2.5 POLICIES

The Growth Management Element contains the following policies:

GM-1 Planning Area
GM-2 Sphere of Influence
GM-3 Annexation
GM-4 Urban Services and Urban Services Boundary

POLICY GM-1 PLANNING AREA

Objective. Advocate appropriate uses and management for Planning Area lands outside the City boundary, including Arcata's creek watersheds and coastal areas, in recognition that they will affect the future form of the Arcata community.

GM-1a **Planning Area**. The Planning Area shall include all lands within the boundary shown on Figure LU-a. The Planning Area includes lands where any future changes or management practices are likely to have an impact on the City of Arcata. The City shall request that all land use applications received by the County, or resource management plans received by other agencies, be referred to the City. The City shall review and comment on these applications and plans. The City shall also advocate that the County implement policies and that property owners manage for the conservation of these unincorporated lands. This policy applies to lands within the Planning Area but outside the Sphere of Influence.

GM-1b **Referrals by Humboldt County**. The City shall review all development and infrastructure proposals affecting the Planning Area and communicate the City's position on these matters to the applicable decision-making body. Humboldt County shall be requested to refer all planning studies and applications for development in the Planning Area to the Arcata Community Development Department, for review and comment, prior to taking action.

GM-1c **Land-use designations within the Planning Area**. The City shall request that the County of Humboldt retain rural and agricultural designations on lands located within the Planning Area. The City shall request that the County adopt consistent land use designations for lands within the planning area but outside the Sphere of Influence, as shown on Figure LU-b.

GM-1d **Greenbelt**. The rural and agricultural lands within the Planning Area are designated by the City as open space or greenbelt. The intent is that such lands shall not be developed with urban densities or uses and that land uses shall be limited to agricultural production and natural resources conservation.

GM-1e **Resource Protection in the Planning Area.** Proposals which could affect the Planning Area's resources, including those resources addressed in the Resources Conservation and Management Element, shall be reviewed by the City. City review shall address the proposal's compatibility with applicable General Plan policy. The City shall communicate the intent of this policy to agencies with jurisdiction within the Planning Area (for example, the California Department of Forestry and Fire Protection for timber management, and the Humboldt Bay Harbor, Recreation and Conservation District for Humboldt Bay tidelands management) together with the policies in the Resource Conservation and Management Element.

POLICY GM-2 SPHERE OF INFLUENCE

Objective. Designate an appropriate amount of urban reserve and open space land in the Sphere of Influence to provide for the ultimate development of the City.

GM-2a **Sphere of Influence**. The proposed Sphere of Influence boundary, which must be adopted by LAFCo for the City of Arcata, is shown on Figure GM-a. The boundary defines land parcels that are eligible for annexation to the City in the future. The City shall maintain an adequate amount of land in the Sphere of Influence to accommodate future growth, consistent with the goals and policies of this plan, as well as to protect open space and productive resource uses. Annexation of property may not proceed unless or until such lands are within the Sphere of Influence boundary.

GM-2b **Changes to the Sphere of Influence boundary**. The City shall comprehensively evaluate the Sphere of Influence boundary at least every five years, but more frequently if appropriate. Any boundary amendments shall be considered by the Planning Commission and recommended to the City Council, prior to any action by LAFCo. Any City decision to change the boundary shall be based on the following:

1. The resulting area has an adequate supply of land to accommodate projected

housing needs allocated by the Humboldt County Council of Government.

2. Any owner of property located adjacent the Sphere of Influence boundary may request that the City add his or her lands to the Sphere of Influence.
3. Any such proposal shall also identify the requested land use designations and any other necessary or appropriate amendments to the various elements of the General Plan.
4. In considering such requests, and at each periodic comprehensive evaluation, the City Council, upon recommendation of the Planning Commission, shall determine whether it would serve the public interest to designate additional lands for which to provide municipal services and developed with urban uses.
5. An amendment to the Sphere of Influence to include additional lands shall be subject to environmental review pursuant to CEQA.
6. A proposal to amend the Sphere of Influence may be considered concurrently with an annexation request.
7. Any adjustment to the sphere boundary incorporates adequate provisions for open space.

