

Chapter 4 Circulation Element

4.1 INTRODUCTION



The Circulation Element identifies the guiding principles for moving people and goods within the City and identifies the infrastructure necessary to assure that the transportation network will serve the City at General Plan buildout.

A majority of trips are made by automobile. The Circulation Element identifies the roadway system necessary for automobile traffic by setting levels of service, hierarchy of roads, and areas where road improvements are necessary.

On September 30, 2008 Governor Arnold Schwarzenegger signed Assembly Bill 1358, the California Complete Streets Act. The Act states: “In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to biking, walking and use of public transit.

The legislation impacts local general plans by adding the following language to Government Code Section 65302(b)(2)(A) and (B):

(A) Commencing January 1, 2011, upon any substantial revision of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.

(B) For the purposes of this paragraph, “users of streets, roads, and highways” means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.

The Circulation Element also identifies alternative travel modes, such as walking, bicycles, bus transit, and rail transit. The alternative transportation is important to reduce pressure on roads, conserve energy, and improve the public health through exercise.

The road system provides many functions in addition to carrying vehicle traffic. It provides open space separating dwelling units and commercial uses. If properly landscaped, streetside landscaping provides location for trees to support the urban forest. If developed with safe pedestrian and bike ways, it serves as a non-motorized transportation corridor, a linear park, and an attractive network for healthy exercise. If properly designed, it provides the background for the community urban design and appearance. Finally, it provides the right of way for most of

the City’s public utilities infrastructure.

4.2 RELATIONSHIP TO OTHER ELEMENTS

The goals and policies in this Element are directly correlated with that of the Land Use Element and Housing Element so that new and existing development will be adequately served by the transportation system, and will not interfere with existing or planned improvements.

**Mandatory
General Plan
Elements**

Coordinating land use and circulation decisions is necessary to achieve many of the goals of this Plan. For example, adequate roads and safe bicycle and pedestrian routes within the City are essential to accommodate growth. If circulation problems are fixed and improvements are made as development occurs, growth can be accommodated without creating traffic and traffic safety problems for existing residents. Land use planning must also complement transportation planning by locating uses in areas that can be cost effectively served and conditioning projects to mitigate impacts.

**Land Use
Circulation
Housing
Conservation
Open Space
Safety
Noise**

4.3 AGENCY COORDINATION

Coordinating the City’s efforts with the California Department of Transportation (Caltrans), and the regional Humboldt County Association of Governments (HCAOG) is a high priority of this Plan.



The Humboldt County Association of Governments (HCAOG) is a Joint Powers Agency comprised of the seven incorporated cities (Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, Trinidad), and the County of Humboldt. It is the designated Regional Transportation Planning Agency (RTPA). HCAOG is largely responsible for programming State highway, local street and road improvements, public transportation resources, and the roadside call box program. HCAOG also bears responsibility for preparing and implementing the Regional Transportation Plan (RTP) and the Regional Trails Master Plan.

The Regional Transportation Plan (RTP) is a long-range transportation planning document for Humboldt County. HCAOG prepares updates every five years, coordinating with the California Department of Transportation (Caltrans) District 1, local governments, local tribes, local transit authorities and transportation agencies, residents, and other stakeholders. HCAOG is currently in the process of updating the 2008 RTP, as well as the plan’s Environmental Impact Report (required by the California Environmental Quality Act).

The main purpose of the County Regional Trails Master Plan is to promote the development of a regional active transportation system. The plan promotes active transportation connections *within* and *between* communities.

The Humboldt County Regional Trails Master Plan is a long-range coordinating and resource document that will help plan and implement a regional, active transportation system that ensures safe and equitable access for non-motorized users. The plan compiles information on

existing trails and active transportation planning in the region, focusing primarily on off-street trails.

4.4 ROADWAY INFRASTRUCTURE

Access to the City is primarily from US Highway 101. There are three access points into the City: (1) the Wildwood Avenue interchange on the north end of the City; (2) the Davis Street interchange; and (3) the Scotia – Rio Dell interchange to the south. The Scotia – Rio Dell bridge, also known as the Eagle Prairie Bridge (State Route 283), is the shortest state highway in the Country at .36 of a mile.



The City currently maintains approximately 14.2 miles of streets. The vast majority of streets are made up primarily of two-lane roads. There are a number of streets within the City that do not have curbs, gutters and sidewalks. The lack of curbs, gutters and sidewalks contributes to drainage problems in many of the City's neighborhoods.

A functional classification system provides for specialization in meeting the access and mobility requirements of the development permitted under the General Plan. Local streets emphasize property access; arterials emphasize high mobility for through traffic; and collectors seek a balance between the two functions.

Figure 4-1, the Circulation Diagram, presents the official functional classifications of existing and proposed streets, roadways, and highways in Rio Dell. The hierarchy of the functional classifications in the city consists of principal arterials, minor arterials, collectors, and local roads and streets as described below. The Circulation Diagram identifies the arterial and collector roadway system in Rio Dell. All roadways not identified on the Circulation Diagram are classified as local streets.

