Editing note: Text with a single underline is new/updated; text with a dashed underline has just been moved from somewhere else in the chapter.

2. COMPLETE STREETS ELEMENT

THE COMPLETE STREETS ACT

The Complete Streets Act of 2008 requires California cities and counties to adopt transportation plans that accommodate all users of roadways, including pedestrians, transit, bicyclists, the elderly, children, motorists, and the disabled. Transportation planning in California now expressly strives to "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways...in a manner that is suitable to the rural, suburban, or urban context of the general plan..." (AB 1358).

The local system will become ever more important in supporting the goals of climate change and building sustainable communities, as local streets and roads serve as the right-of-way for transit, bicycle and pedestrian travel.

- 2010 RTP Guidelines

The Act sets complete streets policies because

> Providing complete streets increases travel options which, in-turn, reduces congestion, increases system efficiency, and enables environmentally sustainable alternatives to single driver automotive trips. Implementing complete streets and other multi-modal concepts supports the California Complete Streets Act of 2008 (AB 1358), as well as the California Global Warming Solutions Act of 2006 (AB 32) and Senate Bill 375, which outline the State's goals of reducing greenhouse gas emissions.[1]

The Act calls on RTPAs to integrate Complete Streets policies into their RTPs and identify the financial resources necessary to accommodate such policies. The Complete Streets Act tells RTPAs to consider accelerating programming for projects that retrofit existing roads to provide safe and convenient travel by all users.

Caltrans ~~has~~ adopted a "Complete Streets" directive, which ~~reads, in part~~states that:

> …Addressing safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian, and transit travel is facilitated by creating "complete streets" beginning early in system planning and continuing through project delivery and maintenance and operations. (Caltrans Deputy Directive 64-R~~1~~2, ~~2008~~2014)

[1] "Complete Streets Implementation Action Plan 2.0," California Department of Transportation, 2014.

HCAOG explicitly and consistently upholds Complete Streets policies in *VROOM*, foremost in the Complete Streets Element, but also in the Commuter Trails Element and Public Transportation Element. In addition, HCAOG has consistent policies also in the Humboldt Regional Bicycle Plan (2017), the Humboldt County Regional Pedestrian Plan (2008), and the Regional Trails Master Plan These plans are incorporated into *VROOM* by reference.

EXISTING ROADWAY SYSTEM

Counties and cities maintain 81% of the maintained miles within the State of California and carry 45% of the total annual miles of vehicle travel.

- 2010 RTP Guidelines

The following briefly describes characteristics of the region's existing roadway system ~~and the concepts of "level of service."~~

The broad use of the term "roadway" includes highways, streets, and paved and unpaved roads. The most basic function of roadways is to allow people to travel and transport goods. *How* the roadways accommodate travel affects what modes people will use to travel along them. The goal of "complete streets" design is to include all the characteristics feasible to provide safe, convenient travel for the most types of ~~users~~modes.

In Humboldt County, we have approximately 1,400 miles of county roads and city streets, and 378 miles of state highways and roadways on federal lands. Proportionately, HCAOG's members (the County and seven cities) have to maintain 79% of the road miles in Humboldt. The local system is mostly public right-of-way. Roads on private property must be maintained by the property owner, unless a public agency agrees to maintain them. State highways in Humboldt County are under the jurisdiction of the California Department of Transportation (Caltrans) District 1. Federal and/or State agencies have jurisdiction over roads within public resource lands such as parks and forests. The agencies responsible for maintaining those non-local roadways include, but are not limited to, Caltrans District 1, U.S. Forest Service, National and State Park Service, Bureau of Land Management, and Bureau of Indian Affairs. Roads owned by Native American tribal governments are maintained by them; some roads on tribal land are in the local city, County, or Caltrans District 1 jurisdiction and are maintained by the respective entity.

~~LOCAL~~ ROADWAYS: ~~& STREETS~~ THE BUILDING BLOCKS OF CITIES

Nearly one-third are one mile or shorter.[2] Local roads are used most for short trips, and these trips are most conducive for alternative transportation modes (biking, walking, transit). where motorists, transit, bicyclists, and pedestrians most commonly share space. Thus, it is where "complete streets" are the most opportune and have the highest potential/realized multi-modal use.

[2] 2009 National Household Travel Survey, California Add-On

Different Classes of Streets/Roads

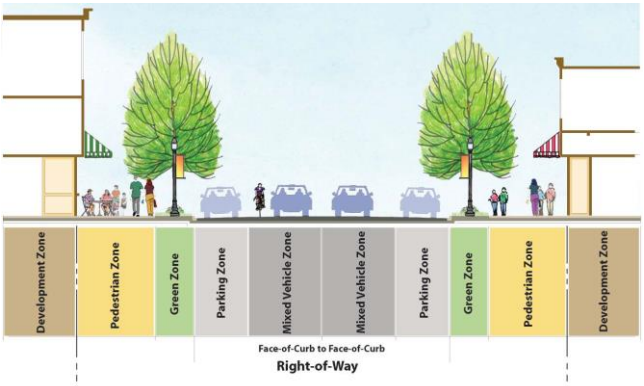
In older towns and neighborhoods in the United States (i.e., pre-automotive 19th century), streets were laid out in grid patterns, with short blocks and frequent intersections. Shops and services were interwoven with residential, sometimes industrial, and other uses. The layout was, in turns, the cause or the effect of denser development, which accommodated people to walk and bicycle to most of their errands and activities. This urban layout is called commonly European city design and traditional downtowns. In Humboldt, two examples of traditional downtowns are Old Town Eureka and the Arcata Plaza.

Another older design, generally built in smaller and more rural communities, is "Main Street," which is the commercial spine that serves as "downtown." Examples of "Main Street" downtowns in Humboldt include Main Street in Ferndale, Main Street in Fortuna, and Redwood Street in Garberville. Main Streets often also are the major transportation corridor through town. In younger rural towns, it is not uncommon for "Main Street" to be a highway, such as in Rio Dell and Orick (State Route 101), and Willow Creek (State Route 299).

As the population grew in the 20th century and private automobile ownership exploded on the scene, cities began to expand out. Since households became more mobile with their personal car, newer neighborhoods were built farther out and less dense. City grids gave way to suburban sprawl. By mid-century, city planners and traffic engineers were designing roadway networks to primarily accommodate longer, faster trips by car. The Federal Highway Administration (FHWA) invented the Functional Classification Systems, which defines a "hierarchy" of road classes, and is used to this day down to the local level. The three main road classes are local, collector, and arterial:

- **Arterials** are major through-roads that are expected to carry large volumes of traffic, with the primary objective of allowing the greatest speed for the longest uninterrupted distance. To increase flow, the number of intersecting streets is reduced. The "Main Street as Highway" roadway described above is usually a principal (or major) arterial. Examples of rural principal arterials are Old Arcata Road/Bayside Road, and Fieldbrook Road.
- **Collectors** are expected to carry lower volumes of traffic for trips of shorter distances. Speeds are lower than arterials.

A Conceptual Road Design for a "Main Street"



Source: "Urban Street Design Guidelines," City of Charlotte, 2007.

- **Local roads** carry low volumes of traffic and have the lowest speed limit. They are expected to be access for the start and destination of a trip; they are not intended for through movement. In the FHWA classification, local streets and roads are at the bottom of the hierarchy.

The road network concept is that a local road links to a collector road, which will link to an arterial road, and an arterial road will directly access a highway. The two major highways in Humboldt County are U.S. Highway 101 (north-south) and State Route 299 (east-west). They carry the highest volumes of passenger cars and commercial trucks. Overall they provide adequate facilities and levels of service. Due to Humboldt's geography, geomorphology, and wet weather patterns, landslides occur seasonally along certain segments.

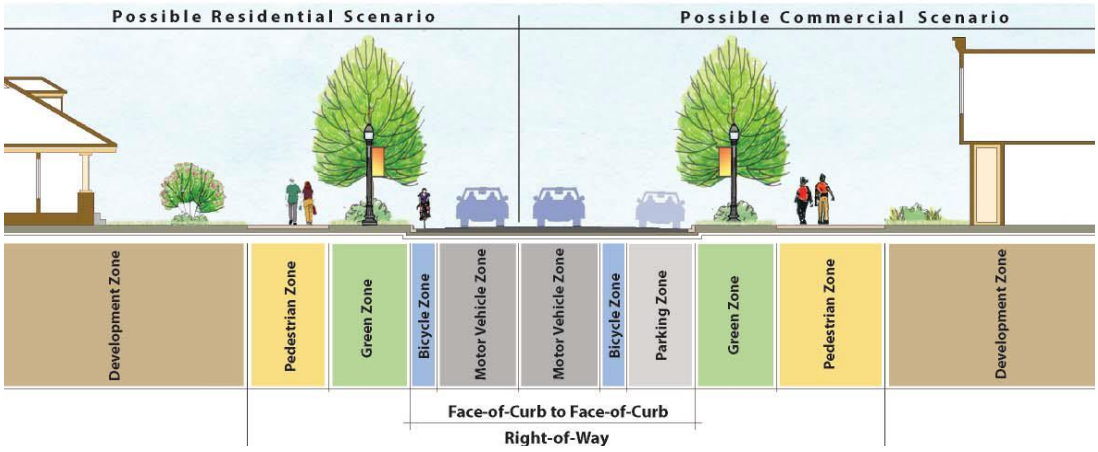
State highways in Humboldt County are as follows (mileage for portion within county):

SR 36	32 miles	Alton (U.S.101) to Bridgeville/Blocksburg
SR 96	45 miles	Willow Creek to Siskiyou County line (Highway 5)
U.S. 101	137 miles	Del Norte to Mendocino County lines
SR 169	20 miles	Klamath (U.S. 101) to Klamath Glen
SR 200	3 miles	McKinleyville (U.S. 101) to SR 299 (near Blue Lake)
SR 211	5 miles	Ferndale (Ocean Ave.) to Fernbridge (U.S. 101)
SR 254	32 miles	(Avenue of the Giants) Phillipsville (U.S. 101) to Stafford (U.S. 101)
SR 255	9 miles	Eureka (Myrtle Ave.) to Arcata (Samoa Blvd.)
SR 271	< 1 mile	Cooks Valley
SR 283	< 1 mile	Scotia (U.S. 101) to Rio Dell
SR 299	51 miles	Arcata (U.S. 101) to Trinity County line

What Makes a Complete Street?

