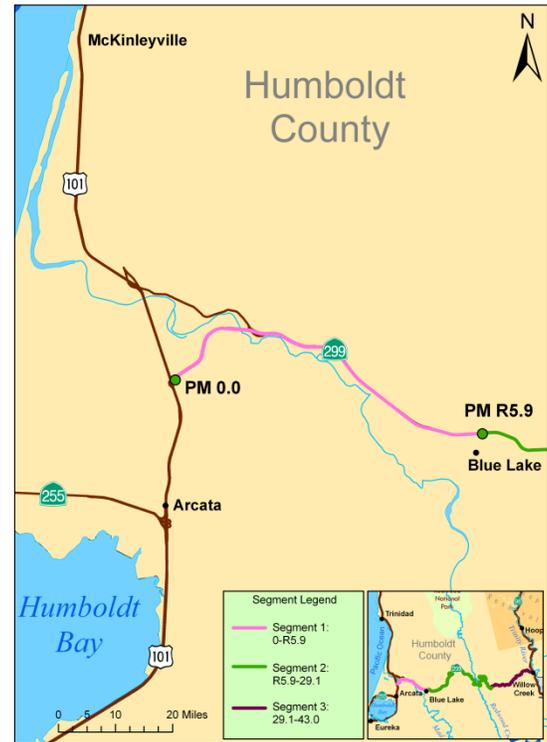
Total = 50; Fatal + Injury = 21

(Actual Fatal Collision Rate is 1.7 times greater than the Statewide Average for Similar Facilities)

(Source: Traffic Accident Surveillance and Analysis System – TASAS, for the period July 2006 through January 2009).

Segment Characteristics and Performance

Facility Type:	4-Lane Freeway
Lane Width:	12'
Paved Shoulder Width:	8' outside, 5' inside
Current (2009) AADT:	10,425
Current (2009) Peak Hour Volume:	1,160
Current (2009) 5-Axle Truck ADT:	850
Current year (2008) Level of Service:	"A"
Future (2029) AADT:	12,600
Future (2029) Peak Hour Volume:	1,400
Future (2029) 5-Axle Truck ADT:	1,020
Future (2029) Level of Service:	"A"



Segment 2 Factsheet: Blue Lake to Berry Summit

Segment Description

HUM-299-R5.9/29.1, from immediately north of the City of Blue Lake to Berry Summit.

This segment of Route 299 is 2-lane expressway, with passing lanes on most of the sustained grades. Its primary function is to serve interregional traffic, much of which is recreational or related to the timber resources industry.

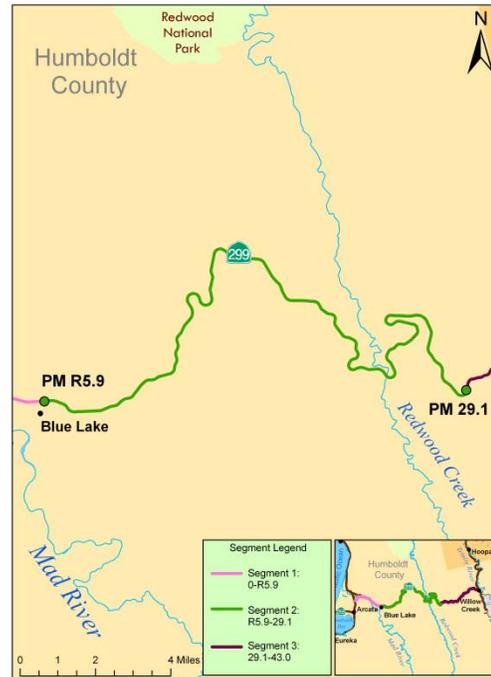
Land use in this segment is predominantly open space, grazing and timberland, with very minimal residential development.

Opportunities and Constraints

This segment of Route 299 carries existing peak hour traffic volumes at a good level of service, and is expected to continue to do so through the 20-year period.

Issues on this segment include slope stability and rock slides, especially during the winter months. Ice and snow are a concern on this segment's two summits (Lord Ellis – 2,260 ft. and Berry – 2,871 ft) during the winter.

TCR: Route 299 Segment 2



This segment of Route 299 is a part of the "Trinity River Scenic Byway", a Forest Service Scenic Byway.