Freeways: Freeways route traffic through the community and are characterized by large traffic volumes and high speed travel.

Arterial Routes: Arterials link residential and commercial districts, and serve shorter through traffic needs.

Collector Roads: Collector streets link neighborhoods to arterials and are not intended for through traffic, but are nonetheless intended to move traffic in an efficient manner.

Local Streets: Local streets are designed to serve only adjacent land uses and are intended to protect residents from through traffic impacts.

**BLANK
FIGURE 4-1
CIRCULATION DIAGRAM**

Roadway functional classifications and standards for Arterial Routes, Collector Roads and Local Streets are shown below in Table 4-1. The standards identify recommended right-of-way, sidewalk, planting strip, parking, bicycle and travel lane widths. These are only recommended widths. The primary objective of the recommended widths is to ensure the safe and efficient movement of motor vehicles, bicycles and pedestrians. If a development project does not incorporate the recommended widths, appropriate Caltrans or American Association of State Highway and Transportation Officials (AASHTO) standards shall be applied. Design features not addressed by Caltrans and AASHTO standards shall be designed consistent with standard engineering practices.

**Table 4-1
Recommended Right of Way/Street Widths**

| Type | ROW | Sidewalk | Landscape Strip | Parking Lane | Bike Lane | Travel Lane | Median |
|-------------------------|-----|----------|-----------------|--------------|-----------|-------------|--------|
| Principal Arterial | 96 | 6 | 10 | 0 | 5 | 12 | 15 |
| Minor Arterial | 82 | 6 | 10 | 8 | 5 | 12 | 0 |
| Principal Collector | 82 | 6 | 6 | 0 | 5 | 12 | 12 |
| Minor Collector | 74 | 6 | 6 | 8 | 5 | 12 | 0 |
| Local up to 300 parcels | 72 | 5 | 6 | 8 | 5 | 12 | 0 |
| Local up to 75 parcels | 56 | 5 | 3 | 8 | 5 | 10 | 0 |
| Local up to 25 parcels | 44 | 5 | 0 | 8 | 0 | 9 | 0 |
| Local up to 6 parcels | 40 | 5 | 0 | 7 | 0 | 8 | 0 |

4.5 ROADWAY CAPACITY

As the City's population grows, corresponding increases in vehicle volumes will have impacts on the safety and functionality of City roadways. Roadway capacity is generally assessed using a Level of Service (LOS) rating. The LOS rating is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. The quality of traffic operations is expressed in terms of LOS A (no congestion) through LOS F (extreme congestions). LOS definitions generally describe traffic conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. Typically, level of service D is used as the design standard in urban areas and level of service C is used as the design standard in rural areas. Table 4-2 identifies the descriptions of the various LOS levels.

**Table 4-2
Level of Service (LOS) Standards**

| LOS | Description |
|------------|---|
| A | Free-flowing conditions with no delay |
| B | Free-flowing conditions; however, speed and maneuverability are slightly restricted due to the presence of other vehicles |
| C | Stable traffic flow, with less freedom to select speed, change lanes, or pass. Some delay may be experienced |
| D | A traffic stream approaching unstable flow, with reduced speed and maneuverability. |
| E | Unstable traffic flow with rapidly fluctuating speeds and flow rates |
| F | Forced traffic flow, where speed and flow may drop to zero with high densities. |

Overall roadway capacity and functionality in the City is currently operating at a LOS C or better level.

Due to their right-of-way widths and the amount of on-street parking on First and Second Avenues, the City Council has discussed the possibility of designating these streets as one-way streets. The purpose of designating the streets one-way is to improve traffic congestion and emergency access.

In order to minimize impacts to City streets due heavy commercial truck traffic associated with timber harvest and mining/quarry operations west of the City, the City has designated a truck route from Monument Road to Pacific Avenue to Davis Street.

Impacts of new development on the safety and capacity of the road network are currently assessed on a project-by-project basis. Developments are required to make on-site improvements to the road frontage and to provide safe access to the new development. The City has been unable to fund road construction to support new development and generally has not accepted privately constructed roads into its maintained road system. Instead, new roads constructed to City standards must be maintained by a Home Owner or Road Maintenance Association.

4.6 ROADWAY MAINTENANCE.

Roadway maintenance programs must be properly funded and managed to have a lasting beneficial effect on roadway condition and public safety. Maintenance benefits can only be achieved if substantial improvements are made to assure the long-term performance of the City's roadways. Perhaps the most significant factor is the availability and allocation of funds for roadway maintenance and construction. And the amount of funding needed is determined by roadway design, construction, maintenance and rehabilitation, which all affect the rate of roadway deterioration.