How do you make a "complete street"? How does a roadway accommodate all users of all ages and abilities? When planning and building the roadway system, we need to consider the needs of people who will be traveling or transporting goods via truck, automobile and motorcycle, emergency vehicle, bus, bicycle, and by foot or wheelchair. The physical and the functional will define what

A Conceptual Road Design for an "Avenue"



Source: "Urban Street Design Guidelines," City of Charlotte, 2007

"complete" can mean for a roadway. The physical space available will limit how much can safely fit in the roadway. Different types of roadways will actually be "complete" at different levels. Depending on space (within the right-of-way), topography, and intended uses, a roadway will include some or all of the following characteristics: travel lane(s), median, shoulder, sidewalk, landscaping, on-street parking spaces, bikeways, and gutters, bioswales, or ditches.

Sidewalks and Crosswalks

(Included by reference is the Humboldt County Regional Pedestrian Plan (HCAOG 2008.)
Sidewalks and crosswalks are the standard transportation facilities for pedestrians, which include people in wheelchairs and strollers. Besides sidewalks, a few examples of walkways designed primarily for pedestrian travel (not solely recreation) are: the Boardwalk and PALCO Marsh path in Eureka; the Hammond Trail in McKinleyville; and Shay Park path (along Foster Avenue and railroad tracks) in Arcata. IN last five to ten years, several sidewalk gaps have been filled thanks to Safe Routes to School programs and funding.

Where the dedicated walkway is substandard or non-existent, it creates conditions that impede pedestrian travel. Barriers for pedestrians include: roads without a dedicated walkway (where pedestrians must walk in the roadway shoulder or in the travel lane); gaps in the sidewalk; uncontrolled intersections (i.e., no signal or stop sign); and substandard slopes on driveways or curb cuts. Sidewalks and crosswalks must meet ADA (Americans with Disabilities Act) standards for wheelchair users, and mobility-impaired pedestrians.

Bikeways & Bike Parking

Bike facilities include public infrastructure and private amenities that support bicycle travel. The most standard bicycle facility is a bikeway on the public right-of-way, usually on the sidewalk.

Humboldt's bikeways are classified according to Caltrans' definitions for Class I, II, ~~and~~ III, and IV bikeways (see Table Streets-~~2~~1). Class I is the most exclusive for bicyclists (or non-motorized modes), and Class III is the least exclusive (bicyclists share the travel lane with motorized vehicles). In 1997, the State increased the minimum width for bike lanes from four feet to five feet; consequently, many bike lanes constructed in Humboldt County before 1997 do not meet current State width standards.

In Humboldt County most bikeways, of any class, are located in urbanized areas (excluding solely recreational trails). For example, there are several bike lanes and bike routes in Eureka, Arcata, and Fortuna, and in some urbanized unincorporated areas of the County. In District 1, bicyclists are allowed on all State highways, including freeways (*District System Management Plan*, 2012). However, most highways are not built to safely carry bicycle and motorized traffic in the same right-of-way.

The popular Hammond Coastal Trail is a multi-modal trail and the county's longest bike path by far. The Hiksari' Trail is 1.5-mile multi-use trial in the City of Eureka's Elk River Access Area. The Hiksari' Trail is a segment of the planned contiguous Eureka Waterfront Trail. Humboldt's most prominent bicycle touring route is the Pacific Coast Bike Route, which traverses the county north to south and is part of the California Coastal Trail. (Trails are discussed further in the Commuter Trail Element.)

Table *Streets-~~2~~1*. Bikeway Classifications

Bikeway Class*	Design Requirements*	Existing in Humboldt
Class I **"Bike Path" (or multi-use path or shared path)**	A separated, surfaced right-of-way designated exclusively for non-motorized use (can be solely for bicyclists, or can be shared with pedestrians and/or equestrians). The minimum width for each direction is 8 feet (1.5 meters), with a 5 feet (2.4 meter) minimum width for a bi-directional path.	• Hammond Coastal Trail in McKinleyville (from Clam Beach to the Mad River). • Eureka: Hiksari' Trail along the Elk River (Truesdale Avenue to Herrick/101 park-n-ride), Waterfront Boardwalk. • Arcata: 18th Street bridge-101 overpass.
Class II **"Bike Lane"**	Within the roadway, a lane for preferential bicycle use, at least 4 feet wide or 5 feet when next to a gutter or parking. Established by a white stripe (on roadway) and "Bike Lane" signs. Adjacent vehicle parking and motorist crossflow is allowed. On a two-way road, a bike lane is required on both sides.	• Exist in Cities of Arcata, Eureka, and Fortuna, and in unincorporated McKinleyville.
Class III **"Bike Route"**	A roadway that does not have a Class I or II bikeway, where bicyclists share a travel lane with motorists. Sometimes created to connect other bikeways. Can be established by a "Bike Route" sign, but not required.	• Designated Bike Routes exist in Cities of Arcata, Eureka, and Fortuna, and unincorporated areas of Old Arcata Road, McKinleyville, and Myrtletown. • Pacific Coast Bike Route begins on Hwy 101 at the California/ Oregon State line. In Humboldt County, it travels through Prairie Creek Redwoods State Park, Eureka City streets, and Highway 101.
Unclassified bikeway	Streets, roadways, and highways without features to qualify as Class I, II, or III.	All streets, roadways, and highways in Humboldt County are open to bicycle use.

*Bikeway classification definitions and design requirements from Caltrans' *Highway Design Manual*.

REGIONALLY SIGNIFICANT ROADWAYS

HCAOG has not independently defined criteria for determining which roadways are "regionally significant." HCAOG generally follows the federal definition which describes a regionally significant facility as one that serves regional transportation needs. "At a minimum, this includes all principal arterial highways and all fixed guideway transit facilities that offer a significant alternative to regional highway travel" (23 CFR 450.140). Regional transportation needs include access to and from:

- the area outside the region;
- major activity centers in the region;
- major planned developments (commercial, recreation, and employment); and
- transportation terminals.

Table *Streets-~~1~~2* lists regionally significant roadways identified by City and County staff.

Table *Streets-~~1~~2*. Regionally Significant Roadways

Jurisdiction	Paved Road Miles[1]	Regionally Significant Roadways
Arcata	68.5	11th Street, Bayside Road/Old Arcata Road, Foster Avenue/Sunset Avenue, Giuntoli Lane, Janes Road/Spear Avenue, K Street/Alliance Road, L K Wood Boulevard, West End Road, U.S. 101, State Route 255, State Route 299
Blue Lake	8.4	Greenwood Avenue, Hatchery Road, Railroad Avenue, State Route 299
Eureka	114.2	6th, 7th, and 14th Streets, Buhne Street, Campton Road, Fairway Drive, H Street, Harris Street, Harrison Avenue, Henderson Street (I to Broadway), I Street (Harris to Waterfront Drive), Myrtle Avenue, S Street, V Street, Wabash, West Avenue, Waterfront Drive, U.S. 101, State Route 255
Ferndale	7.4	Arlington Avenue, Bluff Street, Centerville Road, Fifth Avenue, Main Street, Ocean Avenue, Van Ness Avenue
Fortuna	45.2	Main Street, Rohnerville Road, U.S. 101
Rio Dell	14.2	Belleview Avenue, Blue Slide Road, Monument Road, Wildwood Avenue, U.S. 101
Trinidad	3.3	Edwards Street, Main Street, Patrick's Point Drive, Scenic Drive, Stagecoach Road, Trinity Street, Westhaven Drive, U.S. 101
Humboldt County	932.0	Alderpoint Road, Bald Hills Road, Bair Road, Blue Lake Boulevard/Glendale Drive, Blue Slide/Grizzly Bluff Road, Briceland-Thorne Road, Campton Road, Central Avenue (McKinleyville), Elk River Road, Fieldbrook Road, Freshwater/Kneeland Road, Humboldt Hill Road, Maple Creek Road, Mattole Road, Old Arcata Road/Myrtle Avenue, Redwood Drive (Garberville), Rohnerville Road, Shelter Cove Road, Sprowel Creek Road, Wilder Ridge Road, New Navy Base Road, Walnut Drive, Herrick Road, Murray Road, U.S. 101, State Routes 36, 96, 169, 255, and 299
Hoopa Valley Reservation	15.3	State Route 96
Karuk Tribe	1.0	

GOAL, OBJECTIVES, & POLICIES

HCAOG shall carry out transportation planning for the regional roadway system with this goal:

GOAL: Throughout Humboldt County, the streets, roads, and highway system meet the transportation and safety needs of all users, including pedestrians, transit users, bicyclists, motorists, the elderly, youth, and the disabled. The region's jurisdictions have the resources to preserve, enhance, and maintain the roadway network to support bicycle, bus, pedestrian, automobile, and truck travel.

OBJECTIVES: The policies listed in the Complete Streets Element will help meet the RTP's main objectives (listed in alphabetical order):

- Balanced Mode Share/Complete Streets
- Economic Vitality
- Efficient & Viable Transportation System (includes Preserving Assets)
- Environmental Stewardship
- Equitable & Sustainable Use of Resources
- Safety

The policies below are grouped according to the RTP's main objectives (chapter 1, Introduction, fully describes the six main objectives). The objectives support and work in tandem with one another. Thus, a policy can help meet more than one objective.