Segment Collision Rates

Total = 86; Fatal + Injury = 40

(Actual Fatal Collision Rate is very close (within 0.04 collisions/million vehicle miles) to the Statewide Average for Similar Facilities)

(Source: Traffic Accident Surveillance and Analysis System – TASAS, for the period July 2006 through January 2009).

Segment Characteristics and Performance

Facility Type:	2-Lane Express.
Lane Width:	12'
Paved Shoulder Width:	2' to 8'
Current (2009) AADT:	3,300
Current (2009) Peak Hour Volume:	540
Current (2009) 5-Axle Truck ADT:	530
Current year (2008) Level of Service:	"C"
Future (2029) AADT:	3,950
Future (2029) Peak Hour Volume:	650
Bridge	
Future (2029) 5-Axle Truck ADT:	640
Future (2029) Level of Service:	"C"



Route 299, PM 23.58, east of Redwood Creek

Segment 3 Factsheet: Berry Summit to the Humboldt/Trinity County Line

Segment Description

HUM-299-29.1/43.0, from Berry Summit to the Humboldt/Trinity County line.

This segment of Route 299 is 2-lane conventional highway with intermittent passing lanes. Its primary function is to serve interregional traffic, much of which is recreational or related to the timber resources industry. It also connects to Route 96, which serves the Hoopa, Yurok and Karuk tribal lands.

Land use in this segment is primarily open space and timberland, with limited residential and commercial development, centered primarily within and to the east of the community of Willow Creek.

Opportunities and Constraints

Level of Service (LOS) on this segment of Route 299 is reduced by relatively high truck volumes, numerous access openings and sight restrictions that limit passing opportunities.

Issues on this segment include slope stability and rock slides, especially during the winter months. Historically, there have been collision concerns at spot locations (generally, involving short radius curves), and improvements have been made at these locations. Ice and snow are a concern on the east side of Berry Summit (elevation 2,871 ft) during the winter.

This segment of Route 299 is a part of the "Trinity River Scenic Byway", a Forest Service Scenic Byway. Context sensitive highway improvements have been made in the community of Willow Creek, improving pedestrian and bicycle safety.

Segment Collision Rates

Total = 99; Fatal + Injury = 43

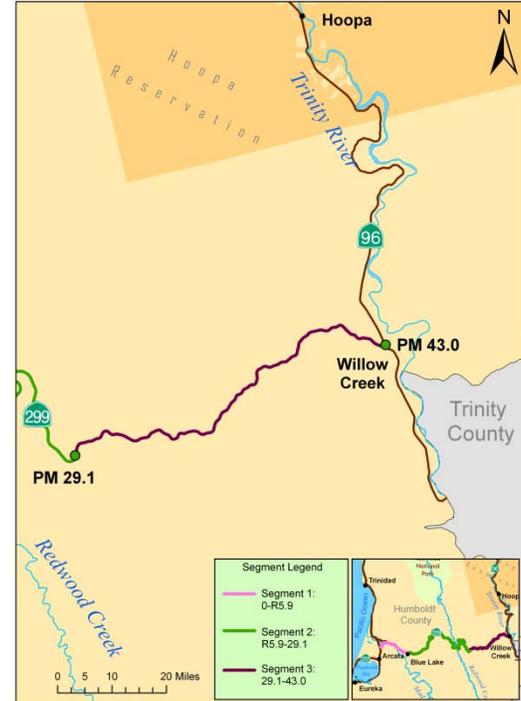
(Actual Fatal Collision Rate is 1.7 times the Statewide Average for Similar Facilities)

(Source: Traffic Accident Surveillance and Analysis System – TASAS, for the period July 2006 through January 2009).