The State of California imposes excise taxes on various transportation fuels. California motor vehicle fuel taxes include the gasoline tax, diesel fuel tax, and the use fuel tax. Taxes on fuel used for other motor vehicles are transferred to the state Highway Users Tax Account. These include:

- The “gasoline tax” and “diesel fuel tax” imposed on the use of vehicle fuels at the rate of \$0.18 per gallon including the \$0.09 rate imposed by Proposition 111 (1994).
- The “use fuel tax” is imposed on vendors and users of motor vehicle fuels that are not taxed under either the gasoline or diesel fuel tax, such as liquefied petroleum gas, ethanol, methanol and natural gas (both liquid and gaseous) for use on state highways. Use Fuel Tax rates vary depending on the type of fuel.
- Beginning with the 2010-11 fiscal year, Section 2103 of the Streets and Highways Code was added to allocate funds from a new motor vehicle fuel excise tax that replace previous city and county allocations from the Proposition 42 sales tax on gasoline. This is the change known as the “fuel tax swap of 2010.” Section 2103 funds are allocated to cities on a per capita basis and to counties 75% based on the proportion of registered vehicles and 25% based on the proportion of maintained county road miles.

The allocation of highway user tax revenues is complex, with differing allocations of the \$0.09 Proposition 111 rate versus the \$0.09 original gasoline tax rate, as well as differences in the allocation of gasoline tax revenues from diesel and fuel use tax revenues.

Of the \$0.18 per gallon of user tax revenue, the City receives about \$0.03. In fiscal year 2011-2012 the City received \$102,470 in user tax revenue. The State has projected that the City will receive \$90,227 in user tax revenue in fiscal year 2012-2013.

In 2009 HCAOG retained the services of Nichols Consulting Engineers to prepare a regional Pavement Management Program (PMP). The intent was to identify and prioritize needed maintenance, rehabilitation and reconstruction of roads within the County and Cities. Roads were categorized based on a Pavement Condition Index (PCI). The PCI provides a numerical rating for the condition of road segments within the road network, where 0 is the worst possible condition and 100 is the best. The PCI is used to guide rehabilitation and maintenance decisions for the road network based on a decision matrix. See Table 4-3.

**Table 4-3
Pavement Condition Index (PCI) Decision matrix**

| PCI Decision Matrix | | | | |
|----------------------------|----------------|-----------------|------------------|--------------|
| TIME OF IMPROVEMENT | FREEWAY | ARTERIAL | COLLECTOR | LOCAL |
| Adequate | >85 | >85 | >80 | >80 |
| 6 to 10 years | 76 to 85 | 76 to 85 | 71 to 80 | 66 to 80 |
| 1 to 5 years | 66 to 75 | 56 to 75 | 51 to 70 | 46 to 65 |
| NOW Rehabilitate | 60 to 65 | 50 to 55 | 45 to 50 | 40 to 45 |
| NOW Reconstruct | <60 | <50 | <45 | <40 |

Based on the results of condition surveys conducted in the Fall of 2009, Nichols Consulting Engineers determined that the City’s average PCI is 61. This is considered to be in the “FAIR” condition category. The City retained Nichols Consulting Engineers to follow-up on the 2009 Pavement Management Program to identify potential costs associated to the City’s maintenance backlog. Based on Nichols survey and rating dated August 2011, there are approximately 30 streets or portions of streets with a PCI rating of 40 or less. Nichols determined that it would

cost the City approximately \$3.7 million (2011 dollars) to fix all the roads in a one year period. Table 4-3 summarizes the costs for the next 20 years. Basically, the City needs about \$5.3 million (in real 2011 dollars) over the next 20 years to improve and maintain the City's street network at a PCI rating in the high 70's to low 80's.

**Table 4-4
Estimated Road Repair Costs**

| Year | Estimated Construction Costs (2011 \$) | Cumulative Construction Costs (2011 \$) | | Year | Estimated Construction Costs (2011 \$) | Cumulative Construction Costs (2011 \$) |
|------|--|---|--|------|--|---|
| 2012 | \$ 2,571,500 | \$ 2,571,500 | | 2022 | \$ 7,062 | \$ 4,049,651 |
| 2013 | \$ 295,403 | \$ 2,866,903 | | 2023 | \$ 9,652 | \$ 4,059,303 |
| 2014 | \$ 151,990 | \$ 3,018,893 | | 2024 | \$ 11,056 | \$ 4,070,359 |
| 2015 | \$ 202,767 | \$ 3,221,660 | | 2025 | \$12,375 | \$ 4,082,734 |
| 2016 | \$ 172,414 | \$ 3,394,074 | | 2026 | \$ 77,348 | \$ 4,160,082 |
| 2017 | \$ 210,519 | \$ 3,604,593 | | 2027 | \$ 48,339 | \$ 4,208,421 |
| 2018 | \$ 81,071 | \$ 3,685,664 | | 2028 | \$ 114,435 | \$ 4,322,856 |
| 2019 | \$ 22,733 | \$ 3,708,397 | | 2029 | \$ 55,830 | \$ 4,378,686 |
| 2020 | \$ 317,667 | \$ 4,026,064 | | 2030 | \$ 137,876 | \$ 4,516,562 |
| 2021 | \$ 16,525 | \$ 4,042,589 | | 2031 | \$ 802,663 | \$ 5,319,225 |

In an attempt to generate much needed funds for road repairs, the City placed Measure X on the June 2012 ballot. Measure X would allow the City to issue \$2 million dollars in general obligation funds, maturing 15 years from their issue date and bearing an interest rate not to exceed 4.25%. It was estimated that the annual parcel tax assessment would be about \$115.00 per \$100,000 of assessed value. In addition, the City was going to contribute an additional \$825,000. It was estimated that the \$2,825,000 would allow the City to repair about 11.5 miles or 90% of the City's roads.