GM-2c **Areas in Sphere of Influence intended only for partial services**. Some areas are included in the Sphere of Influence only for the purpose of receiving City water service, such as the Jacoby Creek residential area. Such areas are not to be considered for annexation during the 20-year time frame of this Plan.

GM-2d **City land-use designations**. The City's land use designations for parcels located within the Sphere of Influence are shown in Figure LU-a. These designations have legal force and effect only upon annexation of particular land areas to the City.

GM-2e **Prezoning of parcels within the Sphere of Influence**. Lands in the Sphere of Influence shall not be prezoned until the City considers particular annexation requests. Such prezonings shall be consistent with the City land-use designations for the Sphere area, or a General Plan Amendment would be required. The purpose shall be to provide maximum latitude to the City to determine the appropriate timing of expansion of the City boundaries, extension of services, and urban development.

GM-2f **County Land-use and Zoning designations in Sphere of Influence**. The City shall request that Humboldt County adopt agricultural, natural resource, or other rural

land use designations, within the Sphere of Influence, as a holding zone to prevent premature development prior to annexation to the City. This shall not apply to areas which are already fully developed such as Pacific Manor. The County's land-use designations are legally binding until annexation to the City is completed.

GM-2g **Resource lands in the Sphere of Influence.** The City shall periodically review the SOI boundary, especially to the west, to determine whether resource lands are being adequately protected.

POLICY GM-3 ANNEXATIONS

Objective. Provide for logical annexations of unincorporated areas, within the City's Sphere of Influence and/or Planning Area, when the existing or proposed development is consistent with community character and City services can be adequately provided.

GM-3a **City annexation procedure**. The City prefers to consider annexation requests prior to LAFCo consideration. If area property owner(s) or residents request that the City initiate an annexation request to LAFCo, the following procedures shall apply:

1. Initiation:
   a. If lands are inhabited, a petition must be signed by no less than fifty percent of the resident voters, or at least twenty-five percent of owners of property located within the annexation area;
   b. If lands are uninhabited but consist of more than one parcel and owner, a petition must be signed by a majority of owners representing more than fifty percent of the annexation area;
   c. If a single parcel, a petition must be submitted by owner(s).
2. The Planning Commission shall review and make a recommendation on the requested annexation to City Council.
3. Final Action shall be taken by Council regarding Resolution of Intention for annexation.
4. Following City Council approval of annexation request, including any accompanying General Plan amendment, pre-zoning ordinance and/or environmental document, the City shall transmit the annexation request to LAFCo for its consideration and decision.

GM-3b **Required materials for consideration of annexations of non-urbanized land areas**. The following shall apply to annexation requests where the land proposed to be added to the City is not developed with urban land uses prior to annexation:

1. The City, or experts under contract to the City, shall prepare a detailed annexation study addressing items "a" through "f" listed below.

a. A comprehensive and detailed analysis of the fiscal impacts of the annexation, addressing the full range of revenues and expenditures. One-time capital costs of facilities, as well as recurring operating costs and revenues, shall be evaluated;
b. A study and/or proposal for tax-sharing agreements with other taxing entities, such as the County;
c. An accompanying General Plan Amendment, if requested or appropriate;
d. A proposed preliminary development plan, including phasing if appropriate;
e. An assessment of the City's capacity to provide facilities and services, including: wastewater collection and treatment; stormwater management; water supply and distribution; streets and circulation; fire protection; police services; parks; and others as appropriate;
f. A prezoning ordinance. The costs of preparing the annexation study, including City administrative costs, shall be borne by the property owner(s) requesting the City to consider the annexation.

2. An environmental document pursuant to CEQA.
3. A Planned Development or Specific Plan may be required for any land area greater than five acres.

GM-3c **Criteria for annexation of undeveloped land areas**. All undeveloped lands proposed for annexation shall be added to the City only if the following criteria are met. The proposed annexation area shall:

1. Be within Urban Services Boundary and adjacent to existing urban development.
2. Not exceed the City's capacity to provide services and infrastructure to accommodate proposed development.
3. Have annexation timed so that availability of services and infrastructure is concurrent with need.
4. Have a positive or neutral fiscal impact, or other overriding public benefits;
5. Be in compliance with General Plan policies.
6. Not include prime agriculture land (Storie Index 60 or higher) other than with designation and prezone as Agriculture–Exclusive [A-E].

GM-3d **Criteria for annexation of areas with existing urban development**. All lands with existing urban development proposed for annexation shall be added to the City only if the following criteria are met. The proposed annexation area shall:

1. Be within the Urban Services Boundary and adjacent to existing city boundary.
2. Have facilities brought up to City standard prior to or concurrent with annexation.
3. Have costs of service extensions borne entirely by owners of annexing properties and not by existing City taxpayers or ratepayers, or, have a financing mechanism in place prior to annexation.

POLICY GM-4 URBAN SERVICES AND URBAN SERVICES BOUNDARY

Objective. Define the boundary that limits the extent of City services and urban uses, within the City's incorporated area and Sphere of Influence. Extend City services to urban uses within the urban services boundary when provision of those services will not exceed the City's planned system capacities

GM-4a **Urban Services Boundary**. The City shall maintain an Urban Services Boundary, beyond which urban services shall not be provided (except as provided for in Policy GM-4b), and urban development shall not be approved (see Figure GM-b). Rural residential development may be approved outside the Urban Services Boundary only if the development would not require the extension of water, sewer, and other public facilities. The area within the Urban Services Boundary shall be annexed at the time of development.

Any changes to the Urban Services Boundary shall be based on an analysis of soil type, vegetation, topography (slope), availability of public water and sewer services, existing property lines, existing land use, and potential for development. The boundary shall not be extended into the prime agricultural land or flood-prone areas on the west and south, nor extend past the Mad River on the north. To the east, the boundary shall not be extended into the steeper portions of Fickle Ridge, as designated on the General Plan Map. Parts of the Jacoby Creek and Bayside areas are included within the urban services boundary.

Only the Agriculture- Exclusive [A-E], Natural Resource [NR], and Public Facilities [PF] land use designations shall be applied to areas outside the Urban Services Boundary and within the Coastal Zone.

GM-4b **Services outside City boundary**. The City shall not extend sewer mains or new water mains or provide new service connections to portions of the Planning Area outside the City Limits except under the following conditions:

1. **Emergency sanitary sewer connection.** The City may provide an emergency sewer line extension provided the following conditions are met:
   a. The property is located within the City Urban Services Boundary for water and sewer.
   b. The property is adjacent to the City limits.
   c. The on-site sewage disposal system has failed.
   d. It is not feasible to replace or repair the on-site sewage disposal system as evidenced by a letter from the County of Humboldt Division of Environmental Health.
   e. The on-site sewage disposal system failure is considered a health hazard by the County of Humboldt Division of Environmental Health.
   f. The owner has submitted a complete application to the City of Arcata for

annexation of the property within 18 months from the date that sanitary sewer service was provided.

g. LAFCo has approved the emergency sanitary sewer connection.
h. The sewer connection shall be sized to only accommodate the failed system.

2. The City may contract to provide sewer services to other service districts subject to the following guidelines:
   a. Only those areas with existing contracts as of December 31, 1998 shall be served.
   b. No new contracts for services shall be approved.
   c. No new connections shall be allowed to the sewer lines in the area between the City Limits and the Arcata Planning Area Boundary.