Segment Characteristics and Performance

Facility Type:	2-Lane Conventional
Lane Width:	12'
Paved Shoulder Width:	1' to 8'
Current (2009) AADT:	3,950
Current (2009) Peak Hour Volume:	540
Current (2009) 5-Axle Truck ADT:	750
Current year (2009) Level of Service:	"C"
Future (2029) AADT:	4,750
Future (2029) Peak Hour Volume:	650
Future (2029) 5-Axle Truck ADT:	900
Future (2029) Level of Service:	"D"

TCR: Route 299 Segment 3



Route 299, PM 32.06, about 3 mi. east of Berry Summit



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III. ENVIRONMENTAL CONSIDERATIONS

Principal environmental considerations for the Route 299 corridor include:

1. **Water Quality:** A portion of Route 299 follows the Trinity River, which is designated as a recreational Wild and Scenic River. Other portions of Route 299 follow the Mad River and Willow Creek. The potential for degradation of water quality is a concern in all of these drainages.
2. **Salmon and Steelhead Habitat:** The Trinity and Mad Rivers and Willow Creek are all critical salmon and steelhead spawning and nursery habitat.
3. **Archaeological Sensitivity:** Areas near river crossings are known to be archaeologically sensitive, particularly the South fork of the Trinity River at the Humboldt/Trinity County line.
4. **Rare and Endangered Species:** The National Diversity Data Base lists the Western Snowy Plover, Coho Salmon, California Wolverine, and Beach Layia as threatened or endangered species that may be encountered along Route 299 in Humboldt County. It should be noted, however, that the Snowy Plover and Beach Layia are found in coastal dunes only and this type of habitat is not found within the Route 299. In addition, the Pacific Fisher is a candidate for threatened or endangered species status. A number of other species of concern have been identified in the region by the California Department of Fish and Game and the California Native Plant Society.
5. **Naturally Occurring Asbestos:** It is likely that naturally occurring asbestos is present at locations within Segment 3 of the Route 299 corridor (Hum-299-29.1/43.0). Naturally occurring asbestos is found in the ultramafic rock formations that make up a portion of the geology along the Route 299 corridor.

IV. SAFETY AND LEVEL OF SERVICE CONCERNS

SAFETY CONCERNS

Collision rate information was compiled from collisions on Route 299, as reported by law enforcement agencies. Collision rates are above the statewide average for similar facilities on all segments of Route 299, except Segment 3 (Hum-299-29.1/43.0). For comparison purposes, collision rates are provided for a three-year period on each highway segment of Route 299 (see segment Factsheets), along with collision rates for similar facilities statewide.

The District follows an established collision surveillance and monitoring process, which investigates and recommends safety improvements for specific locations with a history of collision concerns, as they are identified.

LEVEL OF SERVICE CONCERNS

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



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operates at capacity during peak hour. An explanation of level of service for highway facilities with uninterrupted flow is included in Appendix "A" of this TCR.

The future (2029) level of service on Segment 3 (HUM-299-29.1/43.0) will not meet the "C" concept level of service established in this Transportation Concept Report without the development of additional passing opportunities.

V. ROUTE PLANNING

COOPERATIVE PLANNING

Humboldt County's Regional Transportation Plan (RTP) identifies Route 299 (along with Route 101) as one of the two primary arterials used by the timber industry. The Humboldt County RTP cites summer congestion, narrow lanes, and sharp curves as concerns with Route 299. It also notes that it is a vital interregional transportation link for the Native American Tribes whose lands are located north of Route 299, when inclement weather prevents travel on Bald Hills Road.

The Humboldt County RTP states the Humboldt Bay Harbor, Recreation and Conservation District's belief that modernization of the Humboldt Bay port and other transportation facilities can create local jobs and strengthen the local economy. A crucial element in reaching that goal is the reduction in truck travel times between Redding and Humboldt Bay via Route 299.

SPECIAL STUDIES

Two special studies have been completed on Route 299, as follows:

- o **"SPECIAL STUDY, ROUTE 299"**: Caltrans District's 1 and 2 completed a "Special Study" for Route 299 to develop consensus on concept and improvement priorities over the next 20 years. In addition to the two Caltrans Districts, the Study included the participation of Humboldt County Association of Governments (HCOAG), Trinity County, and the Shasta County Regional Transportation Planning Agency. The two highest improvement priorities identified in this study were segments of the Buckhorn Grade Project. The highest priority project in Humboldt County (a passing lane) had an improvement priority ranking of nineteen.
- o **"STAA TRUCK STUDY, STATE ROUTE 299W"**: In April of 2000, District 2 Traffic Engineering and Operations did a study to identify locations (excluding Buckhorn Summit) that would need improvements to accommodate STAA trucks on Route 299 between the Humboldt/Trinity County line and Interstate 5 in Redding. The Study identified nineteen improvement locations in Trinity and Shasta Counties.