Because Measure X was a tax, it required a supermajority 2/3 voter approval. Measure X received 62.59 percent of the votes. The measure needed 66.66 percent to pass. Because the vote was so close, the City decided to put the matter to the voters again. Measure J was placed on the November 2012 ballot. Measure J also failed to garner the required votes. Measure J received 55.61% of the vote.

| 2012 Election Results | | | | |
|-----------------------|-----|--------|-----|--------|
| Measure | Yes | % | No | % |
| "X" | 437 | 62.7% | 260 | 37.3% |
| "J" | 595 | 55.61% | 475 | 44.39% |

4.7 PUBLIC TRANSPORTATION



Providing adequate public transportation to serve the needs of Rio Dell resident's who prefer or require public transportation for mobility is a priority of the Circulation Element. Increased use of public transportation will reduce air pollution, greenhouse gas emissions, traffic congestion, parking demand, energy consumption and the cost of personal transportation.

The 2008 Regional Transportation Plan contains a comprehensive description of public transit services of fixed and flexible route providers. The following fixed-route systems serve the county's public transit needs: Redwood Transit System, Eureka Transit System, Southern Humboldt Rural Transit System, Arcata & Mad River Transit System, Klamath/Trinity Non Emergency Transportation (K/T Net), and Blue Lake Rancheria.

The Humboldt Transit Authority (HTA), established in 1975, provides transit services along the US 101 corridor in Humboldt County. A joint powers agreement was signed by Humboldt County and the cities of Arcata, Eureka, Fortuna, Rio Dell and Trinidad to finance, acquire, construct, manage, operate and maintain public transit systems and related property and facilities.



Funding for support of the operations and maintenance of HTA is obtained primarily through fares, and Transportation Development Act (TDA) funds that accrue to each entity of HTA. The proportion of TDA funds that are paid by the cities and the county for the support of HTA are based on the census population of each city, compared to the population of all the cities. Humboldt County provides 50 percent of the TDA funds, and the participating cities provide the other 50 percent (City of Eureka 25.6 percent, City of Arcata 13.1 percent, City of Fortuna 8.1 percent, City of Rio Dell 2.8 percent and City of Trinidad .4 percent) of TDA funds for the support of HTA. The member entity assessments have not been adjusted since 1976.



The Humboldt Transit Authority operates the Redwood Transit System (RTS) which provides bus service from Trinidad to Scotia. The "Mainline" route includes 3 stops in the City. One of the stops is located on Center Street. This stop does not have bus shelters. The bus stop on Rigby Avenue and Davis Street does include a bus shelter on the northbound route on the east side of Rigby. The third location is on Wildwood Avenue in front of City Hall. The northbound stop does have a bus shelter, but the southbound route does not.

The "Mainline" north route makes 8 stops a day during the week in the City and the south route makes 7 stops a day during the week. On Saturdays and Sundays there are 4 northbound and southbound stops in the City.

RTS also provides an "Intercity" route from Eureka to Garberville. The "Intercity" route includes a stop at the Davis Street and Highway 101 interchange. Both the northbound and southbound stops are poorly signed and do not include bus shelters. This route provides 4 weekday stops.

Other City public transit services, include Redwood Coast Transit (linking Crescent City and Humboldt County), Greyhound Bus Lines, AMTRAK, and City Cab.

4.8 Bicycle and Pedestrian Travel

The City of Rio Dell has limited non-motorized transportation facilities. There are a number of informal trails throughout the community that provide connections to the town center and neighborhood destinations, as well as access to the Eel River. City staff has participated in non-motorized transportation project identification for inclusion in several regionally significant transportation plans, such as the Humboldt Peopled Powered Pathways (HP3), the 2012 Regional Bicycle Plan and the 2010 Regional Trails Master Plan

This Plan supports improvements that accommodate bicycles, pedestrians, and the mobility-challenged population. These improvements mostly include sidewalks, crosswalks, trails, and bicycle lanes. While walking or cycling between destinations is a choice for some, it is a necessity for others who do not have access to motorized transport. Development of bicycle and pedestrian facilities can reduce vehicle miles traveled, enhance communities, increase the opportunities for an active and therefore healthy lifestyle, and reduce greenhouse gas emissions.

The Circulation Element provides the framework for developing a trail network or active transportation system in the City. The various types of natural surface, paved off-street trails and on-street facilities comprise the system.

The trail network will be comprised of a variety of trail types to accommodate different user groups and topography. The trail classification system is organized by natural and paved surface trail types, which are described below. The classification system is used to identify existing and proposed trails in Humboldt County.