OBJECTIVE: BALANCED MODE SHARE/ COMPLETE STREETS

- *Maximize multi-modal access to the roadway system and eliminate barriers to non-motorized transportation.*
- *Expand and maintain a regional network of inter-connected pedestrian and bicycle facilities <u>for active transportation</u>.*

Policy CS-1 HCAOG shall encourage and facilitate local jurisdictions, local Native American Tribes, Caltrans, and non-profits to individually and collaboratively plan, install, and maintain roads in Humboldt County to build a coordinated and balanced transportation system. *(Also supports objectives: Efficient & Viable Transportation System, Economic Vitality)*

Policy CS-2 HCAOG recognizes the <u>planned</u> Humboldt Bay Trail <u>as a regional priority multi-use trail</u>, and supports multi-jurisdictional, public, and private efforts to develop it. *(Also supports objectives: Efficient & Viable Transportation System, Economic Vitality)*

Policy CS-3 HCAOG shall pursue grants <u>and public-private partnerships</u> to augment funding for <u>,</u> <u>infrastructure and non-infrastructure projects and planning for</u> pedestrian, bicycle, and transit facility improvements<u>. HCAOG shall identify and help secure the financial resources necessary to accommodate HCAOG's Complete Streets and active transportation policies adopted in the *Regional*</u>

Bicycle Plan, Regional Transportation Plan (VROOM), Regional Master Trails Plan, and *Regional Pedestrian Plan.* (*Also supports objective: Economic Vitality, Efficient & Viable Transportation System, Environmental Stewardship)*

Policy CS-4 HCAOG shall include Complete Streets improvements in regionally-funded transportation system projects to the extent feasible, as consistent with California Complete Streets Act of 2008 (AB 1358) and Caltrans Deputy Directive 64-R1. *(Also supports objectives: Economic Vitality, Environmental Stewardship, Equitable & Sustainable Use of Resources, Safety)*

OBJECTIVE: ECONOMIC VITALITY

Policy CS-5 HCAOG shall encourage and promote regional "complete streets" projects for the demonstrated economic benefits they bring to local businesses, markets, and property values.

OBJECTIVE: EFFICIENT & VIABLE TRANSPORTATION SYSTEM

- *Maintain the roadway system in a condition that maximizes resources and uses, and minimizes disruptions and costs.*

Policy CS-6 HCAOG shall pursue local options for developing a funding program to help maintain and preserve the regional roadway system. *(Also support objectives: Complete Streets/Balanced Mode Share, Equitable & Sustainable Use of Resources.)*

Policy CS-~~8~~7 HCAOG shall utilize the "Humboldt County Corridor Preservation Report" (HCAOG, May 2010) to guide strategies and decisions for protecting planned corridors. (*Also supports objectives: Economic Vitality, Equitable & Sustainable Use of Resources.)*

Policy CS-# HCAOG will accelerate programming for regional projects that retrofit existing roads to provide safe and convenient travel by all users.

Policy CS-# HCAOG supports a "fix it first" priority of protecting and preserving what we have first when allocating resources to roadways and other transportation assets.

Also applicable: **Bike Plan Policy 4.3** ~~**Policy CS-7**~~ HCAOG shall use the Bicycle Level of Service and Quality of Service (BLOS/BQOS) and the Bicycle Compatibility Index as tools for assessing bicycle facility needs and prioritizing projects. *(Also supports objectives: Complete Streets/Balanced Mode Share, Economic Vitality, Environmental Stewardship.)*

OBJECTIVE: ENVIRONMENTAL STEWARDSHIP

- *Promote "Complete Streets" policies and projects to reduce CO_2 emissions and the adverse environmental impacts of motorized transportation on land, sea, and air.*

Policy CS-9 HCAOG shall favor first projects that, by design and siting, will result in no significant adverse environmental impacts, and secondarily projects that result in no significant adverse impacts due to mitigation. *(Also supports objective: Equitable & Sustainable Use of Resources.)*

Policy CS-10 Carry out policies and program funding for projects that will help achieve the goals of California Assembly Bill 32: Global Warming Solutions Act. This shall include supporting efforts to reduce non-renewable consumption and air pollution, such as projects that increase access to alternative transportation and renewable fuels, reduce congestion, reduce single-occupancy (motorized) vehicle trips, and shorten vehicle trip length. *(Also supports objectives: Complete Streets/Balanced Mode Share, Economic Vitality, Equitable & Sustainable Use of Resources, Safety)*

OBJECTIVE: EQUITABLE & SUSTAINABLE USE OF RESOURCES

Policy CS-11 HCAOG shall promote equity, cost effectiveness, and modal balance in programming and allocating funds to regionally significant roadway and trail projects. *(Also supports objectives: Complete Streets/Balanced Mode Share, Economic Vitality, Efficient & Viable Transportation System.)*

Policy CS-X HCAOG shall pursue efforts to increase shared mobility options in the region such as car share and bike share programs. HCAOG shall work to make shared mobility programs equitably available to people with low-incomes and other transportation disadvantages. *(Also supports objectives: Complete Streets/Balanced Mode Share, Efficient & Viable Transportation System.)*

OBJECTIVE: SAFETY

- *Improve overall safety for motorists, bicyclists, pedestrians, and transit users on all county, city, and state highways and streets.*

Policy CS-12 To advance Safe Routes to School and Safe Routes to Transit initiatives, HCAOG shall support jurisdictions to establish and maintain safe pedestrian paths and designated bikeways (Class I, II, or III) within one mile of all public schools and public transit connections. *(Also supports objective: Complete Streets/Balanced Mode Share)*

Policy CS-# HCAOG supports roadway design standards that increase bicyclist and pedestrian safety and will work with local jurisdictions to help implement innovative designs and engineering projects that have been shown to improve bicyclist and pedestrian safety.

NEEDS ASSESSMENT

ROADS NEEDS ASSESSMENT

To assess how a roadway is performing, key factors are safety, capacity, physical condition, and direct and indirect environmental impacts. How a roadway performs will tell what its needs are. And the combined needs will tell how the broader roadway system is functioning.

- *Safety* – The roadway system must not subject people (or property) to hazardous conditions that risk their safety.
- *Capacity* – The roadway system's capacity must be able to safely and functionally accommodate population growth and increased vehicle volumes.
- *Environmental impacts* – Transportation planning must address greenhouse gas emissions and the fuel and energy consumed for building, using, and maintaining roadways and other infrastructure for motorized transportation. Impacts to land, water, and air resources must be assessed.
- *Maintenance & rehabilitation backlog* –Humboldt County's pavement condition index (100-point weighted average) rated 56 for 2010, and 64 for 2012. Roads rated between 50 and 70 are considered "at risk" (per "California Statewide Local Streets and Roads Needs Assessment," January 2013).

Throughout California, counties are having trouble keeping up with the costs of consistently maintaining and rehabilitating their roadways. The system suffers from "chronic *road maintenance* funding shortfalls." The challenge is greater in rural counties because their low population densities mean there are more miles of roadway with less people to pay for them. Rural areas generate fewer funds per road mile. Like other California counties, Humboldt has had a backlog of road maintenance needs for decades. The current backlog, estimated as of ~~August, 2013,~~ is over $217 million to be updated (see Table *Streets-~~4~~3*).

Table *Streets-~~4~~3*. Roadway Maintenance & Rehabilitation Backlog (August, 2013) to be updated

Location	Maintenance Backlog ($ million)	Rehabilitation Backlog ($ million)	Total ($ million)
Arcata	12.95	9.82	22.77
Blue Lake	3.50	8.00	11.50
Eureka	1.40	14.70	16.1
Ferndale	3.30	0	3.30
Fortuna	1.50	4.00	5.50
Rio Dell	1.30	4.20	5.50
Trinidad	0.12	0.44	0.56
County of Humboldt	--	--	150.00
Karuk Tribe (roads within Humboldt County)	0.88	0.93	1.81
		TOTAL	217.04

LEVEL OF SERVICE (LOS)

It is standard practice for transportation planning agencies and departments in the U.S. to assess exiting and project future road traffic conditions using the "level of service" (LOS) concept, which forecasts how congested or free-flowing a traffic lane or intersection will be during peak traffic

hours. The LOS is represented by a "grade" from A to F. LOS A generally indicates no traffic congestion, and F indicates ~~the worst~~ heavy congestion. The LOS concept has been primarily applied to driving conditions, but with more attention paid recently to multi-modal travel, people have been devising bicycle LOS and pedestrian LOS models as well, as discussed below. ~~HCAOG prioritizes bicycle and road projects, in part, by rating the LOS of current and proposed bicycle and road facilities. Bicycle LOS modeling has components that can apply to pedestrian facilities, too. For example, a pedestrian LOS can help judge how pedestrians perceive hazards/safety at an intersection. A pedestrian LOS could be used to prioritize projects, too.~~

~~To apply the LOS concept, we collect traffic data for a roadway segment or an intersection (usually during peak traffic hours); the results determine an LOS "grade" from A to F. Generally, LOS A indicates no traffic congestion, and F indicates the worst congestion. The middle grade, LOS C, indicates that traffic flows during peak hours. For example, most drivers would have to wait only one signal cycle before proceeding through signalized intersections.~~ In project planning, LOS has been used as a threshold for traffic impacts. Many jurisdictions nationwide, including in Humboldt County, have policies making LOS C the lowest acceptable grade, and/or LOS D under certain circumstances. Projects that would cause traffic conditions to fall below the established minimum LOS grade are then deemed a significant impact. However, a new law regarding the California Environmental Quality Act (CEQA), has mandated an alternative approach.

Senate Bill 743 (Steinberg, 2013) intends to reduce GHG emissions by removing barriers to infill development, and projects that increase walking and biking and public transportation infrastructure and facilities. Amended CEQA Guidelines, as proposed, recommend replacing LOS and using vehicle miles traveled (VMT) as the most appropriate measure of project transportation impacts.[3] Transportation impacts may also be measured by automobile trip generated. Once the amended CEQA Guidelines are adopted to include those alternative criteria, auto delay will no longer be considered a significant impact under CEQA. The amended Guidelines also advise that projects for roadway rehabilitation, transit, bicycle and pedestrian infrastructure, or that propose development near transit, should be considered to have a less than significant transportation impact." (proposed new Public Resources Code §15064.3 (CEQA Statute)). Public agencies may opt to use the VMT analysis now, but will have up to two years to transition to the new rules. The amended regulations are anticipated to be effective statewide in 2019.

BICYCLE & PEDESTRIAN NEEDS ASSESSMENT

To completely integrate pedestrian and bicycle modes into the transportation system, HCAOG must help meet the principal needs of existing pedestrian and bicycle facilities:

[3] "Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA," Governor's Office of Planning and Research, State of California. January 20, 2016.