VI. ROUTE CONCEPT AND RATIONALE

FACILITY CONCEPT

THE CONCEPT FOR ROUTE 299 IN HUMBOLDT COUNTY IS 2-LANE CONVENTIONAL HIGHWAY/EXPRESSWAY WITH INTERMITTENT PASSING LANES.

This facility concept is consistent with the function and functional classification of Route 299, while recognizing environmental and financial constraints that are not supportive of more extensive improvement.



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LEVEL OF SERVICE CONCEPT

THE SELECTED CONCEPT LEVEL OF SERVICE FOR ROUTE 299 IS "C". If level of service at peak hour falls below this concept level, capacity improvements will be considered.

Segment 3 (HUM-299-29.1/43.0) will require additional passing opportunities to achieve a "C" Level of Service.

ROUTE CONCEPT FUNCTION

This Route Concept should serve as a conceptual guide for development of the Route 299 corridor. It recognizes financial considerations and competing priorities both on this Route and other Routes in the District. Efforts have been made to consider local, regional, and Tribal concerns regarding development of the Route.

ALTERNATIVE CONCEPTS CONSIDERED

A 4-lane freeway/expressway facility concept was initially considered for Route 299, but did not appear realistically attainable due to financial and environmental constraints.

A "C-45" concept level of service was established for Route 299 in the original (1985) Route Concept Report. This was reduced to a "D" concept level of service in the 1989 Route Concept Report, since all two lane segments of the route were expected to fall below a "C" level of service within the 20-year period. The concept level of service was increased to "C" again in the 1989 Route Concept Report, based on field observations of percent time following. A "C" concept level of service appears appropriate for this Transportation Concept Report, based on current traffic volumes, growth factors, and the 2000 Highway Capacity Manual two-lane highway level of service calculation procedures.

VII. ROUTE MANAGEMENT STRATEGIES

SAFETY AND OPERATIONAL IMPROVEMENT STRATEGY

SAFETY IS THE HIGHEST PRIORITY OF CALTRANS AND OUR REGIONAL PARTNERS. NECESSARY SAFETY IMPROVEMENTS WILL BE MADE AS THEY ARE IDENTIFIED.

Collision concerns exist at a number of spot locations on Route 299. Caltrans uses an Accident Surveillance System that systematically identifies high accident concentration locations on State Highways. The system produces a quarterly report known as a Traffic Accident Surveillance and Analysis System (TASAS) Table C. TASAS is a database that contains highway classification data and accident data from the Statewide Integrated Records System (SWITRS) database that is maintained by the California Highway Patrol. The Table C report identifies intersections and highway segments with collision histories showing statistical significance. Each district receives the quarterly TASAS Table C report and investigates the identified locations to determine what, if any, improvements are warranted and feasible (considering both cost and environmental impacts.)

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.



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MAINTENANCE AND REHABILITATION STRATEGY

ROUTE 299 SHOULD BE MAINTAINED AND REHABILITATED AS NECESSARY.

Based on current standards, existing roadway widths on Route 299 should be adequate to allow rehabilitation of the Route without widening. However, consideration should be given to widening in conjunction with pavement rehabilitation projects where necessary to provide adequate paved shoulder width for both motorized and non-motorized traffic.

Where current traffic volumes are 3,000 to 6,000 vehicles per day (the AADT for all of the 2-lane portions of Route 299 fall within this range), these standards specify a desirable minimum roadway width of 40-foot, but do allow rehabilitation at the present width if the roadway is at least 28-foot wide. A design exception may be requested if the roadway does not meet the minimum width requirement, and physical, financial, or environmental considerations preclude widening.

ACCESS MANAGEMENT STRATEGY

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

Where feasible within Segment 3 (HUM-299-29.1/43.0), highway access points for new developments or existing access points located within close proximity of each other should be consolidated to improve highway operations and safety. A reduction in the number of access points along highways generally reduces the number of potential roadway conflicts between through traffic and traffic entering the facility and, subsequently, reduces driver confusion.