Natural Surface Trails are primarily unpaved trails that serve a variety of recreational user groups and may occasionally serve transportation (e.g., commuter use) and local connectivity (e.g., school and local errand access) needs. Natural surface trails are classified into multipurpose, equestrian, and developed/improved trails.

Multipurpose Trails accommodate a wide variety of user groups. These paths, while constructed with native surface materials or compacted, crushed or granulated stone, provide wide treads and clearances (i.e., width varies from four feet to eight feet) potentially accommodating significant volumes of hikers, equestrians and bicyclists. Where hikers, bicyclists and equestrians are allowed on the same trail “Yield to” signage should be installed to notify users of rights-of-way.

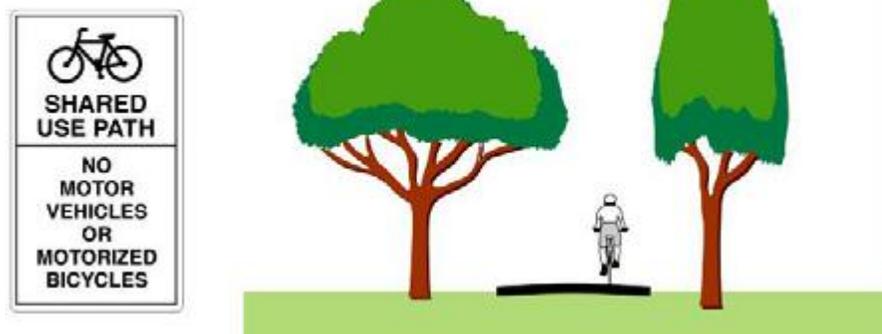
Equestrian Trails should provide for local- and long-distance trail rides, and may also serve multiple user types. Basic dimensional requirements include an 18 to 36 inch wide trail tread and appropriate horizontal clearances. In high use and developed areas, a minimum tread width of seven to eight feet should be provided to allow for riding side by side as well as opportunities for passing when bidirectional movements are expected. Compacted natural soil is typically the preferred trail tread, but surfacing trails with crushed fines may be preferred in Humboldt County due to climate conditions.

**BLANK
FIGURE 4-2
TRAILS DIAGRAM**

Developed/Improved Trails accommodate walking and hiking in a variety of contexts and are the minimum trail standard typically incorporated into a regional trails network. They generally have a compacted natural soil surface (or surfaced with crushed fines to improve trail conditions due to climate) and widths ranging from 18 inches to 48 inches. These types of facilities are typically located in open space areas, at local and county parks, in undeveloped public rights-of-way such as utility corridors, and in parklands and resource lands.

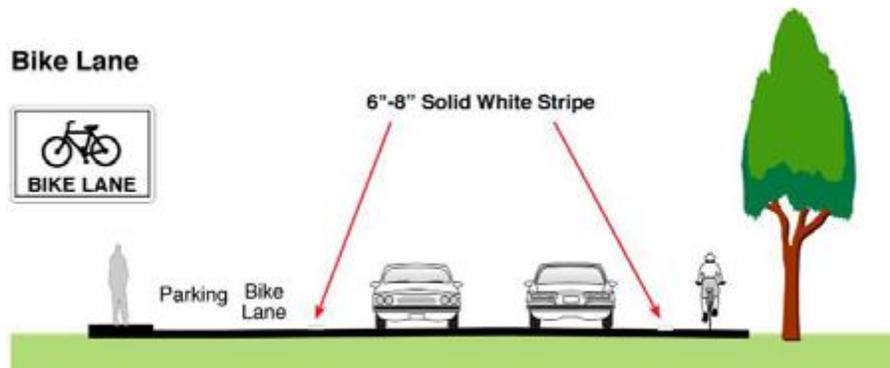
Paved trails and on-street routes are intended to meet Caltrans and AASHTO dimensional, geometric and functional standards for Class I bike paths, Class II bike lanes, and Class III bike routes that serve a variety of commuter trips, utilitarian trips, and recreational trips. Paved surface trails are further described below.

Shared Use Path



Class I Bike Path

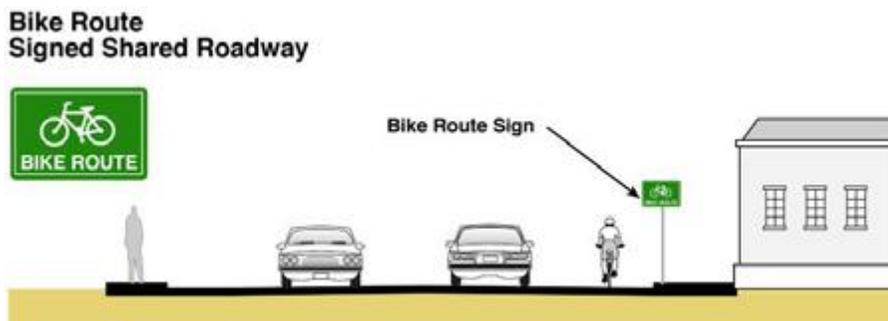
CLASS I BIKE PATH – Class I bikeways are typically referred to as **multi-use** or **shared use paths**. They are paved and separated from streets and highways. For a two-way path, the minimum width is 8 feet (2.4 meters) (per Caltrans design criteria). Class I bikeways are shared by bicyclists and pedestrian, and in some cases equestrians. They are popular with novice cyclists; experienced bicyclists may avoid these paths to avoid conflicts with multiple users.



Class II Bike Lane

CLASS II BIKE LANE – Class II is often referred to as a **bike lane**. It is striped and stenciled lane for one-way travel on a street or highway. When properly designed, bike lanes make

motorists more aware of bicyclists. The minimum width of a lane is 4 feet (1.2 meters), or 5 feet (1.5 meters) if the lane is next to a curb or parked cars.



Class III Bike Route

CLASS III BIKE ROUTE – Generally referred to as a **bike route**, Class III bikeways are signed to indicate that bicyclists share the roadway with motor vehicles, and sometimes pedestrians (not recommended). These are recommended to connect where there are gaps in Class I or Class II bikeways.

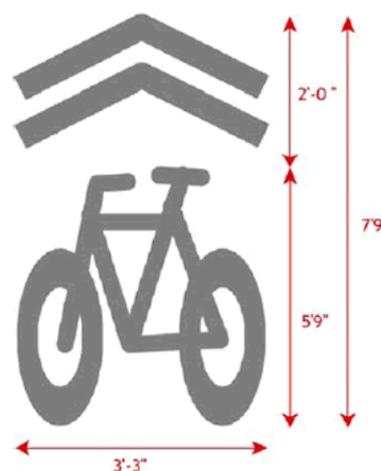
In addition to Caltrans’ standard Class III bikeway design, the Regional Bicycle Plan proposes two modified classifications for Class III bike routes, one “enhanced” and one “rural route.”

ENHANCED CLASS III BIKEWAY – This designation is for bike routes that add one or more design elements other than standard Class III signs. Enhanced Class III bikeways augment the bike facility with pavement markings and/or signage. Roadway space requirements are the same as for other Class III facilities.

One way to enhance the Class III design is to paint a fog line on the roadway, which visually delineates between the edge of the travel lane and the parking zone or shoulder. Fog lines also visually constrict the travel lane, which makes some drivers slow down.

A Class III design can also be enhanced with “Share the Road” signs placed in tandem with “Bike Route” signs, and/or on other signposts. Another way to enhance the bike route is to paint *shared-use arrows* (commonly called “sharrows”) in the roadway.

RURAL ROUTE CLASS III BIKEWAY – This augmented Class III Bikeway is intended for rural, two-lane roads that cyclists frequently use, but whose width and/or sight distances make them poor candidates for a standard bike route. Identifying these roads with signs as “Bike Routes” can potentially attract more cyclists where engineering cannot improve roadway conditions to accommodate more bicycle traffic.



A “Sharrows” Symbol



In these cases, “Share the Road” signs can be installed to increase motorists' awareness that cyclists are riding on the roadway. Appropriate signs include a yellow bicycle warning sign and “Share the Road” or “Share the Road with Bicyclists” placard.

The Regional Trails Master Plan includes detailed information on trail design and standards, including trail cross sections, accessible trail design, trailhead layout and trail support facilities.

Safe Routes to School is an international movement that has taken hold in communities throughout the United States. The concept is to increase the number of children who walk or bicycle to school by funding projects that remove the barriers that currently prevent them from doing so. Those barriers include lack of infrastructure, unsafe infrastructure, lack of programs that promote walking and bicycling through education/encouragement programs aimed at children, parents, and the community. Some of Safe Routes to School's benefits:

- Makes safer school routes by improving intersections and sidewalks.
- Reduces traffic congestion and greenhouse gas emissions from automobiles.
- Improves students' health and their sense of their surroundings.
- Builds working relationships and friendships in the community.
- Promotes and builds active lifestyles and livable communities for everyone.

In 1969, 50% of school children in the United States walked to school (US Centers for Disease Control and Prevention). Today in Humboldt County, 20% of school children walk or bike to school.

There are two schools in Rio Dell, the Eagle Prairie Elementary School and the Monument Middle School. The schools are located on Center Street and adjacent to one another. The City being fairly compact is ideal for walking; therefore the school district does not provide busing for any of its students.

Eagle Prairie Elementary serves grades K-5 and Monument Middle School serves grades 6-8 in the Rio Dell. About half of the total students walk or bike to school. The rest of the approximately 500 students are driven to school. Safety concerns around walking and biking include streets without sidewalks, crossing streets, and narrow unpaved streets. A crossing guard helps students cross Wildwood and Center Streets.