- Access & Choice – While commuting by foot or by bicycle is a choice for some, many others use these modes out of necessity. Children, high school and college students, seniors, and people with low incomes often do not have access to other transportation modes. The streets and roadway network must meet minimum ADA standards to be accessible to wheelchair users, vision-impaired and other pedestrians.

- Connectivity & Links – Pedestrians and bicyclists frequently utilize roads in Humboldt County that lack sidewalks and/or bicycle lanes or bike routes. A number of communities are bisected by busy state routes, or county roads with no (or limited) crossing facilities.

- Safety – The *Humboldt County Pedestrian Needs Assessment Study* (HCAOG, 2003) concluded that better pedestrian access and improved safety conditions are required to ensure that our communities are walkable, safe, vibrant places to live. Improved safety also hinges on better rider/driver education, awareness, and road etiquette.

- Maintenance/Upkeep – When roads lack timely maintenance, deteriorated conditions such as potholes and debris can pose safety concerns for bicyclists and other users.

Bicycle and pedestrian needs were assessed, in part, from information in the *Humboldt Regional Bicycle Plan* (HCAOG, ~~2012~~2017) and the *Humboldt County Pedestrian Needs Assessment Study* (HCAOG, 2003).

Network and Gap Analysis

FHWA defines networks as interconnected pedestrian and bicyclist transportation facilities that allow people of all ages and abilities to safely and conveniently get where they want to go. The following network principles can be used to evaluate the condition of a network and the value added by proposed projects:

- **Cohesion:** How connected and linked together is the network?
- **Directness:** Does the network provide access to destinations along a convenient path?
- **Alternatives:** Is only one transportation option available or does the network enable a range of mode and/or route choices?
- **Safety and Security:** Does the network provide real and/or perceived freedom from risk of injury, danger, or loss of property?
- **Comfort:** Is the network appealing to a broad range of age and ability levels and is consideration given to user amenities?

– Statewide Pedestrian and Bicycle Planning Handbook, FHWA

Bicycle Level of Service Modeling

Bicycle level of service (BLOS) modeling helps predict ~~what conditions a~~how a given bicycle facility ~~does or~~ will ~~offer~~ function for cyclists., ~~such as~~ For example, the BLOS will estimate the ~~average flow rate,~~ speed~~,~~ and density a cyclist would experience ~~in a given~~ while riding in an existing or proposed bike lane. The bicycle LOS can be expressed on a scale of A to F. For a full discussion of Bicycle LOS, refer to the *Humboldt Regional Bicycle Plan* (2012) (available at www.hcaog.net/projects).

Bicycle LOS modeling can also help predict how cyclists perceive the safety or hazard level of a facility. Generally, cyclists feel safer riding where there is more room and less traffic. Perceived hazards include proximity to motor vehicles, deteriorated pavement, roadway debris, high speeds, and intersections without traffic controls (e.g. stop signs). Bicycle LOS can evaluate these conditions. Other factors of perceived safety/hazards are the cyclist's skill level and riding experience, which LOS does not measure.

Generally, cyclists choose their routes, or whether to ride at all, based on how they perceive hazardous conditions (for some local perspectives, see *Humboldt Bay Area Bicycle Use Study*, RCAA

1999). Therefore, one strategy for increasing bicycle ridership is to prioritize projects that will eliminate or minimize perceived hazards to bicyclists.

~~Community members who participated in Humboldt County's *General Plan Update Health Impact Assessment* identified the following needs for bicycle and pedestrian~~ To be updated after public input

ACTION PLAN: PROPOSED PROJECTS

Table *Streets ~~5~~4*, below, shows the top priority short-term (0-10 years) and long-term (11-20 years) roadway improvements for Humboldt County's regional "complete streets" system. Members of HCAOG's Technical Advisory Committee (TAC) prioritized all projects based on the RTP's main objectives. Projects that will meet the most objectives are the top priorities.
The full list of regional complete streets projects is in Table Streets ~~6~~5 in Appendix 1.

For a more detailed, comprehensive description of each jurisdiction's bikeway facility improvements (constrained and unconstrained), refer to the *Humboldt Regional Bicycle Plan* (HCAOG 201~~2~~7), and the respective bikeway master plans for the City of Arcata, City of Eureka, and County of Humboldt.[4] ~~The pedestrian facility improvements for each of the jurisdictions are based on the *Humboldt County Pedestrian Needs Assessment Study* (HCAOG, 2003).~~

[4] Available at the HCAOG office and online at www.hcaog.net. To view a city's bike plan, contact its Public Works Department.

Table *Streets-5*4 Complete Streets Projects –Short-Term & Long-Term

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
***Agency: CITY OF ARCATA** [updated 12/2016]*											
Old Arcata Road Buttermilk to Jacoby Creek Rd	ST	X	X	X	X	X	X	Rehab, ped-bike and calming improvements, gateway at Jacoby Creek Road	Measure G	~~2014-16~~ 2016-2020	~~$950~~ $1,800
Residential streets citywide	ST				X	X	X	Annual residential streets improvement program (see City's PMP)	Measure G	2014-24	$2,500
Valley East and Valley West improvement project COMPLETED IN 2014	~~ST~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Roadway rehab with improvements for bike, ped transit, landscaping and gateway~~	~~Not funded Measure G match~~	~~2016~~	~~$1,000~~
Foster Ave Extension COMPLETED IN 2016		~~X~~		~~X~~	~~X~~	~~X~~		~~Connect two north-south arterials (Alliance with 101-G-H corridor), Class I and II~~	~~Measure G~~		~~290,000 (not incl. acquisition costs)~~
Hwy 255 at Hwy 101 – Roundabouts	ST	X	X	X	X		X	Convert cloverleaf intersection to 2 roundabouts, ped-bike access across bridge (non-existent), add transit park-and-ride, remove 1 mile paved roadway (mitigation)	Not funded	2018-20	$~~2,000~~3,000
Hwy 101 at Sunset and L.K Wood Blvd – Roundabout	ST	X			X	X	X	Convert 5-way intersection to roundabout and create safer segregated bike/ped facilities	Not funded City match	2018-20	$~~650~~1,000
Guintoli Lane-Hwy 299 intersections, Valley West and Valley East to West End Rd	ST	X	X			X	X	Rehab, restripe and improve LOS (roundabouts or channelization). Potential bus park-and-ride at Wymore Road	Measure G, apply for grant funds*	2018-22	$2,200
Annual Roadway Improvements Project (based on city pavement management program)	ST			X	X	X	X	Principally on city bus routes; arterial and collectors (refer to City PMP)	Measure G, apply for grant funds*	2014-24	$8,000
Humboldt Bay Trail–North	ST	X	X	X				Rail with Trail Class I multi-use path, Samoa Blvd to Bracut Marsh		2014-2017	4,800
								**Assumes 50% Measure G match + 50% grant funds*		*Arcata ST Subtotal*	~~***17,300***~~
										Arcata LT Subtotal	~~***N/A***~~

[1] Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years. [2] Assume 3% annual inflation.

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
Agency: CITY OF BLUE LAKE *[updated 1/23/17]*											
South Railroad Ave from Chartin Way to Broderick Ln	ST	X	X	X		X	X	Repave and add pedestrian improvements "Annie and Mary" Trail, rehab and reconstruction	Not funded	2018/19	$2,000
Railroad Ave from Greenwood Ave to Hatchery Road	ST	X	X			X	X	Overlay and pedestrian improvements, rehab and reconstruction	STIP	2017/18	$155
Greenwood Rd/Railroad Ave/Hatchery Rd, from Blue Lake Blvd to Mad River Bridge	ST	X	X			X	X	Overlay and pedestrian improvements, rehab and reconstruction	Not funded	~~2016/17~~ 2019/2020	$3,000
Hartman Lane/G Street, from Blue Lake Blvd. to Railroad Ave	ST	X	X			X	X	Rehab and reconstruct with ped improvements	Not funded	2020/21	$1,400
I Street, from Blue Lake Blvd to First Ave	LT	X	X			X	X	Rehab and reconstruct with ped improvements	Not funded	2023/24	$1,200
Annie and Mary Trail, from Chartin Road to City Limits	LT	X	X	X			X	Rail/Trail	Not funded	2023/24	$1,500
First Ave from Greenwood Ave to I Street.	LT							Rehabilitation and reconstruction with pedestrian improvements	Not funded	2024/25	$1,500
										Blue Lake ST Subtotal	**$6,555**
										Blue Lake LT Subtotal	**$4,200**
Agency: CITY OF EUREKA *[updated 2/15/17]*											
Harrison Ave from Harris St to Myrtle Ave	ST	X	X	X	X	X	X	TWLTL, Bike lanes, bus pullouts	Not funded	2023/24	$2,000
Harris St from H St to J St	LT		X		X	X	X	Signalization and signalization modifications	Not funded	2023/24	$700
Henderson St from I St to Fairfield St	LT	X	X	X	X	X	X	Road rehabilitation, ADA, bike lanes, bus pullouts, storm drains	Not funded	2018/19	~~$500~~ $750
Myrtle Ave from 5th St to Harrison Ave	LT	X	X	X	X	X	X	Congestion relief, ADA, bike facility	Not funded	2023/2024	$500
South Gateway of Eureka	ST		X	X			X	Beautification, bike and ped facilities traffic calming	Not funded	2020/21	$1,688
Waterfront Drive from G St to J St	ST	X	X		X		X	Connection Phase 2	Partially funded: STIP & Non-Freeway Funds	2018~~7~~/19~~8~~	$4,059
~~Eureka~~ Waterfront Trail from Del Norte to Truesdale St (Phase A)	ST		X	X			X	Class I multi-use trail	Non-Freeway Funds (ENFY)	~~2015/16~~ 2016/17	$1,450