Access controls exist on the first two segments of Route 299 (HUM-299-0.0/29.1); access management actions should not be necessary on these segments.

GOODS MOVEMENT STRATEGY

DIST. 1 SUPPORTS IMPROVEMENTS TO ACCOMMODATE SURFACE TRANSPORTATION ASSISTANCE ACT (STAA) TRUCKS ON ROUTE 299.

Goods movement on Route 299 between the Cities of Arcata and Redding is considered essential to the future development of Humboldt Bay harbor. While there are no physical restrictions to STAA trucks on Route 299 in District 1, these longer trucks are not allowed to use Route 299 in Humboldt County, due to restrictions in Trinity and Shasta Counties (primarily Buckhorn Grade). Implementation of District 2's Transportation Concept Report will eliminate this barrier.

LIVABLE COMMUNITIES/CONTEXT SENSITIVE SOLUTIONS STRATEGY

The Department uses Context Sensitive Solutions (CSS) to plan, design, maintain and operate its transportation system in a way that reflects community values and enhances its surrounding environment while meeting transportation safety, maintenance, and performance goals. The application of CSS is especially important in areas where a State Route passes through a community.

Route 299 bisects the community of Willow Creek, an unincorporated town of approximately 1,700 residents. Caltrans has worked with the Willow Creek Community



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Services District to calm Route 299 traffic through the community and to enhance roadway aesthetics. A Caltrans Transportation Enhancement Act grant funded gateways, pedestrian and bicycle facilities, lighting and crosswalks, re-stripping of traffic lanes, and landscaping.

And, Caltrans will ensure that elements of the Route 299 context, such as its proximity to numerous watersheds, environmental and cultural sensitivity, and extensive recreational use, are properly considered and addressed.

VIII. RIGHT OF WAY CONSIDERATIONS

Much of the Right of Way for Route 299 was obtained through easements on United States Forest Service Property. No major new facility improvements to Route 299 in Humboldt County are planned, and no substantial long-term right of way needs are anticipated. Some right of way may be needed to construct turnouts and passing lanes.

IX. MULTI-MODAL CONSIDERATIONS

Non-Motorized

Bicycles are permitted on all segments of Route 299 in District 1, and pedestrians are permitted on all but Segment 1 (HUM-299-0.0/5.9), which is Freeway. Most non-motorized travel is concentrated in and near the community of Willow Creek, and between the Cities of Arcata and Blue Lake. Some portions of Route 299, particularly in Segment 2 (HUM-299-29.1/43.0), have a shoulder width of 2-foot or less, making bicycle and pedestrian travel difficult.

The 2004 Humboldt County Regional Bicycle Transportation Plan includes future plans to develop the Annie & Mary rail corridor into a class I bicycle and pedestrian facility. The Annie & Mary rail corridor parallels Route 299 from the City of Arcata to the City of Blue Lake (Segment 1, HUM-101-0.0/5.9), the only segment of Route 299 in District 1 that has been developed to freeway standards.

The 2004 Humboldt County Regional Bicycle Transportation Plan also notes that the Trinity County Bikeways Master Plan proposes designation of Route 299 as a Class 3 bikeway. While bicycles and pedestrians are permitted on Route 299 in District 1, it is not designated as a Class 3 bikeway.

Bicycle safety is paramount along SR 299. A SHOPP project (EA 01-49040) to install rumble strips in various locations between PM 7.1/43.1 has been funded and is currently under construction with an estimated completion date of April 2012.

Transit

Low population densities make it difficult to provide cost-effective transit services for Route 299. However, the Humboldt Transit Authority (HTA) provides three trips daily Monday through Friday between Arcata and Willow Creek. Since January of 2010, Trinity County has utilized 5311f funding to provide service Mondays, Wednesdays and Fridays between Willow Creek and Redding.



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As discussed in the 2006 Update of the Humboldt County Regional Transportation Plan, the Klamath/Trinity Non-Emergency Transportation (K/T NET) provides fixed-route, public transportation services between the communities of Orleans, Weitchpec, Acorn Flat, Tulley Creek, Willow Creek and the City of Arcata. Two trips per day are scheduled, and the small busses operate at near capacity. K/T NET also provides other transportation services to communities along the Klamath and Trinity Rivers. This operation is separate from that provided by HTA.