The City of Rio Dell received funding in the 2010 cycle, which redesigned the drop-off/pick-up area of the school and improved access near at the intersection of Second Avenue and Davis Street. This has increased safety for students walking and biking. The City applied for another grant during the 2012 cycle. The City was awarded a grant in the amount of \$152,300. The City is providing an additional \$17,400 towards the improvements. The project includes a lighted crosswalk at the intersection of Wildwood Avenue and Central Street, crosswalks, sidewalks and bulbouts.

4.9 Rail Transportation

Northern California's vast stands of redwood trees presented a problem - how to get them to market? Their immense size and weight did not allow for normal lumbering practices. The answer lay in the railroad. The first railroads on the western coast were built in 1854 and for the next century, railroads played a vital role in a thriving lumber industry.



The Northwestern Pacific Railroad, at its height, was an amalgamation of some sixty different companies. Its territory extended along the Pacific coast from San Francisco to California's Humboldt County, 100 miles shy of the Oregon State line. Some of the forerunners had built extensive and substantial operating lines. Others were short lines, such as the many logging lines in the Humboldt Bay region. Nearly a third consisted of companies which incorporated but never laid a foot of track. All of them contributed, in some fashion, to the rich heritage of the NWP.

The line was opened by Northwestern Pacific in 1907 and was owned jointly by Southern Pacific and AT&T. After merging with the Eureka & Klamath Railroad in 1914, Southern Pacific bought the Santa Fe's equal interest in the line in 1929. The Northwestern Pacific Railroad, one of Northern California's historic entities, survived as a Southern Pacific wholly-owned subsidiary. Petaluma was the NWP's base of operations. "Sprint Trains" and their crews originated there, running both north and south on the line.

In 1984 the track from Outlet, near Willits, north to Arcata was sold to a new company, the Eureka Southern Railroad. By the early 1990's most of the traffic originated in Eureka and the surrounding area.

The Eureka Southern went bankrupt in April of 1992 and sold its assets to the North Coast Rail Authority, which designated the North Coast Railroad to run the line. In its first few months, the North Coast Railroad leased NWP diesels, recreating the days when the Northwestern Pacific still owned the line from Willits to Eureka. The NWP interchanged with the North Coast Railroad in Willits, forwarding the train to the Southern Pacific at Suisun City. For the last few years, trains that negotiated the scenic north end of the line were run only at night. The line shut down in 1997 when it was impacted by major floods and landslides.



5.0 Air Transportation

The Arcata-Eureka Airport located in McKinleyville is the county's sole commercial airport. Maintaining a wide selection of carrier, flight, and destination options is a high priority to the County as a whole. Given the County's remote location, providing convenient travel connections to urban centers is an important quality of life amenity and essential to maintain Humboldt's connections to the world economy.

Rohnerville airport is located 0.8 miles south of Fortuna. It serves the City of Fortuna, Rohnerville and surrounding communities of west-central Humboldt County. This airport is situated atop a plateau, overlooking the Eel River, amid rural residential and undeveloped

land. Its runways end at rapidly falling terrain, south of the airfield. Vehicular access to Rohnerville Airport is from Airport Road via Drake Hill Road and US 101.

The airport has one runway, Runway 11-29 which is 4,007 feet long and oriented roughly northwest/southeast. Runway 11-29 offers non-precision instrument approach capabilities. There are two banks of hangars, located at the west end of the airport, consisting of box hangars, T-hangars and portable T-hangars. Fifteen tie-downs are positioned between these hangars. The transient apron is located mid-field and consists of five tie-downs, and one portable T-hangar. A pilots' lounge is immediately west of the transient apron. Fuel is dispensed from a self-fuel card operated system.

A California Department of Forestry and Fire Protection (CAL FIRE) station has been operating on the east side of Rohnerville Airport since 1964. The CAL FIRE station is an air attack base, as well as a fire-fighter training facility. CAL FIRE equipment includes water and retardant tanks, one hangar used to store helicopters, an apron that provides parking for up to four aircraft and a fuel dispensary.

5.0 GOALS, POLICIES, AND PROGRAMS

The Circulation Element proposes several goals and policies to support these additional important roadway functions, rather than serving the single purpose of automobile traffic.

Goal CE 1

Develop and Maintain a Balanced vehicular and non-vehicular transportation system to meet the mobility needs consistent with General Plan land use goals and policies.

Policy CE 1-1

Develop and maintain the Circulation Plan network of arterials, collectors, and local streets. The proposed streets should be designed to serve the functions they are intended to serve, with adequate capacity and safety.

Implementation CE 1-1.a. Design, construct, upgrade, and maintain the automobile, bicycle and pedestrian circulation system according to the functions they are intended to serve.

Responsibility: Project proponents, Community Development, Public Works and the City Engineer.
 Timeframe: Ongoing.
 Resources: Capital Improvement Program, project proponents, street funds, general obligation bonds, potential improvement districts and impact fees.

Implementation CE 1-1.b. Coordinate with the County, CALTRANS and the Humboldt County Association of Governments (HCAOG) in addressing regional transportation issues.

Responsibility: Community Development, Public Works and the City Engineer.
 Timeframe: Ongoing.
 Resources: Local, State and Federal programs.

Implementation CE 1-1.c. Explore the potential of designating one-way streets on narrow, crowded (parked vehicles) streets to enhance traffic flow and emergency access.

Responsibility: Community Development, Public Works, City Engineer and the Traffic Committee.
Timeframe: Ongoing.
Resources: Capital Improvement Program, General Fund and street funds.

Policy CE 1-2

Design street systems in residential areas to minimize through traffic, to encourage internal movement by bicycling and walking, to provide safer and quieter neighborhoods, to minimize vehicular conflicts at intersections and to ensure that the impact of recreational traffic on local residents is minimized.

Implementation CE 1-2.a. Discourage driveway encroachments on arterial and collector streets.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing.
Resources: Project proponents.

Implementation CE 1-2.b. Identify and provide directional signs to recreational uses that maximize use of arterial and collector streets and minimize or eliminate traffic through residential areas.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing.
Resources: General Fund, Capital Improvement Program and street funds.

Goal CE 2

Maintain a satisfactory Level of Service (LOS) for automobile traffic.

Policy CE 2-1

Maintain minimum traffic Level of Service (LOS) C.

Implementation CE 2-1. Evaluate traffic impacts of major developments for consistency with LOS standards.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing. Require traffic reports with major development proposals.
Resources: Project Proponents.

Goal CE 3

Promote bicycle use and walking as an alternative to automobile traffic and for community health and enjoyment.

Policy CE 3-1

Provide an extensive network of pedestrian, including the physically disabled and bicycle pathways to support community health and provide safe alternatives to automobile use.

Implementation CE 3-1.a. Require project proponents to design and construct facilities for bicycle and pedestrian routes as identified in the Circulation Element.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing. Require traffic reports with major development proposals.
Resources: Project Proponents.

Implementation CE 3-1.b. Acquire fee title or easements to provide for the construction of bicycle and pedestrian routes as identified in the Circulation Element.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing
Resources: General Fund, Capital Improvement Program, project proponents, street funds and grants.

Implementation CE 3-1.c. Integrate bicycle and pedestrian routes with transit stops.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing
Resources: Include integration with public works projects and planning permit approvals.

Implementation CE 3-1.d. Explore establishing a rail with trail corridor along the existing railroad along the Scotia Bluffs..

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing
Resources: Grant funds.

Policy CE 3-2

Provide continuous sidewalks along all streets. Maintain sidewalks in good repair.

Implementation CE 3-2.a. Explore a program to fund sidewalk improvement or installation where no sidewalks exist, including sharing of costs with property owners, loans payable at time of sale, etc.

Responsibility: Community Development, Public Works and the City Engineer.
Timeframe: Ongoing
Resources: General Fund, Capital Improvement Program, project proponents, street funds, property owners and grants.

Implementation CE 3-2.b. Identify major pedestrian routes and, where they adjoin streets, prepare roadway sections that encourage pedestrian use.

Responsibility: Community Development, Public Works and the City Engineer.
 Timeframe: Prior to major street improvements
 Resources: General Fund. Repair and install with public works projects and planning permit approvals.

Implementation CE 3-2.c. Repair or install sidewalks on all streets in conjunction with public works and private development projects.

Responsibility: Community Development, Public Works and the City Engineer.
 Timeframe: Ongoing, public works projects and planning permit approvals
 Resources: General Fund, Capital Improvement Program, project proponents, street funds, property owners and grants

Implementation CE 3-2.d. Where possible, use traditional sidewalk design with a planter strip between the curb and sidewalk,

Responsibility: Community Development, Public Works and the City Engineer.
 Timeframe: Ongoing, with public works projects and planning permit approvals
 Resources: Development approvals.

Policy CE 3-3

Provide trees and/or landscaping along streets and pedestrian routes. Where street widening would remove trees and/or landscaping, investigate alternative roadway configurations that would preserve the trees and/or landscaping.

Implementation CE 3-3.a. Review proposed projects, including public works projects that may impact existing trees and/or landscaping

Responsibility: Community Development, Public Works and the City Engineer.
 Timeframe: Ongoing
 Resources: Development approvals, grant funds.

Goal CE 4

Promote public transit service to, from and within the City.

Policy CE 4-1

Participate in efforts to maintain and enhance public transit opportunities within the City.

Implementation CE 4-1.a. Maintain and encourage use of public transit by encouraging providers to maintain and expand schedules that serve the community.

Responsibility: Humboldt Transit Authority (HTA), the Humboldt County Association of

Governments (HCAOG), CALTRANS, Community Development, Public Works and the City Engineer.
Timeframe: Ongoing.
Resources: Local, State and Federal transit funding.

Implementation CE 4-1.b. Provide convenient bus stop locations and shelters.

Responsibility: Humboldt Transit Authority (HTA) and the Humboldt County Association of Governments (HCAOG), CALTRANS, Community Development, Public Works and the City Engineer.
Timeframe: Ongoing.
Resources: Local, State and Federal transit funding.