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
City of Eureka (cont'd)											
Waterfront Trail from Del Norte to C St (Phase B) and Adorni Trail to Tydd Street (Phase C)	ST		X	X			X	Class I multi-use trail	ATP, Rec Trails Prog., Coastal Conserv., ENFY	2016~~5~~/17~~6~~	$4.610 ~~100~~
Hawthorn St from Broadway to Felt, Felt St from Hawthorn to Del Norte, and 14th St from Broadway to West Ave	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	Not funded	2018/19	$1,175
Highland Ave from Broadway to Utah St and Koster St from Del Norte to Washington St	ST		X			X	X	Road rehabilitation, ADA	Not funded	2019/20	$700
3rd St from L St to R St and Glen St from Harris St to Allard St	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	Not funded	2020/21	$400
6th and 7th Streets from ~~I St to~~ Myrtle Ave~~, and 7th St from~~ to Broadway ~~to J St~~	ST	X	X	X	X	X	X	Road rehabilitation, ADA, bike lanes, bus pullouts	Not funded	2020/21	~~$500~~ $1,200
Fairway Dr from City limits to Ridgecrest Drive; Campton Road from City limits to Oak St	ST	X	X			X	X	Road rehabilitation, ADA, bicycle facility	Not funded	2018/19	$1,000
H & I Street Corridors	ST	X	X	X	X	X	X	Road rehab, ADA, bicycle facility and bus pullouts	Planning Study funded ($110,000): Sustainable Comm Grant	2019/20	$2,110
Citywide	LT				X	X	X	Improve transit stop pullouts	Not funded	2024/25	$500
Walnut Dr at Hemlock St	LT				X	X	X	Traffic signalization	Not funded	2023/24	$300
Citywide	LT			X	X	X	X	Bicycle facilities per Humboldt Regional Bicycle Plan 2012	Not funded	2023/24	$3,239
~~6th, 7th, and Henderson Streets~~Citywide	LT		X	X		X	X	Pedestrian improvements per Humboldt Regional Pedestrian Plan 2008, and other reports	Not funded	2023/24	$1,000
										Eureka ST Subtotal	~~$11,497~~**$16,234**
										Eureka LT Subtotal *Total = $23,232*	~~$ 5,904~~**$6,989**

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
Agency: CITY OF FERNDALE											
Rose Ave/Herbert St – East City limits to Main St	ST	X					X	Class II bike path	Not funded	2019	$24
5th St – Van Ness Ave to Ocean	ST	X					X	Class II bike path	Not funded	2019	$15
Arlington Ave - 5th St to Main St	ST	X					X	Class II bike path	Not funded	2019	$20
Ocean Ave - West City limits to East City limits	ST	X					X	Class II bike path	Not funded	2019	$22
Wildcat Rd - Ocean Ave to south City limits	ST	X					X	Class III bike path	Not funded	2017	$1
Main St - Ocean Ave to north City limits	ST	X					X	Class III bike path	Not funded	2017	$38
Van Ness Ave - 5th St to Main St	ST	X					X	Class III bike path	Not funded	2017	$1
Shaw Ave - Ocean Ave to Berding	ST	X					X	Class III bike path	Not funded	2017	$37
Ocean Ave - Strawberry Ln heading east towards trailhead	ST	X	X				X	Multipurpose trail (Class 1 bike path)	Not funded	2018	$36
5th St - Van Ness to Ocean Ave	ST	X	X				X	Multipurpose trail (Class 1 bike path)	Not funded	2018	$174
Lincoln St - Grant Ave to East City limits	ST	X	X				X	Multipurpose trail (Class 1 bike path)	Not funded	2018	$12
Ocean Ave - Craig St to Russ Park trailhead	ST	X	X				X	New sidewalk	Not funded	2016	$98
5th St - Arlington Ave to Fairview North and piece on Arlington Ave	ST	X	X				X	Curb and gutter and new sidewalk	Not funded	2015	$54
Berding St-Rose Ave to Lewis St	ST	X	X				X	New sidewalk (Ped 2)	STIP/TE	2013	$50
Rose Ave - Berding to Herbert St	ST	X	X				X	New sidewalk (Ped 2)	STIP/TE	2013	$147
Main St - North City limits to Arlington Ave; citywide	ST	X	X				X	Misc. ADA improvements	Not funded	2015	$150
Main St - Arlington Ave to Ocean Ave (Caltrans)	ST	X	X				X	Misc. ADA improvements		2014	$600
Francis St - Ocean Ave to Ferndale Public Works Bldg	ST	X	X			X		Roadway rehabilitation	Not funded	2016	$80
Berding St - Herbert St to Eugene	ST	X	X			X		Roadway rehabilitation	Not funded	2015	$1,400
Deferred Maintenance	LT					X		Misc. roadway maintenance	Not funded		$3,291
										Ferndale ST Subtotal	***$2,959***
										Ferndale LT Subtotal	***$3,291***

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
Agency: CITY OF FORTUNA *[updated 12/2016]*											
Ross Hill Road, Kenmar to School St	ST	X	X	X	X		X	Pedestrian and bike safety improvements	~~Not funded~~ ATP/SR2S	~~2015/16~~ 2016/2017	$800
~~Rohnerville Road, Redwood Way to Jordan St~~	~~ST~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Reconstruct w/sidewalk and bike lanes – COMPLETED 12/2016~~	~~STIP~~	~~2014/15~~	~~$1,041~~
Rohnerville Road, Newell St. to Redwood Way	STLT	X	X	X	X	X	X	Reconstruct w/ sidewalk and bike lanes	Not funded	~~2018/19~~ 2022/2023	$3000$4,500
Fortuna Boulevard, Redwood Way to Kenmar Road	ST	X	X	X	X	X	X	Overlay w/ bike lane improvements	Not funded	~~2017/18~~ 2021/2022	$2,000
Redwood Way, Fortuna Blvd to Rohnerville Road	ST	X	X	X	X	X	X	Overlay w/ pedestrian and bike lane improvements	Not funded	2017/18	~~$1,000~~$1,500
~~12th Street-Riverwalk Drive/US 101 South~~	~~LT~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~Reconfigure intersection to accommodate increased traffic, ped~~	~~Not funded~~		~~$1,500~~
~~Newburg Road and 12th Street/NB 101 ramps realignment~~	~~LT~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~Reconfigure intersection to accommodate increased traffic, ped~~	~~Not funded~~		~~$1,500~~
U.S. 101/12th Street Northern Interchange Improvements Onramps, Dinsmore Drive	LT	X	X	X	X		X	Reconfigure Interchange to Include Roundabout and Bike/Pedestrian Facilities	Not funded	2022/2023	$14,000
U.S. 101/Riverwalk Drive Southern Interchange	LT	X	X	X	X		X	Reconfigure interchange to include roundabout and bike/pedestrian facilities mand.	Not funded	2022/2023	$12,000
U.S. 101/Kenmar Road Interchange Improvements	LT	X	X	X	X			Reconfigure interchange to add two roundabouts and bike/pedestrian facilities	Not funded	2022/2023	$6,500
South Fortuna Boulevard/Ross Hill Road/Kenmar Road	LT	X	X	X	X			Pedestrian improvements including adding sidewalk, bike lane and retaining wall	Not Funded	2024/2025	$600
Thelma and Ross Hill Road	LT	X	X	X	X			Install Roundabout	Not Funded	2025/2026	$660
Newburg Road, Lawndale Drive, Summer Street, 2nd Ave, Orchard Lane	ST							New sidewalk, bike lanes and school entry improvements	ATP/SR2S	2017/2018	$900
Various Locations – Riverwalk Drive, Fortuna Boulevard, Rohnerville Road	LT							Strongs Creek Trail Phase 1 – Class I bike lane through Fortuna and Class II bike lanes on City streets	Not Funded	2026/2027	$4,600
										Fortuna ST Subtotal	***~~$7,841~~$5,200***
										Fortuna LT Subtotal	***~~3,000~~$42,800***

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
Agency: CITY OF RIO DELL											
Wildwood Avenue from Eagle Prairie Bridge to Davis St	ST	X	X	X		X	X	Transportation enhancement project adding raised center median and striped bike lanes to increase safety	State Transp. Enhancement	2013	$589
Wildwood Avenue at Center Street and Davis Street Safe Routes to School	ST	X	X	X				Traffic calming on Davis Street, including curb extensions, crosswalks and sidewalks. Lighted Pedestrian Crossing across Wildwood Avenue	State Safe Routes to Schools	2013/14	$152
Wildwood Avenue, Elko St to Belleview Ave	ST	X	X		X	X	X	Class III bike lanes including striping and signage	Not funded	2013/14	$35
Rigby Ave, Davis St to Center St	ST	X	X	X			X	Maintenance Paving and Bike Improvements, Class II bike lane, centerline stripe	Not funded	2013/14	$104
Wildwood Avenue at intersection with Hwy 101 off- ramp	ST		X	X		X	X	Re-alignment of southbound off-ramp and pavement replacement between Caltrans paving project and City of Rio Dell project on Wildwood Ave	Not funded	2014/15	$135
Davis Street, Between Wildwood Ave. and Rigby Ave.	ST	X	X				X	Pedestrian/Bike Improvements, narrow crossing distance at Hwy 101 on-ramp. Class II bike lanes from Rigby Ave. to Ireland St. Class III bikes lanes from Ireland St. to Wildwood Ave	Not funded	2014/15	$53
1st Avenue and 2nd Avenue, from Elko St. to Columbus St.	ST		X					Signage and striping to accommodate emergency response vehicles	Not funded	2014/15	$44
Belleview Avenue, Wildwood Ave to River Street	ST	X	X				X	Class II bike lanes, signage and centerline striping	Not funded	2014/15	$69
2nd Ave., Davis St. to Columbus St.	ST		X	X				Maintenance paving project including 2" overlay and striping	Not funded	2014/15	$106
Ogle Avenue, River Street to Creek Street	ST	X	X	X	X		X	Road reconstruction and drainage improvements	Not funded	2015/16	$3,303
Monument Road, Dinsmore Ranch Rd to Redwood Lane	ST				X		X	Drainage improvements including new inlets, valley gutter, ditch and storm piping	Not funded	2016/17	$149
Riverside Dr., Eagle Prairie Rd. to Fern St.	ST		X	X				Maintenance paving project including 2" overlay and striping	Not funded	2016/17	$156
Northwestern Ave, east entrance to Eel River Industries to cul-de-sac at Humboldt Co right-of-way	ST	X	X		X	X		Centerline and edge striping, centerline monument	Not funded	2017/18	$55
Ireland Ave., Davis St. to Painter St. and Dixie St., 4th Ave. to Davis	ST	X	X	X	X		X	Maintenance paving project, including 2" overlay and striping, including bikeway signage	Not funded	2017/18	$19

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
City of Rio Dell (cont'd)											
Monument Road at Dinsmore Ranch Road	ST		X	X	X			Replacement of a failing timber post retaining wall	Not funded	2019/20	$234
Belleview Avenue, Spring Street to 300 ft east and 750 ft east of Creek Street to 100 ft west of Creek St	ST		X	X				Maintenance paving project, including 2" overlay and striping.	Not funded	2019/20	$112
Elm St., Pacific to Wildwood Ave. Orchard Pl., Cherry Ln. to Orchard St. Cedar St., Pacific Ave. to Wildwood Ave. View St., Douglas St. to Kelly St	ST			X				Maintenance paving project, including 2" overlay and striping.	Not funded	2019/20	$109
W. Painter St, Pacific Ave to 50' west of Rio Dell Ave. Butcher St., Pacific Ave. to Rio Dell Ave. Rio Dell Ave., W. Center St. to Townsend St. W. Townsend St., Rio Dell Ave. to Pacific Ave	ST			X				Maintenance paving project, including 2" overlay and striping	Not funded	2019/20	$95
Davis Street, Gunnerson Lane to Edwards Drive and Edwards Drive from Water Treatment Plant to Davis St	ST	X	X	X		X		Sidewalk, Class III bikeway and Class I Bike and Pedestrian path along Eel River gravel bar, including two trailheads.	Not funded	2021/22	$246
Scenic Way at Eeloa Ave	ST	X	X	X	X		X	Intersection Reconfiguration to improve pedestrian and bicyclist safety	Not funded	2023/24	$572
Eel River bar, Davis Street to Eeloa Ave	LT	X				X	X	Class I bike and pedestrian path along Eel River bar, including two trailheads	Not funded	2025/26	$947
Railroad ROW, Eagle Prairie Bridge to Northwestern Avenue	LT	X		X		X	X	Class I bike and pedestrian path next to railroad tracks	Not funded	2027/28	$2,394
									Rio Dell ST Subtotal		***$6,337***
									Rio Dell LT Subtotal		***$3,341***

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
Agency: CITY OF TRINIDAD *[updated 2/15/17]*											
Van Wycke Street Trail	ST	X	X	X	X		X	~~Reconstruction, Lights~~Class I, II, & III bike, walkways, signage and striping	~~Not funded~~ATP	~~2016/17~~2018/19	$~~372~~714
Trinity Street	ST	X	X	X			X	Sidewalks, driveways & curb ramps	Not funded	20~~18/19~~22/23	$~~377~~438
Patrick's Point Dr./Scenic Drive	ST	X	X	X			X	Sidewalks, driveways & curb Ramps	Not funded	20~~20/21~~24/25	$~~191~~235
Patrick's Point Drive	ST		X			X		Overlay/maintenance paving	Not funded	20~~21/22~~25/26	$~~127~~161
Main St, Trinity St, Westhaven Dr	LT		X			X		Overlay/ maintenance paving	Not funded	20~~22/23~~26/27	$~~561~~732
Edwards Street	LT		X			X		Overlay/ maintenance paving	Not funded	20~~24/25~~28/29	$~~415~~575
Frontage Road	LT					X		Overlay/ maintenance paving	Not funded	20~~26/27~~30/31	$~~323~~475
Parker Creek Drive	LT					X		Reconstruction	Not funded	20~~27/28~~31/32	$~~159~~241
Edwards Street to Ewing Street	LT	X	X	X			X	Sidewalks, driveways & curb Ramps	Not funded	20~~28/29~~32/33	$~~514~~801
										Trinidad ST Subtotal	***$~~1,067~~1,548***
										Trinidad LT Subtotal	***$~~1,972~~7,044***
Agency: COUNTY OF HUMBOLDT											
Myrtle, Lucas, Harris, Eureka	ST	X		X	X		X	Sidewalk infilling	STIP	2014	$580
Myrtle Avenue, Freshwater	ST	X		X	X		X	Bicycle lane improvements – Pigeon Point to Mitchell	BTA	2013	$200
Central Avenue, McKinleyville	ST	X			X		X	Central Avenue median installation – School to Hiller	HSIP	2014	$700
Walnut & Fern Street, Cutten	ST	X		X	X		X	Traffic signal installation	STIP	2015	$400
Honeydew Bridge	ST	X	X	X	X	X	X	Replace existing bridge	HBP	2014	$6,200
Redway	ST	X		X	X		X	Pedestrian safety improvements	TE	2013	$450
School Road – Salmon to Fischer, McKinleyville	ST	X		X	X		X	Sidewalks	TE	2013	$650
School Road – Washington to Salmon, McKinleyville	ST	X	X	X	X	X	X	Sidewalks & bike lanes w/ roundabout	Prop 1B & Developer	2013	$1,400
Briceland Thorne Road	ST				X		X	Curve correction	HRRR	2013	$800
Oak & F Street, Eureka	ST	X		X	X		X	Sidewalks, speed table crosswalk, center median haven	SR2S	2013	$350
Murray Road, McKinleyville	ST	X		X			X	Sidewalks, bulbouts, center median haven	SR2S	2013	$100
Union Street	ST	X	X	X	X	X	X	Shoulder widening & geometric improvements	STIP	2013/14	$2,881
Central Avenue	ST	X		X	X	X	X	Shoulder widening & overlay	Not funded	TBD	$900
Harris & Hall	ST	X			X		X	Safety improvements	Not funded	TBD	$500

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
County of Humboldt (cont'd)											
Herrick & Elk River Intersection	LT	X	X	X	X	X	X	Signalize	Not funded	TBD	$900
Fairfield, Meyer, Eureka	LT	X	X	X	X	X	X	Route improvement	Not funded	TBD	$1,000
McKinleyville Avenue Extension	ST	X	X	X	X		X	Connect to School Road	Not funded	TBD	$500
Bald Hills Road	LT		X	X	X			Pave Surface	Not funded	TBD	$6,000
New Navy Base Road	LT	X	X	X	X	X	X	Reconstruct from SR 255 to Bay	Not funded	TBD	$1,500
Myrtle Ave. at Freshwater Road	ST	X		X	X		X	Traffic Circle	Not funded	TBD	$900
Central Avenue, McKinleyville	ST	X		X	X		X	Shoulder widening	Not funded	TBD	$800
Central Avenue, McKinleyville	ST		X	X	X		X	Synchronize Traffic Signals	Not funded	TBD	$800
Hammond Trail Bridge–Mad River	ST	X		X	X	X	X	Replace existing bridge	Not funded	TBD	$3,200
Glendale Drive, Blue Lake	ST	X		X	X		X	Construct Class I Trail	Not funded	TBD	$2,000
Humboldt Hill to Thompkins Hill	LT	X	X	X	X		X	Connector Road	Not funded	TBD	$2,000
Harris to Fern Street, Cutten	LT	X	X	X	X		X	Connector Road	Not funded	TBD	$2,000
Alderpoint/Mattole/Maple Creek	LT		X	X	X	X	X	Reconstruct rural routes	Not funded	TBD	$100,000
Bell Springs Road	LT		X	X	X	X	X	Improve with Mendocino County	Not funded	TBD	$10,000
Briceland/Shelter Cove Roads	LT		X	X	X	X	X	Reconstruction/Safety Improve	Not funded	TBD	$10,000
Fern Street, Cutten	LT	X	X	X	X		X	Complete Connection	Not funded	TBD	$1,000
Red Cap Road, Orleans COMPLETED in 2016	~~ST~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~Shoulder Widening~~	~~Not funded~~	~~TBD~~	~~$1,200~~
Garberville	ST	X	X		X	X	X	Context Sensitive Modifications	Not funded	TBD	$1,500
Hoopa Downtown Corridor Project	ST	X			X	X	X	Context Sensitive Modifications (County portion only)	Not funded	TBD	$250
Manila Bike Path, west of Hwy 255 from Dean St/Pacific Ave intersection to Carlson Ave inter.	ST	X			X	X	X	Class I multi-use path, intersection ped and bike improvements, new street lighting	ATP	2017/18-2018/19	$300
Humboldt Bay Trail–South	LT	X	X	X	X			Rail with Trail Class I multi-use path, Bayside Cutoff (Bracut Marsh) to Eureka Waterfront Trail	Not funded	TBD	$10,500 to 14,000 (2016 $s)
Little River Trail, Hammond Trail/Clam Beach to Scenic Drive	LT							Class I, II, and III (0.3 miles). *(Interagency coordination with City of Trinidad)*	Not funded	2027/28	1,800 (2017 $s) [est $2,420 in 2027]
									Humboldt County ST Subtotal		***$~~27,161~~***
									Humboldt County LT Subtotal		***$~~134,400~~***

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
Agency: HOOPA VALLEY TRIBAL ROADS DEPARTMENT											
SR 96	ST	X	X		X		X	Downtown traffic calming & safety enhancements	Partially funded	2013-16	$4,400
SR 96	ST					X	X	Reservation-wide safety enhancements; SR2S & pedestrian walkways	Not funded	2014-20	$12,500
SR96, Trinity River Bridge	ST	X	X				X	Safety enhancement; cantilevered walkway	Not funded	2015-25	$12,500
Bair Ranch Road, Humboldt County Road	ST				X	X		Reconstruction of roadway for emergency access	Not funded	2015-20	$750
On SR96 at Blue Slide	LT		X		X	X		New bridge crossing the Trinity River to K'ima:w Medical Center	Not funded	2020-35	$45,000
Tish Tang Road from SR 96 to Medical Center & Hoopa Airport	LT		X		X	X	X	Reconstruct Tish-tang(county road)	Not funded	2020-35	$6,500
										Hoopa ST Subtotal	***$30,150***
										Hoopa LT Subtotal	***$51,500***
Agency: KARUK TRIBE											
~~Karuk Tribe/County: Red Cap Road, Orleans – *see under County of Humboldt projects.*~~ COMPLETED in 2016											
Karuk Tribe/Caltrans: SR 96, Orleans	LT	X	X		X	X	X	Streetscapes/Dip Improvement Project: roadway rehab, ped-bike- transit improvements, landscaping	FHWA TTP Safety funds	2016-20	$1,100
Karuk Tribe/Caltrans: Tishawniik Hill, Camp Creek Road to Asip Road	LT	X	X	X	X	X	X	Class I trail (detour project) and Class II bikeway	FHWA TTP Safety funds	2021/22	$1,400
										Karuk Tribe LT Subtotal	***$2,500***
Agency: CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 1 (updated 2/2017)											
101 Corridor Improvement Project	ST	X	X	X	X	X	X	Safety improvements at uncontrolled intersections	RTIP ITIP	~~2017/18~~2020/21	$28,380 $15,000
U.S. Highway 101 / Broadway, Kmart to O Street	ST	X				X	X	ADA curb returns and ramp upgrades	2016 SHOPP	~~2018~~ 2019/20	$3,000
~~101-In Arcata from 11th Street Overcross to the Arcata~~	~~ST~~						~~X~~	~~Install cable median barrier~~	~~2013 SHOPP~~	~~2013~~	~~$1,000~~
~~101-From Arcata Slough Bridge to Arcata Overhead~~	~~ST~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~Eureka/Arcata capital preventative maintenance and restripe~~	~~2012 SHOPP~~	~~2013~~	~~$14,000~~

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
California Department of Transportation – District 1 (cont'd)											
~~101-Various locations from Westhaven Dr. to Trinidad Rd.~~	~~ST~~					~~X~~	~~X~~	~~Humboldt 101 seismic retrofit~~	~~2013 SHOPP~~	~~2014~~	~~$4,000~~
~~101- Near Rio Dell from Eel River Bridge to S. of Van Duzen Bridge~~	~~ST~~						~~X~~	~~Median barrier installation~~	~~2013 SHOPP~~	~~2014~~	~~$1,000~~
101 – Near Garberville near Richardson Grove	ST		X		X		X	STAA Operational Improvement Project	2011 SHOPP	~~NA~~ 2018/19	$5,500
~~City of Fortuna Maintenance Station~~	~~ST~~		~~X~~		~~X~~		~~X~~	~~Excavate contaminated material~~	~~2014 SHOPP~~	~~2015~~	~~$2,000~~
299-Near Willow Creek on Cedar Creek Road	ST				X	X	X	Cedar Gap curve improvement	2014 SHOPP	~~2012~~ In construction (89% complete)	$1,000
~~299-Near Blue Lake near Bair Rd~~	~~ST~~				~~X~~	~~X~~	~~X~~	~~Acorn curve improvement~~	~~2014 SHOPP~~	~~2015~~	~~$3,000~~
299-Near Willow Creek near Redwood Creek Bridge	ST				X	X	X	Sabertooth shoulder widening	2016 SHOPP	2017 In construction (92% complete)	$2,000
299 - Near Willow Creek near Chezem Road	ST				X	X	X	Circle Point curve improvement	2014 SHOPP	2016 In construction (89% complete)	$4,000
299-near Blue Lake, Chezem Road	ST				X	X	X	Lupton curve improvement	2015 SHOPP	2016 In construction (93% complete)	$2,000
~~299-Near Blue Lake at Mill Creek Bridge~~	~~ST~~			~~X~~				~~Mad River fish passage mitigation~~	~~2012 SHOPP~~	~~2013~~	~~$1,000~~
~~299-Near Blue Lake at Chezem~~	~~ST~~				~~X~~		~~X~~	~~Green Point sink restoration~~	~~2012 SHOPP~~	~~2014~~	~~$9,000~~
299-Near Blue Lake to 0.2m W of the Route 96 Junction	ST				X		X	Grind-in rumble strips installation	2012 SHOPP	2017	$21,000
96 - Near Willow Creek near the Tish-Tang Campground	ST				X		X	Sugar Bowl Ranch curve Improvement	2012 SHOPP	2017 In construction (34% complete)	$3,000
96 - Near Willow Creek near Shoemaker Road	ST				X		X	Hoopa Vista Point curve correction	2012 SHOPP	2017 In construction (45% complete)	$2,000
~~96 - In Hoopa from Loop Road near Hostler Creek Bridge~~	~~ST~~	~~X~~	~~X~~		~~X~~		~~X~~	~~Shoulder widen and lighted crosswalk~~	~~2012 SHOPP~~	~~2016~~	~~$1,000~~
~~96 - Downtown Hoopa~~	~~ST~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~Pedestrian safety, traffic calming, drainage improvements~~	~~Partially funded~~	~~2013-2016~~	~~$4,400~~

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
California Department of Transportation – District 1 (cont'd)											
255 -Near Arcata at McDaniel Slough Bridge	ST			X			X	Mad River Wetland Mitigation	2012 SHOPP	~~2015~~ TBD	$1,000
169 - East of Pecwan near Junction of Highways 96 /169	ST				X	X	X	Weitchepec Curve Improvement	2016 SHOPP	~~2017~~ 2019/20	$1,000
~~169 - Various Locations~~	~~ST~~				~~X~~		~~X~~	~~Widening and Metal Beam Guardrail~~	~~2012 SHOPP~~	~~2015~~	~~$6,000~~
~~36 - At Carlotta from Wilson Lane to 0.5 W of Cummings Creek Rd.~~	~~ST~~				~~X~~	~~X~~	~~X~~	~~Carlotta Left Turn Channelization~~	~~2012 SHOPP~~	~~2014~~	~~$9,000~~
254 - Various Locations	ST				X	X	X	Avenue of the Giants–Four Bridges Project	SHOPP	2016	$3,000
101 - South Fork Eel River Bridges	ST				X	X	X	Eel River Bridges Seismic Retrofit Project	SHOPP	~~2015~~ 2019/20	$9,900
~~101 - In Trinidad between 6th Street and Trinidad Road exit~~	~~ST~~		~~X~~		~~X~~		~~X~~	~~New Interchange~~	~~STIP (PID)~~	~~NA~~	~~$18,000~~
96 - Trinity River Bridge in Downtown Hoopa	ST	X	X	X	X	X	X	Pedestrian and non-motorized vehicle crossing of Trinity River (Bike & ped improvements)	SHOPP (PID)	~~NA~~ TBD	$1,000
101 - Intersection of Broadway, Wabash and Hawthorne	ST	X	X		X	X	X	Intersection control evaluation	SHOPP (PID)	~~NA~~ 2018/19	$3,000
101 - In Eureka south of Fields Landing OH to North of Herrick Avenue overcrossing	ST				X	X	X	Pavement preservation	SHOPP (PID)	~~NA~~ 2019/20	
101 - Eureka on 4th and 5th Streets from Broadway to Eureka Slough Bridge	ST	X	X		X	X	X	Eureka capital preventative maintenance	SHOPP (PID)	~~NA~~ 2018/19	$2,800
101 - Near Orick north of Big Lagoon	ST				X	X	X	Orick capital preventative maintenance	SHOPP	2017	$16,300
101 - Near Blue Lake, various locations from Lupton Creek to Berry Summit	ST				X	X	X	Slope repair and drainage improvements	SHOPP (PID)	~~NA~~ 2019/20	
101 - Near Blue Lake from Titlow Hill Road to Willow Creek	ST				X	X	X	Humboldt 299 capital preventative maintenance	SHOPP (PID)	~~NA~~ In construction	
96 - 6.2m E of Willow Creek to 2.6m W of Tish-Tang Campground	ST				X	X	X	Correct curve, shoulder widen, rumble strip, restripe, open graded friction course	SHOPP	~~2016~~ In construction (31% complete)	$3,700
101 and 254 - Various locations	ST				X		X	Upgrade guardrail and bridge approach	SHOPP	~~NA~~TBD	$4,000
101, 169, and 199 - Various locations	ST				X			Metal beam guard rail follow-up	SHOPP	TBD	$3,000

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
California Department of Transportation – District 1 (cont'd)											
~~101 - Upgrade Bridges (2 Humboldt County Bridges)~~	~~ST~~				~~X~~	~~X~~	~~X~~	~~Bridge Seismic Retrofit~~	~~SHOPP~~	~~2014~~	
101 – Near Miranda at various locations	ST					X		Overlay	SHOPP	2017	$2,800
101 – Near Weott at S. Fork Eel River Bridge	ST					X		Bridge seismic retrofit	SHOPP	2020/21	$5,500
101 – Two bridges over the South Fork Eel River	ST					X		Bridge seismic retrofit	SHOPP	2021	$4,700
101 – Various Locations from Myers Flat to Fortuna	ST					X		Pavement preservation	SHOPP	2018	$4,200
101 – Near Weott	ST					X		Pavement preservation	SHOPP	2017/18	$1,800
101 – Near Fortuna, Eel River Bridge #04-0016R	ST					X		Bridge seismic retrofit	SHOPP	2020	$22,200
101 – Near Eureka from Fields Landing to Herrick Ave	ST				x	X		Roadway rehabilitation	SHOPP	2017/18	$27,000
101 – Eureka, K-Mart to 6th	ST				X			Modify signal	STIP (K-Phase)	2017/18	$700
101 – In Eureka from X Street to Cole Ave-Jacobs Ave	ST					X		Seismic restoration	SHOPP	2018	$7,000
101 Corridor Improvement	ST	X			X			Extend acceleration/deceleration lanes	SHOPP	2019/20	$6,400
101 Corridor Improvement	ST				X			Metal beam guardrail	SHOPP	2018/19	$1,700
101 – Near Arcata at Jacoby Creek & Gannon Slough Bridges	ST	X		X	X	X		Bridge rail replacement/upgrade	SHOPP	2019	$3,900
101/299 Interchange in Arcata	ST				X			Curve improvement	SHOPP	2020	$3,300
101 – Near Orick, south of Lost Man Creek	ST			X		X		Replace box culvert with bridge	SHOPP	2020/21	$5,600
101 – In Eureka from Elk River Bridge to Pierson/Tetrault signal	ST	X						Eureka South Entry Gateway Project	STIP (RTIP)	PID	$2,000
101 –Eureka from 15th St to 6th	ST	X			X			ADA sidewalks and curbs	ADA	PID	$3,900
101 – From the 101/299 on-ramp to the Giuntoli Off Ramp	ST				X			Construct auxiliary lanes	SHOPP (K-Phase)	PID	$2,000
101 – From Mad River to north of Big Lagoon	ST					X		Trinidad capital preventative maintenance	SHOPP (K-Phase)	PID	$24,300
36 - Hely Creek, Little Larabee Creek and Butte Creek	ST				X		X	Bridge rail replacement and upgrade	SHOPP	~~NA~~ 2018/19	$1,000