The Blue Lake Rancheria operates a fixed route and dial-a-ride service between the Cities of Blue Lake and Arcata. Funding is a continuing concern for this service.

Rail

The Arcata and Mad River (Annie & Mary) railroad spur of the North Western Pacific Railroad, owned and operated by the North Coast Railroad Authority, parallels Route 299 from the City of Arcata to the community of Korbel, northeast of the City of Blue Lake. This spur historically provided rail service primarily for forest products producers located in the lower Mad River valley. The rails and ties were salvaged from this spur in late 1997. It is currently being considered as a "rails-to-trails" corridor.

X. IMPROVEMENTS NECESSARY TO ACHIEVE THE ROUTE CONCEPT

Additional turnouts for passing or an additional passing lane in Segment 3 (HUM-299-29.1/43.0) will be necessary to achieve the level of service concept and maintain it through the 20-year planning period. The estimated cost of these improvements is not expected to exceed \$5 million.

The 2010 State Transportation Improvement Program (STIP) does not include any projects on Route 299 in District 1. It does program \$5.5 million for the environmental process on the Buckhorn Grade project in Shasta County, in District 2. Further, the 2010 State Highway Operation and Protection Plan (SHOPP) includes two repair projects (EAs 42370 and 47440) on Route 299 in Humboldt County, with a total cost of approximately \$3 million.



ROUTE 299 TCR



APPENDIX "A"

WORKS REFERENCED

1. State of California, California Department of Transportation, Route Concept Report Guidelines, 1987. <<http://onramp.dot.ca.gov/hq/tpp/files/pdf/RCR1987Guidelines.pdf>>
2. Humboldt County Association of Governments, Humboldt County 2008 Regional Transportation Plan. < <http://hcaog.net/docs/RTP.2008/pdf/Complete> >
3. State of California, Department of Fish and Game, California Natural Diversity Database, accessed April 29, 2008. <http://www.dfg.ca.gov/cnddb_quickviewer/app.asp>.
4. Humboldt County Association of Governments, 2006 Bicycle Facilities Plan. June 2007. <http://dnltc.org/planningdocs/Bicycle_Facilities_Plan_2007.pdf>
5. State of California, California Department of Transportation, 2006 State Highway Operation and Protection Program (SHOPP). April 2008 update.
6. Caltrans District 1, Office of System & Community Planning, 2006 Growth Factors. April 2006.
7. Caltrans District 1, Office of Traffic Safety, TASAS Selected Accident Retrieval. July 2008.
8. State of California, Business, Transportation and Housing Agency and Department of Transportation, 2006 Traffic Volumes on the California State Highway System. June 2007.
9. State of California, California Department of Transportation, State Highway Inventory. 2001.
10. State of California. California Department of Transportation, 2002 California State Highway Log - District 1, 2002.
11. State of California, California Department of Transportation. Maintenance GIS maps of areas likely to contain naturally occurring asbestos, < http://onramp/hq/maint/roadway_rehab/gis/District01_NOA_05.pdf >
12. Transportation Research Board, National Research Council, Highway Capacity Manual: HCM 2000. December 2000
13. State of California. California Department of Transportation, Design Information Bulletin 79-03: Design Guidance and Standards for Roadway Rehabilitation Projects. November 2007
14. State of California. California Department of Transportation, Districts 1 and 2, Special Study, Route 299. May 1993
15. State of California. California Department of Transportation, District 2, STAA TRUCK STUDY, ROUTE 299W. April 2000
16. Humboldt County's Willow Creek Community Action Plan, 2003
http://co.humboldt.ca.us/planning/planning/documents/action_plans/2003_plans/wcrk_web.pdf
17. Humboldt County GPU Background Reports,
<http://co.humboldt.ca.us/gpu/documentsBackground.aspx>

APPENDIX "B"

LEVELS OF SERVICE

for Multi-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. No delays
B		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. No delays
C		60	Density becomes noticeable with ability to maneuver limited by other vehicles. Minimal delays
D		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. Minimal delays
E		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. Minimal delays
F		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. Significant delays

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways