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Comments submitted by Ann Lindsay, MD Health Officer 1/30/08

Chapter 8. Circulation Element

8.1 Introduction

This chapter describes the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local transportation facilities. It includes consideration of roads, public transportation, non-motorized transportation facilities, airports, and marine and rail transportation. There is a growing recognition of the need to consider public health and economic development aspects when planning transportation in the county. Reducing dependence on automobiles could increase physical activity while reducing greenhouse emissions.

Motor vehicles are the number one killer of Californians age 1 – 35. Transit is ten times safer per passenger mile. 67% percent of Humboldt County residents report they get less than the recommended amount of physical activity. Fifty-eight percent are overweight. Transportation accounts for 45% of greenhouse gases, emissions and the transportation system is almost entirely dependent on oil-based fuels, accounting for 13% of Humboldt county's gross domestic product (GDP) spending. It costs the average person $9,000. a year to maintain an automobile.
The average Humboldt County resident pays 27% percent of their income on transportation compared to 16% statewide. Nine percent of households are "carless" largely due to age, disability or income restraints. County Public Works reports road maintenance is grossly underfunded, highlighting the benefits of transportation demand management (TDM) to reduce vehicular traffic.

Relationship to Other Elements and Other Plans

The goals and policies in this Element are correlated with the Land Use Element (Chapter 5), so new and existing development will be adequately served by the transportation system, and will not interfere with existing or planned improvements. Transportation policies in this Element are also consistent with policies in the Energy Element (Chapter 17), and the Air Quality Element (Chapter 19), to minimize energy costs and air quality impacts. The Circulation Element is also consistent with the Community Infrastructure and Services Element, which contains policies regarding infrastructure financing and level of service standards.

State laws (Government Code §65103(f) and §65080 et seq.) encourage coordination between the County's Circulation Element and transportation plans developed by other local, regional, and State agencies.

The County coordinated with the California Department of Transportation (CalTrans) and the City of Eureka to develop a Greater Eureka Area Travel Model (GEATM), a county-wide travel demand forecasting model. The model is a joint-agency planning and

decision making tool that can be used to assess impacts of land use and transportation changes, and help determine the effectiveness of potential improvements to the road system.

The County is also synchronizing with on-going transportation planning by the regional Humboldt County Association of Governments (HCAOG); in addition to the 2006 Regional Transportation Plan (RTP), HCAOG has produced a Regional Bicycle Transportation Plan (2004), a Pedestrian Needs Assessment (2003), and a Regional Parking Needs Study (2003). The 2006 RTP reviewed other local transportation planning documents as well, such as the Manila Community Transportation Plan (Phases I and II), a traffic calming and safety concept plan for Hoopa, the County's Airport Master Plan, the Port of Humboldt Bay Harbor Revitalization Plan, and a recent feasibility study for the Northwestern Pacific Railroad.

8.2 Description of Transportation Facilities

Roadway Infrastructure

The overall roadway network in Humboldt County has approximately 1,400 miles of county roads and city streets, 378 miles of state highways, including U.S. Highway 101, and roadways on federal lands. These roadways provide for the inter-regional and intra-regional movement of goods and people on California's north coast. The Humboldt County-maintained roadway system is made up primarily of two-lane roads that traverse varying degrees of flat, rolling, and mountainous terrain.

Road Capacity

As the County's population grows over the 20 year general plan period, corresponding increases in vehicle-volumes could have impacts on the safety and functionality of County roadways unless concentrated effort is made to reduce auto trips and the current "drive alone" mode. The GEATM model predicts most vehicle trip increases will occur within the Urban Study Areas (USAs) shown in Chapter 4 (Managing Growth). In urban infill, mixed-use development context, more trips occur by transit, walking and bicycling. Urban infill could factor down auto trips by as much as 25%, according to the Sacramento County Association of Governments.

As described in the Community Infrastructure and Services Technical Report (Winzler & Kelly, 2007), the model uses a Volume to Capacity Ratio (V/C Ratio) to describe the "Level of Service" (LOS)of roads, a measure of the adequacy of the road to accommodate vehicle traffic. In several cases, roadways in the Eureka area are already operating at or above capacity during peak hours; F Street, Herrick Avenue and Harrison Avenue are among the eight (8) road segments already operating at above capacity[1].

The 2007 Technical Report also identifies other roads currently able to accommodate existing traffic volumes, but expected to have segments that reach or exceed capacity

[1] In addition to the road segments at capacity in the Eureka area predicted by the GEATM model, the 2006 RTP also identified capacity constraints along Indianola Road between Eureka and Arcata, on Blue Lake Boulevard (in the Blue Lake area), in McKinleyville on Murray Road and Sutter Road, and on Redwood Drive in Garberville. The 2006 RTP used data compiled from CalTrans to derive capacity estimates, rather than the GEATM model; they used the 1997 Route Segment Report, the 2002 California State Highway Log for District 1, and 2004 traffic volume data.

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as traffic volumes increase over the next 20 years. Seven (7) roadways fall into this category; Ridgewood Drive and Elk River Road in the Eureka area, as well as School Road and Central Avenue in McKinleyville are among them. Still others are expected to remain below capacity over the next 20 years; 44 of the 64 total roads analyzed by the model fall into this category. Peak-hour auto traffic congestion could be reduced by shifting peak-hour drive-alone trips to other modes by investing in trip-reducing programs, such as expanded bicycle and pedestrian infrastructure, requiring new development to unbundle parking and encouraging employers to provide free transit passes to residents and/or facilitate car sharing programs.

Roadway capacity is generally less of an issue for rural areas due to the lower population densities, but even so there are rural roadways where existing and future capacity and functionality must be addressed. Roadway capacity is also affected by limited right-of-way width and the need to provide for vehicle travel lanes and facilities for other transportation modes, including public transit, bicycles and walking.

Several map series provide details of the County's road system. Maps showing existing and planned future County roads and multimodal transportation facilities are attached as Appendix XX, existing and future above-capacity road segments are in the 2007 Technical Report, and maps showing the 2006 Average Daily Traffic (~~and~~ADT) and Level of Service for the State Highways in Humboldt County are in the 2006 Regional Transportation Plan (RTP) developed by the Humboldt County Association of Governments. It should be noted that ADT is not the primary measure of a transportation system's success or failure because motorists don't perceive ADT of a particular roadway segment, but rather peak-hour congestion. Peak-hour auto trips would be a better measure and goal for mitigation than ADT.

Impacts of new development on the safety and capacity of the road network are 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 County no longer accepts new roads into the County-maintained road system, but instead requires they be constructed by the developer, and a Road Maintenance Association is established to maintain them into the future.

Some developments are required to make off-site improvements as well, to mitigate for off-site impacts. Increasingly, the County is relying on the GEATM model to assess off-site impacts of new development. The model helps compare alternative improvement designs, and can be used to apportion to the new development the fair share of the selected road and/or intersection improvements. Road infrastructure financing policies and implementation measures are contained in the Community Infrastructure and Services Element (Chapter 7). Incentives should be developed to reduce drive-alone transit.

Road capacity and functionality is connected to development potential described in the Land Use Element (Chapter 5). Simply put, areas with development potential need to be adequately served by roads with sufficient capacity to accommodate the new development and multi-modal mitigations must be incentivized to reduce drive-alone automobile dependence.

Road Maintenance

Roadway maintenance is one of the biggest challenges facing the County. At the time this chapter was written, there was over $100 million in deferred maintenance on the County's major roadways, which does not include maintenance costs for local streets. The majority of future maintenance needs will occur within in the USAs, but it is an issue system wide. Without significant increases in spending on maintenance, and/or reduction of drive-alone automobile travel roadway conditions in the County will continue to decline.

In 2000, Humboldt County's arterial and collector roadways were inspected and rated as part of the County's new Pavement Management System (PMS). This system relies on assessments of roadway condition and helps roadway maintenance managers identify thresholds for maintenance measures. The PMS generates pavement distress data for a representative sample of arterial and collector roadways in Humboldt County. This data forms the basis for the creation of an "Overall Condition Index" (OCI), which rates roadway surfaces on a scale from 0-100 as shown in the following table:

Table 8-1 Roadway OCI Estimates, Maintenance Requirements and Costs

OCI	Condition	Maintenance Typically Required at this Condition Level	Average Cost ($/ft²)[2]
70-100	Very Good	*Minor* (OCI 70-85)—Variable maintenance.	<.4
50-69	Good	*Chip Seal*—Pavement sprayed with asphalt, covered with aggregate and rolled.	.4
25-29	Poor	*Overlay*—An increase in the pavement load carrying capacity by adding additional pavement layers.	4.0
<25	Very Poor	*Reconstruction*—Complete removal and replacement of the existing pavement structure.	10.0

The OCI is used to prioritize maintenance projects for the County's arterial and collector roads. The 2007 Technical Report expands the OCI to include the other County maintained roads.

Besides the OCI, funding for roadway maintenance, upgrades and expansions is often the limiting factor for determination of project eligibility and priority. Funding issues are more fully described in the 2007 Technical Report, and is addressed by policies in the Community Infrastructure and Services Element (Chapter 7).

The County is developing a five-year Capital Improvement Program (CIP) for the years 2008-2012 to help guide the use of the County's transportation budget into the future and should increase capital development of transit and bike/ped transportation. The County is also developing a list of road projects from its pavement management system that will determine the future priorities for maintenance and rehabilitation of the County's roadways.

The 2006 RTP already includes a list of the top priority transportation improvement projects for the County. That list will be updated in future versions of the RTP with projects from the CIP and Pavement Management System.

[2] Cost estimates are based on 2003 CIP estimates escalated to reflect current material costs as reported by Public Works personnel.

Best Management Practices

In response to the 1997 listing of the Coho salmon as a threatened species, Humboldt County worked with four (4) adjacent counties (Del Norte, Mendocino, Trinity and Siskiyou County) to form the "Five Counties Salmonid Conservation Program" to evaluate options for County grading and road maintenance practices to provide or improve salmonid habitat and water quality overall.

From this effort, the County developed and implemented a grading ordinance in 2001 to standardize best management practices for controlling soil erosion from stormwater runoff across disturbed areas. Another outcome of this effort in 2002 was a road manual to act as a guide and framework for implementing improved road maintenance practices. County Public Works adopted this as Departmental Policy several years ago. Now that the County has an approved incidental take permit for operating under these guidelines, Public Works will be seeking formal adoption of the manual by the Board of Supervisors.

U.S. Highway 101 Safety Corridor Project

Arguably the single largest transportation project with the most potential impact on Humboldt County residents during the timeframe of the General Plan is the CalTrans Highway 101 Safety Corridor project between Arcata and Eureka. The 2007 Draft Environmental Impact Report (DEIR) described the alternatives under consideration, and the preferred alternative involves construction of an overpass at the intersection of Indianola Cutoff and U.S. Highway 101. Reducing drive-alone automobile travel would help mitigate transportation demand and have other health and environmental benefits

Policies in this Element reflect the comments made on the DEIR by the Board of Supervisors September 18, 2007 to request consideration of a strategy that treats all three main roads between Arcata and Eureka as one system. The strategy would develop an overall improvement plan that phases improvements on a prioritized basis between the three roads; U.S. Highway 101, State Route 255, and Old Arcata Road/Myrtle Avenue.

Public Transportation

The 2006 RTP contains a comprehensive description of public transit services of fixed route, paratransit and other 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.

Paratransit services are available through Dial a Ride/Dial a Lift, K/T Net Paranet, Blue Lake Rancheria Dial a Ride, Fortuna Senior Transit, Humboldt Community Access and Resource Center (HCAR), Bridgeville Community Center Van, Ferndale Senior Resource Transportation Network "Bridging the Gap", Coastline Enterprises, Humboldt County Mental Health, and United Indian Health Services, Inc (UIHS).

Also described in the 2006 RTP are the services of the Redwood Coast Transit service between Crescent City and Humboldt County, Greyhound Bus Lines, AMTRAK and City Cab.

The 2006 RTP defines a threshold level of public transit service as, "a minimum level that should be provided in Humboldt County to ensure system integrity and to implement RTP transportation policies" (2006 RTP). It identifies a 1 hour weekday interval or less as the appropriate level of service for the urban areas of Eureka and Arcata, and an interval of 1.5 hours for the U.S. Highway 101 corridor between Trinidad and Scotia. This Element carries forward those public transit goals, policies and implementation measures applicable to the unincorporated areas of the County. See Jeremy's paper RE: other performance measures. Add in (something ??) transit stops and setting design standards for bus stops in small town or rural context.

Non-Motorized Transportation

The term "non-motorized transportation facilities" generally refers to improvements for bicycles and pedestrians, and for the mobility-challenged, and they mostly include sidewalks, crosswalks, and bicycle lanes associated with the road system. While walking or cycling between destinations is a choice for some, it is a necessity for others that do not have access to motorized vehicles. Providing alternatives to drive-alone automobile travel would benefit public health and the environment while reducing traffic congestion and road maintenance costs. The Community Service Department should develop design standards for pedestrian and bicycle facilities, particularly with interface with public transportation.

Incentivizing mixed used development in commercial zones with modes of higher density focused around transit hubs can help reduce traffic demands and promote healthier commute modes.

Most facilities dedicated exclusively for non-motorized use are located in urban areas of the county. However, pedestrians and bicyclists frequently utilize roads in Humboldt County that lack sidewalks and/or bicycle lanes. Cyclists are also granted full access to all state route facilities in CalTrans District 1, which includes all of Humboldt County. Major new non-motorized facilities are possible along the Annie and Mary Rail Line from Arcata to Blue Lake, and along the Northwestern Pacific Railroad between Arcata and Eureka. A long-term goal should be providing a network of class I multi-use paths between all major population and employment centers in the area.

Impacts on non-motorized transportation facilities are assessed on a project-by-project basis. While the County uses LOS standards for determining impacts of new development to vehicle traffic, assessing impacts to non-motorized facilities is less standardized. Adoption of a Level of Service standard for non-motorized transportation facilities would help standardize those assessments. (The Seattle system defines roads on importance for each mode.)

For recreational use, many trails either dedicated or shared, are identified in the 1979 Trails Master Plan, and in the six (6) coastal plans. While equine use does not constitute a significant portion of daily commuter travel in Humboldt County, equestrian trails are a significant recreational resource, and are also identified in the Trails Plan. Maps and descriptions of existing and proposed future non-motorized transportation facilities are shown in Appendix XX.

The 1979 Trails Master Plan recognized the health benefits of bike paths and trails when it stated,

> "It is becoming more widely accepted by doctors and health officials alike that *America's* increasingly sedentary life style is having a detrimental effect on its citizens. With the provision of recreation or transportation oriented trails for walking, horseback riding, and bicycling, county residents as well as north coast tourists will have increased opportunity to improve their general well-being through physical activity.

The connection between public health and non-motorized transportation is receiving increased attention both locally and nationally as childhood obesity and other health problems related to our more sedentary life styles become epidemic in our population. Non-motorized transportation and alternatives to drive-alone auto trips also reduce carbon emissions and our dependence on fossil fuels. The 1979 Trails Master Plan also looked at school access conditions for students walking and bicycling to and from county schools. It reported that parents and school administrators at the elementary school level were concerned about safe child access to schools. One of the policy initiatives that came out of the Plan was to gradually provide safe student access "trails" wherever children walk or bicycle to school regardless of the number of children involved. Schools cited in the 1979 Trails Master Plan for improved accessibility were: Cutten (Eureka area), Dows Prairie (McKinleyville), Fieldbrook, Freshwater, Jacoby Creek, Lafayette (Eureka area), Morris (McKinleyville), Orick, Pine Hill (Eureka area), Redway, Winship Jr. High (Eureka area), and Worthington (Eureka area).

The need for safe access to schools is reflected today in the "Safe Routes to Schools" funding program administered by CalTrans, which helped construct bicycle and pedestrian facilities along Central Avenue in McKinleyville. The Redwood Community Action Agency (RCAA) has also completed several "walkability audits" to assess the difficulty of walking in communities, particularly along school routes. "Walkability Audits should continue to be used to help prioritize improvements. This tool could also be used with residents in the vicinity of proposed new development to help mitigate community concerns.

Current state law exempts schools from general plan requirements to coordinate with local jurisdictions regarding transportation routes to schools. Nonetheless, a policy has been added to this Element to encourage coordination between the school districts and the County.

Truck Transportation

The primary routes into and out of the County used by commercial trucks are U.S. Highway 101 and State Route 299. These major highways provide many trucks adequate facilities and level of service for their operations. However, narrow, windy sections of these highways prevent larger trailers from entering the County, which increases shipping costs for both imported and exported goods.

Improvements to the road alignment of Highway 101 through Richardson Grove in the southern end of the County, combined with recent State regulatory reforms, may eliminate the constraint on large truck access. This would reduce costs of shipping and may help local businesses become more profitable. Future improvements to Highway 299 in the Buckhorn Summit area of Trinity County could provide trucks with larger trailers access from the east, which would also have broad economic benefits for the County. Planned roadway infrastructure improvements to accommodate large trucks should not

compromise access and safety by other modes. Multi-modal street design standards should be developed to include bicycle and pedestrian facilities.

Air Transportation

The following airports presently operate in the County:

Table 8-2. Inventory of Airports of Humboldt County

Airport Name	*Runway Length (in linear feet)*	*Runway Width (in linear feet)*	*Lighting*	*Number of Based Aircraft*
Arcata-Eureka Airport	5,998	150	Yes	11
	4,499	150	Yes	
Dinsmore Airport	2,510	48	No	1
Eureka Municipal Airport	2,700	60	No	16
Garberville Airport	3,050	75	No	20
Hoopa Airport	2,325	50	No	2
Kneeland Airport	2,270	50	No	0
Murray Field	3,000	50	Yes	69
Rohnerville /Fortuna Airport	4,005	100	Yes	35
Shelter Cove Airport	3,400	75	No	0

Source: Humboldt County Aviation Division, 2007

Airports in the unincorporated areas (all except the Eureka Municipal Airport) are operated according to an Airport Master Plan, which was developed in 1992. The plan for the Arcata-Eureka Airport and the Kneeland Airport were updated in 2005, and the plans for the Garberville, Dinsmore, Murray Field and Rohnerville airports were updated in 2006. (Operation of the Shelter Cove Airport has been assumed by the Resort Improvement District, and the Hoopa Airport is being operated by the Hoopa Tribe.)

The State Airport Land Use Compatibility Plans map "Land Use Compatibility Zones", which restrict the allowed uses, and residential densities in areas that would impact aircraft operations. This is another area where the Land Use Element needs to be consistent with this Circulation Element; the development potential in the Land Use Element should reflect the residential densities allowed by the current State designated Airport Compatibility Zones. The Noise Element (Chapter 20) and Safety Element (Chapter 21) also include policies and standards to address airport noise and safety issues. Consistent with other traffic demand reduction efforts, transit, bicycle and pedestrian access to existing airports should be improved

Marine Transportation

The Moving Goods and People Report (Dyett & Bhatia, 2002) reported that historically, forest products have been the highest volume commodity passing through Humboldt Bay. The export demand for forest products has fluctuated over the years, having been affected by governmental regulations, market fluctuations, and construction activity levels. Shipped commodities passing through Humboldt Bay include petroleum products (gasoline and fuel oil), wood chips, logs, lumber, and paper pulp.

The marine transport of goods has been affected by changes in the shipping industry. Larger deep draft vessels are becoming more common for moving cargo along Pacific Ocean shipping lanes. These vessels have higher cargo capacities and require deeper and wider channels and turning basins. In response to this need, the Humboldt Bay Harbor District and the U.S. Army Corps of Engineers completed a project in 2000 to deepen the Bar, Entrance, North Bay, and Samoa Channels and widen the Entrance Channel. In addition, the Harbor District has been working with members of Congress and the U.S. Army Corps of Engineers to develop a companion project that would deepen and widen the Fields Landing Channel.

Upgrading and modernization of the port facilities is considered an important component of economic growth for the area. The bar and entrance channels have been deepened to a depth of 48 feet, and the North Bay and Samoa Channels deepened to a depth of 38 feet. The growth of Humboldt Bay's marine transport industry is linked to growth in the truck and rail transportation modes. All six dock facilities identified in the 2006 RTP have railroad spurs that connect to the main North Coast Railroad facilities. Due to the current condition of railroad operations, goods loaded on and off of commercial vessels calling on Humboldt Bay are transported to and from the dock facilities by truck.

Rail Transportation

Rail transportation in the County is described in detail in the 2006 RTP and the Moving Goods and People Report (Dyett & Bhatia, 2002), which reported that the North Coast Railroad Authority (NCRA), created by the State Legislature in 1989, began acquiring the Northwestern Pacific Railroad Company (NWP) in 1992, and fully acquired it by 1996.

In 1997, the rail line effectively ceased operation. When the line operated, it provided freight service three days a week and occasional excursion passenger service on weekends and holidays. Principal freight for the railroad was lumber being transported to the California and Arizona markets. Additional traffic included dairy products, fish products, and aggregates. There was also some inbound traffic of coke and calcified lime used in pulp processing.

The railroad's ability to offer service depends largely on the condition of the track and roadbed and the availability of stations. Currently, there are six inactive stations at Willits, Ukiah, Scotia, Fort Seward, Calpella and Laughlin. A considerable program of roadbed, track, bridge and tunnel and station rebuilding would be necessary if operations are to ever resume.

A potential use of the northern most portion of the rail line considered in the 2002 Moving Goods and People Report would support tourism by developing an excursion train. The Northern Counties Logging Interpretive Association's (NCLIA's) mission is to create a logging and timber technology museum in Humboldt County, coupled with an operating steam-powered "Humboldt Bay Scenic Railroad" excursion train. This tourist railroad would operate from South Fork north to Samoa. The NCLIA envisions two excursion lines. One line would operate from Eureka, around the bay to Arcata, then to Samoa. Another line would originate in Arcata, and travel to Eureka, Loleta, Fernbridge, Fortuna, Scotia, and South Fork.

The excursion trains would be operated under the NCLIA's non-profit (501(c)3) corporation. According to NCLIA, the section of the railroad to be used, referred to as the "Humboldt short rail," can be profitable with limited local freight and tourist train service. The NCLIA hopes to have the Humboldt Bay Scenic Railroad, along with the "Redwood Empire Museum of Timber Technology" in operation after the NCRA opens this portion of the railroad.

The NCRA Board of Directors intends to focus on updating and implementing the adopted business plan and three major areas of future need:

- Executing public policy to protect the railroad as a public transportation asset and to promote its use.
- Oversee the financial accounting and record keeping system through auditing and monitoring of all systems.
- Pursue new funding sources and new legislation, as well as continuing management of grant funding from existing local, state and federal sources to improve railroad infrastructure and operations.

8.3 Goals and Policies

The goal of the Circulation Element is to support safe transportation and movement of commercial goods while reducing drive-alone automobile trips, reduce dependence on fossil fuels, promote physical activity and possibly reduce road construction and maintenance expense.

C-G1 Roadway Safety and Functionality. To develop, operate and maintain a well-coordinated, balanced, circulation system that is safe, efficient and provides good access to all cities, communities, neighborhoods, recreational facilities and adjoining regions [FRWK].

C-G2 Multi-Modal Transportation. To provide a balanced multi-modal transportation system that accommodates motorized vehicles, public transit, bicycles, and pedestrians. and develop multi-modal quality of service (QOS) performance measures at an area-wide level.

C-G3 Interagency Cooperation. To coordinate planning among state/county/city roadway system service providers and HCAOG for improved system design, development, operations and maintenance. And adopt HCAOG Regional Transportation Plans (RTP's) as intervals updates to the General Plan.

Policies

Policy Topic #1—Roadway Classification, Safety and Functionality

C-P1. Safety Improvement. Use safety indicators and threshold criteria for capital improvements in the Capital Improvement Plan that result in levels of safety for all transportation modes on County roadways higher than statewide averages.

C-P2. Roadway Functional Classifications. Adopt and apply consistent roadway functional classifications that reflect urban/rural/community distinctions and that

maximize right-of-way use for multi-modal safety and functionality, working towards a network of class I multi-use paths between all major population and employment centers.

C-P3. Roadway Condition Thresholds. Multi-modal quality of service (QOS) performance measures should be developed and used with roadway system condition thresholds should be used to allow for maintenance project prioritization and selection based on the attainment of acceptable overall system condition levels and safety for all modes.

C-P4. Functional Efficiency and Capacity. Manage roadway systems for functional efficiency (roadway system and demand management) before functional capacity (roadway widening or new road construction) whenever possible, promoting safety and reducing drive-alone automobile use where possible.

C-P5. Pavement Management Criteria. Strive to maintain the overall condition of County-maintained roadways above the 50th percentile of the Overall Condition Index (OCI) and Modified OCI developed in the 2007 Technical Report.

C-P6. Orderly Development. Encourage development of a road system that supports an orderly pattern of land use through:

A. Using minor collector roads to provide access to higher density residential areas, local commercial facilities, neighborhood parks and schools.

B. Locating lower density residential areas with frontage onto arterial or major collector roads away from through-traffic unless sufficient mitigation measures are used.

C. Locating retail, service and industrial facilities, community centers, major recreational facilities, employment centers, and other intensive land uses near major collector, or arterial roads, prioritizing co-location of residential development.

D. Improving roads to accommodate land uses served by an inappropriate road classification. [FRWK] ?

E. Assessing needs of bicycle, pedestrian, transit and vehicular traffic when planning new development, allowing reduction of parking requirements if demand for vehicular trips is mitigated

F. Incentivizing mixed-use development to reduce transportation demand

G. Planning and developing multi-use transportation hubs with higher residential density, off street parking nearby commercial and safe access for bicycles and pedestrians

C-P7. Consideration of Land Uses in Transportation Decision-making. Transportation decisions in urban and rural areas should be based on a comprehensive planning approach that considers at a minimum existing land uses and future land development as proposed in adopted County plans and plans of other governmental agencies. [FRWK]

C-P8. Consideration of Transportation Impacts in Land Use Decision-making. Decisions to change or expand the land use of a particular area should include an analysis of the impacts to existing and/or proposed transportation facilities and services so as to minimize or avoid serious operational or economic consequences. [FRWK] and promote healthful alternatives.

C-P9. Mitigation Measures. Proportionate mitigation measures should be used to construct on- and off-site transportation multi-modal infrastructure improvements and dedicate rights-of-way clearly connected to impacts resulting from new development, and/or reduce transportation demand (e.g., by mixed-use development).

C-P10. Tracking Transportation Road Improvement Requirements. Maintain a database to track ~~road~~ transportation improvement requirements, including road conditions, bicycle, pedestrian Class I multi –use paths, multi-modal quality of service (QOS) measures, percentage of population within ¼ mile of a transit stop .

C-P11. Road Abandonments. ~~The County Planning Commission shall review~~ All proposed abandonments of ownership or maintenance on County roads shall be reviewed for conformance with the County General Plan before they are approved. [FRWK]

C-P12. Right of Ways as Public Facilities. Road and rail right of ways are hereby designated as Public Facilities (PF) in the Land Use Element, whether or not specifically mapped.

C-P13. Acceptance of Roads in the Circulation Element into the County Maintained Road System. Roads whose alignment are part of the Circulation Element (generally arterial and collector roads) that are constructed to County standards approved by the Department of Public Works shall be recommended to the Board of Supervisors for inclusion into the County Maintained Road System.

C-P14. Acceptance of Roads Outside of the Circulation Element into the County Maintained Road System. Roads that are constructed to County standards approved by the Department of Public Works that are not a part of the Circulation Element , and are not arterial or collector roads shall not be recommended for acceptance into the County Maintained Road System unless adequate funding for the future maintenance of the road and its associated facilities is provided, subject to approval of the Department of Public Works.

C-P15. Public Input. Continue to consider public input in the development of the Capital Improvement Program.

C-P16. U.S. Highway 101 Safety Corridor Improvements. The County supports a strategy for improvements to the U.S. Highway 101 Safety Corridor that minimizes impacts to coastal resources, and treats all three main roads between Arcata and Eureka as one system. The strategy would develop an overall improvement plan that phases improvements on a prioritized basis between the three roads; U.S. Highway 101, State Route 255, and Old Arcata Road/Myrtle Avenue.

Policy Topic #2—Road Construction and Maintenance and Watershed Protection

C-P17. Best Management Practices for Grading. New development subject to the grading ordinance shall use best management practices as described in the Grading Ordinance to prevent soil erosion and minimize impacts to watersheds from grading activities.

C-P18. Best Practices for Road Maintenance. Continue use of the 2002 Water Quality and Habitat Protection Manual (Best Practices Manual), or subsequent revisions to the manual, for County road maintenance and maintenance yards to minimize impacts to watersheds from roads and maintenance yard facilities.

C-P19. Update Standards. Recognizing that best management practices continue to evolve, the County should continue to update their procedures for grading, road maintenance and maintenance yard facilities on regular basis to incorporate advances in the state of the art.

Policy Topic #3—Public Transit

C-P20. Coordinating Public Transit with Other Modes of Travel. Transportation systems in the County and those which link with other areas of the State should be coordinated and integrated so that a full range of travel patterns can be supported.

A. Existing and future public transit services should be coordinated so that service from rural areas is effectively integrated with urban service. Schedules should be designed for a smooth transfer between rural and urban buses. Fares should be integrated so that a person pays only once for the full trip. Convenience facilities should be made available so that transfer areas are protected from the weather and bus information is provided.

B. Automobile and bicycle transport should be integrated with public transit by developing adequate parking facilities (preferably off street) at major bus stops and, where feasible, transporting bicycles on the buses along the intercity bus routes. and proving weather-protected and secure bicycle parking at transit hubs (expand hubs).

C. Multi-family housing for a range of income levels, public uses such as libraries, schools and community centers, and commercial uses should be encouraged in areas serviced by public transit where consistent with other sections of the plan. [FRWK]

Policy Topic #4—Multi-Modal Transportation

C-P21. Roadway Capacity Expansion and Non-Vehicle Modes. Enhance the Level of Service for non-vehicle modes when expanding roadway capacity for vehicle circulation, incorporating quality of service (QOS) evaluation.

C-P22. Right-of-Way Design Standards. Right-of-way design standards should incorporate design options which include facilities for bicycles, pedestrians and public transit.

C-P23. Encourage bicycle-friendly design on all streets and roadways through new technologies, "best practices" standards, guidelines, and innovative treatments where appropriate on new roadways and multiuse paths. ~~Administer~~ Resurfacing programs for local streets ~~to~~ should include appropriate provisions for bicycle facilities. [2006 RTP]

C-P24. Right-of-Way Multi-Modal Level of Service Standards. Right of Way Multimodal Level of Service (LOS) Standards should be used for maximizing the multi-modal suitability of County roads and intersections.

C-P25. Efficiency and Capacity Investment Priority. Transportation facility investments should consider functional efficiency and capacity of pedestrian, bike and public transit.

C-P26. Capital Improvement Plan. The County's Capital Improvement Plan shall include an assessment of the impacts on multimodal transportation for all projects considered for funding.

C-P27. Coordination with School Districts. The County and school districts should coordinate with one another regarding school site locations and transportation facilities.

C-P28. Walkability Audits. Information from walkability audits should be incorporated in the prioritization of road improvements for non-motorized modes of travel.

C-P29. Traffic Calming. Use ~~of~~ traffic calming measures where appropriate as a means of providing balanced multi-modal roadways that are compatible with adjacent land uses. Traffic calming measures include, but are not limited to, chicanes, curb extensions and traffic circles. [MCCP]

C-P30. Landscape Maintenance Zones. The County or other local agency should explore alternative financing mechanisms for landscape maintenance zones which will enhance street aesthetics and enable landscape strips with street trees within the public right-of-way. [MCCP]

C-P31. Protection of Designated Trails. The County shall review ~~land~~ development along and adjacent to designated trails and pathway corridors ~~in order to provide sufficient right-of-way~~ to ensure that ~~adjacent~~ new development is compatible with safety, recreational, and aesthetic qualities of the corridor. [MCCP]

C-P32. Encourage Bicycle Storage Facilities. Encourage the provision of secure, weather protected bicycle storage facilities at bus stops, businesses, and public buildings as needed. [FRWK]

C-P33. Encourage Bicycle Transport racks on Public Transit. Encourage appropriate buses to be equipped with bicycle transport racks. [FRWK]

C-P34. Encourage Access to Recreation Areas. Encourage development of access ~~and, where suitable, camping areas~~ into existing and future recreation areas. [FRWK]

C-P35. Encourage Visual Screens Along Horsetrails. Encourage the placement of landscaping along horsetrails located adjacent to roadways to serve as safety and/or visual screens between trail and vehicle lanes. [FRWK]

C-P36. Annie and Mary Trail. Encourage development of the Annie and Mary trail between the cities of Blue Lake and Arcata as a Class I bike/pedestrian trail using the existing railroad right of way where feasible.

C-P37. Use of the NWP Railroad Right of Way for Bicycles and Pedestrians. The County shall encourage of the NWP right of way between Arcata and Eureka as a Class 1 bike/pedestrian trail provided those uses do not compromise future use of the right of way for rail transportation.

C-P38. Support the Development of More Park-&-Ride Lots Near Population Centers to Encourage Bus Ridership and Carpooling. The County shall support CalTrans efforts to add park-&-ride lots in McKinleyville, Fortuna, and other population centers as identified in the most recent RTP. [2006 RTP]

C-P39. Integrate social transportation services with daily services where possible. Promote integrated social service and public transportation services, using existing programs where possible, and seek available alternatives for independently providing client transportation services. In addition, encourage public and private non-profit specialized transportation providers to notify and apprise each other of all service changes that will impact programs or clientele. [2006 RTP]

CD 40 Develop a long-term Transit Plan.

Policy Topic #5—Interagency Cooperation (See also Policies GP P8 – P16 in Chapter 3)

C-P40. Departmental Coordination/Integration. Participate in coordinated transportation-related activities through integration and shared use of consistent transportation standards and roadway functional classifications.

C-P41. Joint Use of the Greater Eureka Area Travel Model. Integrate roadway maintenance and improvement data through use of the Greater Eureka Area Travel Model (GEATM). Support coordination with other agencies to resolve discrepancies in the list of road segments with capacity problems between the GEATM model and estimates made by HCOAG based on CalTrans data.

C-P42. Coordination with Public Health. The Planning Division shall refer all new subdivisions and discretionary permits for commercial developments to the Environmental Health Division for comments on potential public health impacts.

C-P43. Coordination Between County Agencies. County agencies shall coordinate with each other to encourage development patterns more easily served by public transit, biking and walking, including incentivizing multi-modal transportation use in areas of new development.

Policy Topic #6- Marine Transportation

C-P44. Humboldt County supports continued maintenance of the channels to provide access to existing and planned port facilities. [FRWK]

C-P45. Humboldt County supports the improvement and modernization of commercial fishing facilities in Humboldt County. The cities of Eureka and Trinidad, Humboldt County and Humboldt Bay Harbor District should actively and cooperatively seek to encourage private investment into commercial facilities and, where necessary, invest public funds into rehabilitation, upgrading and expanding boat marinas and public piers. [FRWK]

C-P46. Local business groups should be encouraged to work with local government to encourage private investment into facilities such as:

Boat building and repair facilities;

Fleet service facilities; and

Fish processing facilities. [FRWK]

Policy Topic #7- Rail Transportation

C-P47. When it becomes economically and environmentally feasible, the railroad system connecting to points south shall be maintained and operated to support the County's economic development and maintain the diversification of the County circulation network. [FRWK]

C-P48. Protect and reserve the rail right of way for public transportation uses, regardless of whether or not rail service is restored.

C-P49. The County supports use of the NWP railroad for excursion trains as a tourist attraction provided they do not interfere with use of the railroad for cargo transport.

Policy Topic #8- Air Transportation (See also Policies GP P8 – P16 in Chapter 3)

C-P50. Expansion of Airline Service. Humboldt County supports efforts to expand commercial airline service to the area consistent with the Airport Master Plans of each airport operated by the County. [FRWK]

Policy Topic #9- Coastal Access Policies From All Six (6) Coastal Plans

C-P51. Coastal Access. Implement policies for coastal access through review of new development as required by the Coastal Act. (Coastal Plans)

C-P52. Coastal Public Roadway Projects. Public roadway improvement projects shall not, either individually or cumulatively, degrade environmentally sensitive habitats or coastal scenic areas. Improvements (beyond repair and maintenance) shall be consistent with Coastal Act protections of environmentally sensitive habitats and visual resources and shall be limited to the following:

a. Reconstruction and restoration of existing roadways, including bridge restoration and replacement, highway planting, construction of protective works such as rock slope protection and slope corrections,

reconstruction of roadways following damage by storms or other disasters, and improvement of roadside rests.

b. Operational improvements, such as traffic signals, guard rails and curve corrections.

c. Roadside enhancements, such as construction or improvement of roadside rests and vista points consistent with Section 3.40 (Resource Protection Policies and Standards), and removal of roadside signs consistent with Section 3.42 C (Coastal Scenic Areas).

d. Minor improvement projects, such as modifying encroachments or ramps, construction turnouts, and channelized intersections.

e. Except in coastal scenic areas, climbing and passing lanes.

f. Expansion of substandard roadway shoulders.

g. Construction of bikeways. (Coastal Plans)

Policy Topic #10- Community Plan Policies

McKinleyville Community Plan (MCCP)

C-P53. On-Street Parking. On street parking shall be prohibited discouraged in commercial areas and shall be prohibited discouraged where bicycle routes are planned adjacent to public street's travel lanes unless parking lanes are provided. *(MCCP)*

C-P54. Design Standards for All Pathways. Design standards should be adopted for all pathways. Pathways are defined as developed portions of rights-of-way from which motor vehicles are excluded. *(MCCP)*

C-P55. Circulation Planning for Bicycles, ~~and~~ Pedestrians and transit. All future circulation planning shall include bicycle and pedestrian pathway routes. *(MCCP)* *and facilitation of public transit use*

C-P56. Road and Intersection Designs for Bicycles and Pedestrians. All new roads and intersections shall be designed to provide convenient use by pedestrians, bicyclists and motor vehicles. *(MCCP)*

C-P57. Repair and Reconstruction Projects to Provide for Bicycles and Pedestrians. When major repairs or reconstruction occurs on existing substandard collector and arterial roads and intersections, they should be brought up to standards which provide for pedestrian, bicycle and motor vehicle use. Existing deficiencies shall be corrected prior to further development. This policy is contingent upon funding availability. *(MCCP)*

C-P58. Prioritize Funding for Bicycles and Pedestrian Facilities. Priority (from the available funds provided for McKinleyville) shall be given to circulation projects which enhance safe pedestrian and bicycle access to McKinleyville's schools. *(MCCP)*

C-P59. Bicycles and Pedestrian Facilities in New Subdivisions. In subdivisions creating new interior roads, bikeways, off-street pedestrian ways, or sidewalks separate from roadways shall be incorporated when warranted into the design of the subdivision. *(MCCP)*

C-P60. Landscape Buffer Strips. Landscape buffer strips shall be used to segregate pedestrian walkways from arterial and busy connector travelways. *(MCCP)*

C-P61. Removal of Obstacles in Pathways. New pathways (including sidewalks) shall be free of obstacles such as utility poles and mailboxes. Where obstacles are unavoidable on existing sidewalks or pathways, they shall be widened or otherwise designed to provide the least amount of obstruction to users. *(MCCP)*

C-P62. Minimize Impacts to Streams and Wetlands With New Road Construction. Site plans for new roads, paths and trails, or improvements to existing ones shall minimize their impact to streams and wetlands, and incorporate and preserve aesthetically pleasing natural features consisting of native and non-native species. A funding mechanism should be provided for the design of improved public pathways. Funding alternatives include development impact fees, user fees (such as fuel taxes and tolls), non-user fees (such as property and sales taxes), special benefit fees (such as assessment districts), joint ventures (such as public/private agreements), and debt financing (such as bonds, certificates of participation etc.). *(MCCP)*

C-P63. Wheelchair Accessibility for New Walkways. All new hard surfaced walkways shall be wheelchair accessible. *(MCCP)*

C-P64. Wheelchair Accessibility for Existing Walkways. Existing hard surfaced walkways should be improved to be wheelchair accessible when funding is available or when development projects occur on adjacent parcels. *(MCCP)*

C-P65. Creative and Flexible Application Of Travelway Design Standards. Creative and flexible application of travelway design standards based upon engineering principles in new subdivisions shall be allowed if they minimally impact the natural environment. *(MCCP)*

C-P66. Integration with the Pedestrian Circulation Network. New subdivisions and other major developments shall be designed to integrate with the pedestrian circulation network in the community. *(MCCP)*

C-P67. Rights-of-way for Pathways. In order to minimize travel distances for pedestrians (encouraging pathway short-cuts and non-automobile use), new subdivisions and other major developments shall provide rights-of-way for pathways consistent with the adopted Trails Plan between public streets (or other public or commercial destinations) at least every 1,320 feet (1/4 mile) in R-1 neighborhoods; and every 350 feet (one city block) in higher density areas. Assessment districts, subject to voter ratification or other funding mechanisms, shall be created for all subdivisions to improve and maintain rights-of-way to pathway standards as identified in the Circulation and Trails Plans. *(MCCP)*

C-P68. Off-Street Parking. Off-street parking along local streets shall be encouraged in the design of new developments. Creative on-street parking arrangements such as parking pockets or bays on local service roads are encouraged when based on engineering principles. *(MCCP)*

C-P69. Off-Site Improvements. Offsite improvements along local streets shall be encouraged in the design of new developments. *(MCCP)*

1. All subdivision applications which propose new roads not listed in the circulation element shall submit alternate roadway designs which reflect an emphasis on pedestrian and bicyclist convenience and access to public transit. They may include reducing travelway widths within the required right-of-way easement. *(MCCP)*

2. Prior to approving a reduced roadway width, the County shall ensure that the roadway provides adequate access for emergency vehicles.

3. The County shall implement where appropriate as determined by the Public Works Department the use of traffic calming measures as a means of reducing the speed of motor vehicles, and facilitating pedestrian movement. Traffic calming measures include chicanes, curb extensions and traffic circles.

4. The County or other local agency should explore alternative financing mechanisms for landscape maintenance zones which will enhance street aesthetics and enable landscape strips with street trees within the public right-of-way.

5. All pedestrian pathways should be located adjacent to or within landscape strips or greenways. Pathways should not be located adjacent to the traveled way.

6. Subdivisions involving five or more units and zoned for under 20,000 square foot minimum parcel size are encouraged to incorporate parking bays into the design of any proposed traveled way that are not shown as collector streets on the Circulation Plan map.

7. Intersections and streets shall be designed to provide an attractive and safeenvironment for multiple modes of transportation.

8. The County shall explore the use of incentives to property owners/subdividers for providing transportation demand management, landscaping strips, maintenance programs, and parking bays. These incentives may include density bonuses. *(MCCP)*

C-P70. Trails Implementation Plan A Trails Implementation Plan shall be prepared that includes a trail by trail review with recommendations for how easements could be gained and under what circumstances dedication of easements might be required. Development projects proposed on lands that include a trail as shown on the Trails Map may be required to dedicate and/or improve such trail if an individualized determination is made that the dedication is related both in nature

and extent and is roughly proportional to the impact of the proposed development.

For purposes of this section, 'development projects' include discretionary projects including subdivisions, special or conditional use permits, variances, and zoning reclassifications and ministerial projects requiring more than five (5) new parking spaces. Excluded from requirement to dedicate a trail easement are ministerial projects that would require less than five (5) new parking spaces. Also excluded are the following discretionary projects: temporary uses, including public assemblages, timber production, variances where the proposed development does not interfere with a trail alignment, lot line adjustments which do not interfere with a trail alignment, signage. *(MCCP)*

C-P71. Review of Development Along Trails. The County shall review land development along and adjacent to designated trails and pathway corridors in order to provide sufficient right-of-way to ensure that adjacent development is compatible with safety, recreational, and aesthetic qualities of the corridor. *(MCCP)*

Avenues of the Giants Community Plan (Avenues CP)

C-P72. Maintenance and Repair of County/State encroachments at intersections. Coordinate with CalTrans to maintain and repair County/State encroachments at intersections. (Avenues CP)

C-P73. Lowering the Speed Limit in Miranda and Phillipsville. The County shall work with CalTrans in lowering the speed limit through the communities of Miranda and Phillipsville. (Avenues CP)

C-P74. Funding for Pedestrian Safety, Access and Egress. The County shall request that CalTrans comply with Streets and Freeways Code, Section 157, to provide for pedestrian safety, access, and egress, as an integrally funded part of their highway projects. (Avenues CP)

C-P75 Lowering the Speed Limit in Manila. The County shall work with CalTrans in lowering the speed limit through the community of Manila.

Roadway And Multimodal Transportation Standards

C-S1 Capacity Standards. Volume-to-Capacity and/or movement-delay estimates should be used to assess ~~Level of Service (LOS) impacts~~ Quality of Service/person delay during peak traffic hours of new developments on the road network according to the following table. Volume to Capacity Ratio estimates from the GEATM Model should be used where feasible. Alternatively, site-specific data from a certified engineer may be used.

Table 8-3. Volume to Capacity Ratio and Level of Service.

Volume to Capacity - V/C ratio (percent)	Level of Service (LOS)
<30	A
30-50	B
50-75	C
75-90	D
90-100	E
>100	F

C-S2 Levels of Service. Level of Service (LOS) C should be used as the Threshold of Significance for all roadways during non-peak periods, and LOS D as the Threshold of Significance within Urban Study Areas for peak periods. Calculation of LOS shall be based upon V/C Ratios as described in C-S4, or other methods acceptable to Public Works. Cumulative impacts to levels of service shall also be considered in project review and addressed through the use of development impact fees.

C-S3 Consistent Roadway Design Standards. Roadway design standards and functional classifications shall be applied in a consistent manner throughout the County roadway system.

C-S4 Functional Classifications. The County's Road Standards in the Subdivision Ordinance shall be modified to incorporate the following functional classifications for the Humboldt County-maintained roadway system:

Urban/Rural Minor Arterials link cities and towns. An arterial provides service between major traffic generators such as cities or large towns, and normally provides the most direct route to the state system. Arterials usually provide the highest level of service to the County as measured by mobility and traffic volume. An arterial will have some access and traffic control. Arterials have relatively high travel speeds with minimum interference to through movement.

Urban/Rural Major and Minor Collectors. A collector road moves local traffic from or to arterial roads. A collector can also link arterials or provide access to an arterial. A collector also provides service between minor traffic generators. Collectors typically have shorter routes than arterials with more moderate speeds.

Table 8-5b Cross Sections of Road Classifications (Rural)

	Functional Classification			
	Rural Minor Arterials (feet)	**Rural Major Collectors** (feet)	**Rural Minor Collectors** (feet)	**Rural Local Roads** (feet)
Right of Way Width	66-84	50-64	50-64	40-52
Vehicle Lane Widths	10-12	10-12	10-12	10-12
Bicycle Lane Width	5-6	4-6	4-6	4
Sidewalk Width	5-8	4-6	4-6	4
Landscape Strip Widths	8-10	0-5	0-5	n/a
Medians/Turn Lane Widths	0-14	N/a	n/a	n/a
On-Street Parking Width	7-8	7-8	7-8	7-8

C-S5 Prioritization of Road Improvements. Volume to Capacity Ratios (V/C Ratios) should be considered in the prioritization of roadway projects.

C-S6 Prioritization of Road Maintenance Projects. Use and refine the OCI rating system to prioritize road maintenance projects for roads that have been assessed under this system. Maintenance projects on other roads shall use the Modified OCI system. Technological advances such as Geographic Information Systems (GIS) and Geographic Positioning System (GPS) shall be used to enhance these rating systems.

C-S7 Multi-Modal Level of Service Standards. Right of Way Multimodal Level of Service (LOS) Standards should be used for maximizing the multi-modal suitability of County roads and intersections. For bicycle facilities, LOS standards should be developed for the following types of facilities:

Bike Path Class I Separated, surfaced right-of-way designated exclusively for nonmotorized use. The minimum width for each direction is 1.5 meters, with a 2.4 meter minimum width for a bi-directional path.

Bike Lane Class II White stripe and Bike Lane sign on roadway providing 1.5 meters of road surface for preferential bicycle use (not including gutter). Vehicle parking adjacent to and motorist crossflow is allowed. Bike lanes must be on both sides of a two-way road for one-way travel only.

Bike Route Class III Shared roadway with motorists on through routes not served by Class I or II bikeways or to connect discontinuous bikeways. Established by a Bike Route sign

Major collectors serve more important intracounty travel corridors than minor collectors.

Urban/Rural Local Roads. Local roads provide access or entrance to residences, businesses or other abutting property. They generally provide the least mobility within the County system and are usually the origin and destination route for a "trip" within the County.

Table 8-4 Description of Road Classifications

	Functional Classification		
General Characteristics	**Urban/Rural Minor Arterials**	**Urban/Rural Major and Minor Collectors**	**Urban/Rural Local Roads**
Length	Usually more than three (3) miles long.	Varies from ½ mile to 2 miles.	Generally less than one mile long.
Traffic Volumes	5,000 to 30,000 ADT	1,000 to 15,000 ADT	100 to 5,000 ADT
Posted Speed	30 to 50 miles per hour	35 miles per hour or less	25 to 30 miles per hour
On-Street Parking	Limited	Normally Permitted	Permitted
Access	Intersect with Freeways, Arterials, Collectors and Local Roads. Limited access for private roadways and driveways.	Intersect with Arterials and Local Roads. Private roads and driveways permitted.	Intersect with Arterials and Collectors. Private roads and driveways permitted.
Sidewalks	Yes	Yes	Yes
Bikeways	Yes	Yes	Yes

Table 8-5a Cross Sections of Road Classifications (Urban)

	Functional Classification		
	Urban Minor Arterials (feet)	**Urban Major and Minor Collectors** (feet)	**Urban Local Roads** (feet)
Right of Way Width	60-88	50-66	50
Vehicle Lane Widths	11-12	10-12	10-12
Bicycle Lane Width	5-6	4-6	4-6
Sidewalk Width	5-8	4-6	5-6
Landscape Strip Widths	0-8	0-5	n/a
Medians/Turn Lane Widths	6-12	n/a	n/a
On-Street Parking Width	8 *Limited, One Side Only*	8 *Limited, One Side Only*	7-8

C-S8 Safe Routes To Schools, and Between Transit Stops And Nearby Libraries, Parks, And Community Centers. Construct and maintain contiguous sidewalks and bike paths along roads used for multimodal access within one mile of all public schools, and between transit stops and nearby public facilities (libraries, parks, and community centers) as funding sources are identified and available.

McKinleyville Community Plan (MCCP)

C-S9 Dedication of Trails and Parkland Fees. Public pathways, trails and greenways identified on the Trails Map are to be dedicated separately from and in addition to dedication of park acreage or payment of in-lieu fees authorized by the Quimby Act (CA Gov. Code §66477) and the local implementing ordinance (HCC Title III, Div. 1, Sec. 316-24 *et seq*) [MCCP]

C-S10 Use of Parkland Fees for Trails Improvements. The trails, parks, and improvements identified in this section may be developed using Quimby Act parkland dedication in-lieu fees. [MCCP]

C-S11 *Terms for Dedication of Trails.* When new development triggers a dedication requirement, the County shall require the developer to provide either: a) a 50 year offer of dedication of an easement; b) an easement (with any improvements as may be agreed on); or c) fee simple title of that portion of the trail (with any improvements as may be agreed on). [MCCP]

C-S12 Review of Trails Proposed for Dedication. The review of development subject to trail and greenway dedication and/or improvement shall include consideration of the following features:

A The intended purpose for the trail (i.e., a surfaced pedestrian walkway, bicycle path, semi-improved recreational trail for walkers, bicyclists, and equestrians, an unimproved rural trail for hikers, mountain biking, and horseriding).

B. Consistency of the proposed class of trail and its location with adjacent uses so as not to have adverse impacts on adjacent owners' use of their property.

C. The intensity of adjacent development.

D. Minimizing the likelihood of trespass and vandalism on adjacent private property through the trail design, including location, improvement standard, and the sanctioned use of the trail.

E. Evaluating public health and safety needs for:

1) parking;
2) road capacity and traffic patterns;
3) avoiding conflicts in uses (i.e. pedestrian, equestrian, vehicular);
4) use by the handicapped;
5) sanitary facilities including trash disposal; and
6) accessibility of the terrain (topography of trail is not too steep).

F. Availability and adequacy of other nearby trail alignments.

G. Potential for significant conflicts with agriculture including:

1) vandalism;
2) theft of livestock, agricultural supplies and tools;

3) damage to crops and livestock;
4) trespass on areas not part of accessway;
5) damage to fencing and gates;
6) livestock depredation;
7) litter; and
8) interference with agricultural operations.

H. The design, construction, and management of trails and pathways should be carefully executed in order to reduce environmental disturbance.

I. Bridges and other public improvements within designated trails and pathway corridors should be designed to provide safe and secure routes for trails, including grade separation between roadways and trails whenever feasible.

J. Encouraging the incorporation of trails and pathways into corridors used for public and utility purposes.

K. New development shall not block existing neighborhoods' access to trails.

L. Bikeways, hiking trails, and equestrian trails (off road) should be provided within designated trail corridors, and whenever feasible, rest areas and picnicking accommodations.

M. The applicant for development of a parcel which the Trails Map indicates as having a trail crossing it shall have the option of designing the trail route through the property provided the trail's entry and exit points are consistent with the Trails Map.

N. A parcel which the Trails Map indicates as crossing it "in whole" (i.e., not straddling a common property boundary with an adjacent lot) shall have the option of designing the trail route through the parcel provided the trails end points --- where it enters and exits the parcel --- are consistent with the Trails Map. [MCCP]

Eureka Community Plan (ECP)

C-S13 Robinson\Dunn Project Improvements. Incorporate the following standards into the transportation improvements for development of the Robinson\Dunn property south of the Lundbar Hills neighborhood:

a) The project should require that a road be constructed from Ridgewood Drive toward Fairway Drive at least to the north end of the property. The road should be planned so that it may eventually be connected through to the City to Fairway Drive.

b) The development should have multiple access points onto Walnut Drive and Ridgewood Drive. The timing for development of each access point shall be determined by Public Works, as warranted, as each development phase is submitted to the County.

c) These access points should coincide with existing street systems whenever feasible, such as entering Walnut Drive where a street already exists on the opposite side, thus providing for a four-way intersection.

d) Access point location designs should conform with good traffic engineering principles such as adequate site distance, adequate storage for vehicular movements entering and exiting, appropriate intersection controls, and conformance with the County's street design standards. (ECP)

C-S14 McKay Tract Improvements. Incorporate the following standards into the transportation improvements for development of the North and South McKay Tracts off of Walnut Drive:

a) Development of the North McKay property should include a primary through road from Cypress Street to the end of Harrison Avenue. In addition, development of the North McKay property shall include at least three access points onto Walnut Drive. These access points shall incorporate the extensions of Redwood, Fern and Arbutus Streets. The timing for extension of each street shall be determined by Public Works, as warranted, as each development phase is submitted to the County.

b) Development of the South McKay property shall be designed with a primary access other than Northridge Road. The primary access shall be designed to intersect Walnut Drive when possible. Northridge Road shall be used as a secondary access. The timing for construction of the secondary access shall be determined by Public Works, as warranted, as each development phase is submitted to the County.

c) All access points should coincide with existing street systems whenever feasible, such as entering Walnut Drive where a street already exists on the opposite side, thus providing for a four way intersection.

d) Access point locations should conform with good traffic engineering principles, as mentioned above (for Robinson\Dunn property). (ECP)

Roadway Implementation Measures

C-IM1 Review of the Capital Improvement Program. Planning and Environmental Health staff should review and provide comments on the Capital Improvement Program.

C-IM2 Great Eureka Area Travel Model (GEATM). In coordination with the City of Eureka and CalTrans, the County shall, maintain, update and validate the GEATM on a regular basis, and use the GEATM to evaluate development-related traffic impacts on the City's existing and proposed circulation system.

C-IM3 Missing Links. Where feasible, construct missing roadway links to complete the roadway system designated in the Circulation Element when warranted by safety concerns, congestion relief, and improvement of roadway functional efficiency and/or capacity.

C-IM4 Multi-Modal Requirements. Roadway improvements should include pedestrian and bike facilities and bus stops as needed to ~~accommodate demand for such~~

~~facilities~~ promote alternatives to automobile use and where rights of way can accommodate such facilities, including sidewalks, bicycle lanes, bus stops, safe highway passages and neighborhood trail linkages.

C-IM5 **Future Multi-Modality Options.** Preserve use of dedicated rights of way for future pedestrian, bicycle and transit facilities on roads where they do not presently exist.

C-IM6 **Transit Infrastructure.** Work with regional transit providers (HTA, Redwood Coast Trasnsit, A&MRTS, K-T Net,)to situate transit stops and hubs at locations that are convenient for transit users, ~~and promote increased transit usage through the provision of shelters, benches, and other amenities.~~ Where feasible, develop bus rapid transit strategies, such as signal prioritization,dedicated lanes ands streets, queue jumps and bus stations. State Transportation Improvements (STI) funds can be used for capitalization projects

C-IM7 **New Roadway Construction/Widening.** Use roadway designs that minimize environmental impact for proposed construction and widening projects and, where impacts are unavoidable, impose mitigation measures to limit the impact of roadway improvements on County waterways, including promotion of alternative transportation modes.

C-IM8 ***Adoption of Water Quality and Stream Habitat Protection Measures.*** Formally adopt the 2002 manual, "Water Quality and Stream Habitat Protections Manual for County Road Maintenance" to guide the following activities:

- routine and emergency road repair;
- maintenance of county roads and related facilities including actions taken to prevent erosion and/or the deterioration of a roadway, such as activities affecting the cutbank, road surface, fillslope and all drainage structure;
- maintenance and replacement of bridges and culverts;
- activities on County-owned maintenance yards; and
- measures to protect the traveling public, such as snow and ice removal.

C-IM9 **U.S. Highway 101 Safety Corridor Improvements.** Issuance of Coastal Development Permits and other discretionary permits by the County for the U.S. Highway 101 Safety Corridor Improvement project should support a multi-modal strategy that treats all three main roads between Arcata and Eureka (U.S. Highway 101, State Route 255, and Old Arcata Road/Myrtle Avenue) as one system. The strategy would develop an overall improvement plan that phases improvements on a prioritized basis between the three roads. Potential impacts of the project on coastal resources, including those that were identified in the comments made to CalTrans by the Board of Supervisors September 18, 2007, should be minimized.

C- IM11 **Re-establish transit service to east, south and north county.** ~~The Humboldt Transit Authority will~~ Pursue partnerships with the ~~County of Humboldt~~, Humboldt Transit Authority, Native American Tribes, and non-profit transportation organizations, that will help fund and facilitate the re-establishment of services to rural communities in the east, south and north portions of the County. [2006 RTP]

C-IM12 Handicapped Access. Outdoor recreation facilities shall be designed and constructed to be accessible to handicapped persons consistent with the requirements of the Americans with Disabilities Act.

Implementation Measures From All Six (6) Coastal Plans

C-IM13 Lateral Access Guidelines in Coastal Areas

Guidelines for the designation of lateral accessways are as follows

(1) Where there is an existing accessway adjoining the proposed accessway, the location and size of the new accessway shall be the same as the adjoining accessways; or

(2) where there is a fixed landward point from which to measure (e.g. bluffline) the accessway shall be no less than 25 feet in width seaward from the fixed landmark; or

(3) to the first line of terrestrial vegetation, excepting dune areas; or

(4) a minimum of 25 feet from the mean high tide line

(5) where there is no vertical gradient differential between the development and the accessway, a privacy buffer shall be established with a minimum of 10 feet with only limited uses allowed from 10 to 20 feet and only passive recreational uses between 20 and 50 feet. *(Coastal Plans)*

C-IM14 Vertical Access Guidelines in Coastal Areas

Guidelines for the designation of vertical accessways are as follows

(1) *Location should be along boundaries of property but may be resited as necessary.*

(2) Width should be a minimum of 10 feet for pedestrian use with additional width as required for slope or construction easements and/or other uses.

(3) Privacy buffer between accessway and residence shall be a minimum of five (5) feet for pedestrian accessways. *(Coastal Plans)*

C-IM15 Access Improvements

1. Minimal improvements should be scheduled for unimproved access points in character with the rural nature of the communities they serve, and accessways accepted by the responsible entity or agency should include but shall not be limited to, the following as they are found consistent with the identified uses, modes of access and limitations as identified in the Access Inventory.

a. parking
b. roads
c. trails, stairs and ramps
d. sanitary facilities (including trash collection)
e. facilities for the handicapped
f. fencing and barriers to inappropriate uses
g. signing of access points, trails and hazard areas
h. maintenance and operation of the accessway and support facilities.

i. bicycle trails and bike parking facilities

2. In reviewing improvements to accessways, the approving authority shall consider the following:

a. The common use(s) of the shoreline;

b. The proposed mode of access (pedestrian, equestrian, or vehicular) and adverse impacts on adjacent owners' use of their property, and the size of the development;

c. The likelihood of trespass and vandalism on adjacent private property;

d. The need to provide for public health and safety, including the need for:

(1) parking
(2) road capacity and traffic patterns
(3) conflicts in uses (i.e. pedestrian, equestrian, vehicular)
(4) use by the handicapped
(5) capacity of sanitary facilities, including trash disposal
(6) topography of trail
(7) beach hazards (tides, currents, undertows)

e. Conflicts with agriculture including:

(1) vandalism
(2) theft of livestock, agricultural supplies and tools
(3) damage to crops and livestock
(4) trespass on areas not part of accessway
(5) damage to fencing and gates
(6) dogs killing, maiming or harassing livestock
(7) litter
(8) interference with agricultural operations (by access corridor)

3. Improvement of accessways shall be permitted where the level of development is adequate to support common uses of the shoreline and the mode(s) of access proposed in the Plan, and where the improvements are sited and designed to prevent significant hazards to public health and safety or to agriculture and minimize the likelihood of trespass and vandalism on adjacent private property.

4. Signs at access points should be supplemented by an atlas of County coastal access points for use by both residents and visitors. *(Coastal Plans)*

C-IM16 Unavoidable Loss of Coastal Public Access

New industrial development which impedes or interferes with public access to or along the bayshore shall provide off-site improvements to open other equivalent bayshore areas where no public access exists, or enhance comparable, existing bay access. Such improvements shall include, as necessary, dedication of access easements, fee title along the new accessway, access improvements, including parking areas and trails, and provisions for maintenance and operation of the new accessway.

If an applicant cannot provide these improvements or these improvements amount to only a portion of an overall preferred off-site access proposal, an in-lieu fee payment shall be made to an appropriate public agency for the purpose of providing the above comparable bay access or enhancement of existing comparable bay access. (Enhancement of existing, comparable bay access could include in-lieu fees for shoreline protection, development of a public fishing pier, or provision of additional off-site access facilities. *(Coastal Plans)*

Eureka Community Plan (ECP)

C-IM17 Improvements to F Street (Oak to Alder). ~~F Street is being recommended for widening from two to four lanes. This~~ Improvements should be coordinated with the same improvement warranted on F Street within the city boundaries. ~~This improvement is needed at the 25% development scenario (assuming 100% buildout of the City's vacant parcels). This can largely be accommodated by restriping of the existing facility, and perhaps with removal of on-street parking.~~ (ECP)

C-IM18 Improvements to Herrick Road at Elk River Road. The intersection of Herrick Road and Elk River Road should be signalized and left-turn lanes should be constructed. (ECP)

C-IM19 Improvements to Union Street. That portion of Union Street from the city limits to Madison Avenue should be improved to allow for access from Pine Hill to the City of Eureka. The improvements should consist of a minimum of 2 driving lanes, pedestrian/bicycle corridor, and improvement of the intersection of Sea Avenue.

C-IM20 Improvements to Togo Street. Incorporate the Togo Street improvements onto Public Works Five Year Priority List Capital Improvement program.

C-IM21 Robinson\Dunn Project Improvements. When the Robinson/Dunn property develops, the County shall work with the City of Eureka to ensure a route through the City to connect Fairway Drive with Ridgewood Drive.

C-IM22 Lot Frontage on Major Roads. The policy to discourage lots from fronting onto such roads as Humboldt Hill, Walnut, Campton and Ridgewood (west of Walnut) shall be implemented through the subdivision process for parcels along these corridors.

C-IM23 Pedestrian Corridors. The County shall incorporate the development of pedestrian corridors along major roads into Public Works Five Year Priority List Capital Improvement program.

C-IM24 Elk River/Ridgewood/Westgate Intersections. The County shall incorporate the realignment of these intersections as a high priority in Public Works Five Year Priority List Capital Improvement program.

NOTE: the section below will fall out of the 'final' version found in the GP, but will be critical to the process of review.

8.4 Staff Analysis and Alternatives

State Requirements

The primary purpose of this section of the plan is to recommend policies and programs which will resolve the transportation needs of unincorporated Humboldt County. The Circulation Element is one of the seven mandated elements of a general plan. It is required to describe the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, military airports and ports, and other local public utilities and facilities, all correlated with the land use element of the plan.

Staff Recommendation

Current trends in transportation reflect the same trends described in the 1985 Framework Plan. The 1985 Plan referred to the rising costs of fuel and hence, the rising cost of travel, and suggested a transportation system that included modes of travel other than the automobile. Its stated goal was to correlate the transportation system with planned land uses, and with the needs of various segments of the population. The staff recommended alternative continues to place an emphasis on the development of a balanced, multi-modal transportation system.

Another finding of the 1985 Plan was that because of Humboldt County's large land area, with a great deal of sparsely populated rural areas, transportation costs make up an inordinately high proportion of the amount of money leaving the County for energy. The continued export of local dollars in exchange for imported fuel is well documented in the draft Energy Element (Chapter 4?). Global warming has emerged as a major concern To confront this issue, the 1985 Plan recommended that, "to help make the county's economy sounder, energy conservation in transportation should be stressed. Ride sharing, greater use of public transit, and use of bicycles for commuting should be encouraged where feasible." Policies in the recommended Alternative B continue to support energy conservation in transportation.

In addition to moving forward with the goals and programs in the 1985 Plan, the Circulation Element also draws from the results of other recent local transportation planning efforts. First, the Element recognizes the policies and measures put forward in Plans recently adopted by HCAOG: the 2006 Regional Transportation Plan (RTP), the Regional Bicycle Transportation Plan (2004), a Pedestrian Needs Assessment (2003), and a Regional Parking Needs Study (2003). Included in these plans are policies and action items directed at achieving a coordinated and balanced regional transportation system.

The Element also recognizes policies and measures coming from more recent work linking public health and transportation. One of the main findings from this emerging field of science and study is that land decisions emphasizing automobile travel over other modes of travel, such as walking or biking, can indirectly lead to health problems, such as obesity,

diabetes and heart disease. Policies in this Element support development of tools to assess the impact of policies and projects on public health, and creating incentives for measures that that respond to transportation-related impacts on public health in a positive way.

The McKinleyville Community Plan contains a number of policies and standards that are recommended to be implemented in the other USA's.

Background

A complete description of transportation and circulation conditions is contained in the 2002 Moving Goods and People Report (Bhatia and Dyett), the 2006 Regional Transportation Plan (HCOAG) and the 2007 Community Infrastructure and Services Technical Report (Winzler and Kelly), a technical background study for the General Plan Update.

The information contained in these documents is summarized below.

Road Network

The County-maintained roadways are integrated with an overall countywide circulation system maintained by the California Department of Transportation (CalTrans); the U.S. Forest Service, Bureau of Land Management and the Bureau of Indian Affairs; cities; and private property owners. This roadway network contributes to the economic vitality of Humboldt County, providing safe access and travel routes for Humboldt County citizens and visitors, from low-density rural areas to higher-density urban areas.

Most of the cities and larger unincorporated communities are within a few miles of Highway 101. And although the road network provides access to all developed parts of the county, the topography and natural barriers of Humboldt limit easy access between all communities. This configuration results in many local trips on Highway 101 and the other highways, treating them as principal arterials. Steep hills, environmental constraints, and community opposition prevent roads from being built over hills to connect adjacent valleys.

The 2006 RTP projects the number of vehicles and vehicle fuel consumption will increase over the next 20 years. Without a change in transportation modes Humboldt County is expected to experience a total compounded growth rate of 24.4 percent increase in vehicle miles traveled during the next 20 years; gasoline consumption during this time frame is expected to increase by 20%, and diesel consumption by almost 24%.

The County's road network is normally described using a functional classification to group streets and roadways into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner while planning to facilitate safe bicycle and pedestrian use. This could entail designating bike routes with traffic calming to improve safety.