COMPLETE STREETS Project Location	Short or Long Term[1]	Complete Sts	Economic	Environment	Operations	Preserve Sys	Safety	Description	Funding Source	Implementation Year(s)	Cost in Year of Expenditure[2] ($000)
California Department of Transportation – District 1 (cont'd)											
36 - Little Golden Gate, approx 15m E of Carlotta	ST			X	X		X	Install erosion control measures	SHOPP (PID)	PID	$2,000
36 -Near Hydesville at River Bar Road	ST				X	X	X	Alton shoulder widening	SHOPP	2019/20	$9,900
36 – East of Little Larabee Creek Bridge	ST					X		Rehab culverts	SHOPP	2018	$450
36 – Near Dinsmore various	ST				X			Little Buck safety improvements	SHOPP (Safety)	2016/17	$7,700
36 – Near Dinsmore	ST				X			Buck Mountain operational improvement	SHOPP	2017/18	$6,900
36 – Near Riverside Park to east of Riverside Park Road	ST				x			Curve Improvement	SHOPP	PID	$2,400
101 - Between Eureka and	ST				X		X	Metal beam guard rail follow-up	SHOPP	~~2014~~ 2018/19	$2,000
299, 96 - Near willow Creek; 36 - From Carlotta to Hydesville	ST				X		X	Metal beam guard rail follow-up	SHOPP	~~NA~~	$2,000
101 - Williford Rd. undercrossing	ST				X	X	X	Replace superstructure	SHOPP	~~2015~~ TBD	$2,000
299 – Near Blue Lake/Simpson Rd	ST	X			X			Widen shoulders and install rumble stripes	SHOPP	PID	$1,000
299 – From Chezem Road to Cedar Creek Road	ST	X			X			Widen shoulders and install rumble stripes	SHOPP	PID	$5,700
299 – Near Willow Creek from Cedar Road to SR 96	ST	X			X			Widen shoulders and install rumble stripes	SHOPP	PID	$7,600
299 - In Willow Creek from Willow Way Road to Panther Rd	ST	X			X			Widen shoulders	SHOPP	PID	$1,000
200 – Near Arcata at 200/299 grade separation	ST		X					Raise structure for extra-legal permit loads	SHOPP	PID	$20,900
283 – Near Scotia at Eel River Br	ST					X		Seismic retrofit	SHOPP	PID	$4,400
101- Through the community of Orick	LT	X	X		X		X	Streetscape improvements to enhance bicycle and pedestrian safety	Not funded	NA	$1,400
96 - Through the community of Orleans	LT	X	X		X		X	Streetscape improvements to enhance bicycle and pedestrian safety	Not funded	NA	$1,800
255 – Through the community of Manila	LT	X	X	X	X		X	Streetscape improvements to enhance bicycle and pedestrian safety	Not funded	NA	$2,200
									Caltrans ST Subtotal		~~$191,980~~
									Caltrans LT Subtotal		~~$5,400~~
									ALL REGIONAL PROJECTS – Funded (constrained) Subtotal		**$~~239,274~~TBD**
									ALL REGIONAL PROJECTS – Not funded (unconstrained) Subtotal		**$~~275,426~~ TBD**

[1]*Short-term (ST) is the next 1 to 10 years; long-term (LT) is the next 11 to 20 years.* [2]*Assume 3% annual inflation.*

PERFORMANCE MEASURES

Transportation performance measures consist of a set of objectives and measurable criteria used to evaluate the effectiveness of the transportation system. Performance measures help set goals and outcomes, detect and correct deficiencies, and document accomplishments. Below are performance standards for measuring the "complete streets" system—highway and roadways, bicycle and pedestrian facilities.

Table *Streets-7.* Performance Measures for the Regional Complete Streets System

GOALS	FACTORS	INDICATORS	PERFORMANCE MEASURES	DATA SOURCES
Safety	*Collision rates* *Bicycle & pedestrian activity and safety*	Do collision rates exceed statewide averages? Have rates of crashes, fatalities, and injuries decreased? Has the number of miles of "safe routes to school" increased? Has the number of trips to school by bicycling and walking increased?	• Collisions per vehicle (or passenger) miles traveled. • Severity of collisions and injuries. • Number of safety improvement projects implemented. • Miles of safe routes (bike lane miles vs. motor lane miles). • Bicycle crashes per 1,000 cyclists. • Pedestrian collisions per 1,000 pedestrians.	Accident statistics collected by Caltrans District 1 Safety Division, CHP, local agencies.
	SAFE Program (Service Authority for Freeway Emergencies)	Are SAFE call boxes located at appropriate distances along designated corridors?	• Percentage of fully operational call boxes. • Percentage of call box locations that meet all design criteria. • Annual call box use.	Call box monitoring/ performance reports.
Balanced Mode Shares (Complete Streets)	*Mobility* *Reliability*	Have transportation projects increased multi-modal options in the region? Has congestion decreased? Has travel time decreased for passengers, freight/goods trips?	• Travel mode split (shares) for work trips. • Travel mode split (shares) for non-work trips. • Annual average delay per mile of roadway segment (per passenger, automobile, freight truck trips). • Peak hour congestion.	U.S. Census, American Community Survey.
	Connectivity	Are there more multi-modal connections within and between communities?	• Miles of improved connectivity for bicycle and pedestrian facilities.	Walk/trail/bikeway audits, Bicycle Plan Updates, Public Works Dept. information.

GOALS	FACTORS	INDICATORS	PERFORMANCE MEASURES	DATA SOURCES
	Access to transit, paratransit	Has the level of transit or paratransit service increased? Have ridership levels increased? Has number of interregional transit routes or schedules increased?	• Total transit/paratransit trips. • Percentage of population within ¼ mile of a transit stop. • Major destinations not accessible by transit/paratransit. • Revenue service hours/miles.	Transit Development Plan updates, Local transit operators' data.
	Access to walking & bicycling	Have walking and bicycle mode shares increased?	• Bicycle ridership (mode share). • Pedestrian travel (mode share).	Surveys, pedestrian and bicycle ridership counts.
	Performance	Has the level of service (LOS) increased for alternative modes?	• Average annual boardings per transit vehicle revenue hour or mile. • On-time performance of transit system. • Pedestrian LOS/QOS. • Bicycle LOS/QOS. • Percentage of sidewalks, intersections, and bus shelters that comply with ADA requirements.	Local transit operators' data, LOS/QOS results.
Efficient and Viable Transportation System	*System condition* *System preservation*	Are roads better maintained? Do road, aviation, and maritime facilities meet standards for state of good repair? Is the road maintenance or rehabilitation backlog decreasing? Is the bridge or pier replacement or rehabilitation backlog decreasing?	• Pavement Condition Index (PCI) rating. • Condition of bridges, harbor and aviation facilities. • Maintenance/rehabilitation funding shortfalls.	Public Works Depts, Caltrans District 1, Harbor District, StreetSaver or other pavement management software (PMS).
	Cost effectiveness of investments *Benefits to costs ratio*	Are investments in RTIP projects helping achieve RTP goals? Have investments improved system efficiency and/or productivity? Have system operating and maintenance costs decreased?	Per one thousand dollars invested: • Decreased collisions and fatalities. • Decrease in system-operating cost. • Increased frequency and reliability of transit. • Decrease in air pollution emissions. • Decrease in freight travel time. • Decrease in freight system maintenance costs. • Improved access to jobs, school, commerce, and services. • Increase in trips by alternative modes.	Caltrans, Air Resources Board, Public Works Depts.

GOALS	FACTORS	INDICATORS	PERFORMANCE MEASURES	DATA SOURCES
Environmental Stewardship & Climate Protection	*Fuel and energy use*	Has fuel consumption decreased? Are people driving less (trips or miles)? Are fewer people driving alone to work and school?	• Fuel consumption gallons per capita. • motorized VMT per capita. • motorized VMT per employee. • Average vehicle occupancy rate.	Caltrans annual traffic counts, environmental and compliance reporting.
	Air quality	Have air pollutant emissions decreased from on-road mobile sources?	• $PM_{2.5}$, PM_{10} emissions. • Air quality levels.	CARB, local and state environmental and compliance reporting.
	Adaptability and resilience to climate change impacts	Have transportation CO_2 emissions decreased per capita? Have car/light truck VMT decreased? Have alternatives to driving alone increased?	• Total transportation CO_2 per capita. • Passenger transportation CO_2 per capita. • Decrease in single vehicle occupancy travel. • Car and truck VMT per CO_2 emissions. • Average utilization rate of park-&-ride lots (% full).	CARB's EMissions FACtors model (EMFAC), environmental and compliance reporting.
Equitable & Sustainable Use of Resources	*Equity* *Environmental justice*	Has the proportion of transportation investment in environmental justice tracts increased?	• Percentage of RTP/RTIP expenditures in environmental justice tracts. • Average travel time per person trip (EJ/non-EJ). • Percentage of homes within half-mile of transit stop (EJ/non-EJ).	US Census, American Community Survey
	Transportation coordinated with land use	Has new transportation infrastructure developed agricultural or natural resource land? Is transportation planned for new land development (residential, work, commercial, services, recreation)?	• Acres of sensitive lands on which transportation infrastructure is built. • Ratio of jobs to housing. • Average distance to nearest transit stop and park-and-ride lot. • Percentage of jobs and population within 0.4 miles of transit.	General Plan updates.
Economic Vitality	*Economic sustainability*	Have transportation investments contributed to economic growth? Has access to jobs, markets, and/or services increased?	• Direct and indirect economic benefits from increased multi-modal options? • New residential/commercial development within ¼ mile of public transit.	
	Goods/freight movement	Has the freight network been enhanced?	• Freight capacity acreage (for ports of entry) • Freight capacity mileage (highway connectors to port terminals, highway truck routes)	