[Revised by Ordinance No. 1377, September 2008]

GM-4c **Requirements and procedures for modifying Urban Services Boundary**. The following findings must be made to modify the Urban Services Boundary:

1. There are existing urban uses or urban uses designated on the land use plan map for the area being considered.
2. There is sufficient existing or planned infrastructure capacity to extend water, sewer, police protection, and other services, without reducing service standards for other areas.
3. The area to be served is adjacent to existing urban development.
4. The area to be served is within the City limits or Sphere of Influence.
5. City services extensions will not adversely impact natural resources in the area.

2.6 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURE	RESPONSIBLE PARTY	TIME FRAME
LU-1	**Annexation Procedures (LUC Amendment)** Add City annexation criteria and procedures to the City's LUC (formerly LUDG) for consistency with General Plan policies.	Community Development Dept./ Planning Commission	Year 1
GM -1	**Sphere of Influence/Planning Area Application Review** Develop memorandum of understanding (MOU) between City of Arcata, Humboldt County, and LAFCo for review of development and use permit applications.	Community Development Dept.	Year 1
GM -2	**Memorandum of Understanding (MOU) with County** Negotiate a MOU with Humboldt County that provides for City review and input on all proposed actions on Sphere of Influence/Planning Area lands.	Community Development Dept.	Year 1

#	IMPLEMENTATION MEASURE	RESPONSIBLE PARTY	TIME FRAME
GM -3	**Urban Services Boundary** Update Title 5 and Title 7 of the Arcata Municipal Code to define and describe criteria for modifying Urban Services Boundary, consistent with General Plan policy.	Community Development Dept./ Planning Commission	Year 1
GM -4	**Update Sphere of Influence Boundary** Comprehensively evaluate the Sphere of Influence Boundary to ensure that City growth and resource protection objectives are being met.	Community Development Dept.	Every 5 Years
GM -5	**Prezoning Ordinance** Prepare and adopt a prezoning ordinance that does not allow resource lands to be prezoned, but requires consideration of land use designations at time of annexation.	Community Development Dept.	Year 2
GM -6	**Local Agency Formation Commission** Submit changes in Sphere of Influence and updates of maps to LAFCo, and request that maps be updated.	Community Development Dept.	Year 5

TRANSPORTATION ELEMENT

2.7 INTRODUCTION

Transportation concerns how people and goods move through and around the City. The transportation element addresses how roadway, transit, rail, freight, bicycle, and pedestrian systems can be planned to achieve maximum individual mobility in a manner consistent with community character and environmental protection. California law requires that transportation and land use policies be closely correlated. The Arcata General Plan accomplishes this correlation in two ways. First, travel demand has been forecasted based on the amount and distribution of growth allowed by the land use plan. Second, the policies of the transportation, land use and air quality elements have been interwoven to provide a balance between land uses and the transportation facilities that serve them. The overall theme of this element is achieving a balanced transportation system.

Overview of Existing and Future Transportation Conditions

Existing Roadway System. Arcata's pattern of highways and streets is similar to many small and rural communities. The central business district has a traditional grid pattern of streets, with a one-way couplet system comprising the primary arterial. A non-grid series of arterial and collector streets surrounds the central business district and serves outlying residential subdivisions, neighborhood shopping centers, Humboldt State University, and industrial areas. On the outer edges of Arcata, the transportation system is comprised of rural roads and highways serving isolated farms and residences. Arcata is bisected by the State Route 101 freeway, the main state route serving the North Coast of California from San Francisco to Oregon.

Functional Classifications of the Street System. Arcata's existing and planned primary streets and their functional classifications are shown in Figure T-a. The functional classification system is described in the following paragraphs.

Freeways and Highways. Freeways are high speed facilities with restricted access that move traffic on an intercity or regional basis. Access to freeways is limited to grade-separated interchanges. Routes 101 and 299 are designated as freeways. Highways are also high-speed facilities, but with fewer restrictions on access and at-grade intersections. Route 255 is designated as a highway.

Arterial Streets. The primary function of arterial streets is to provide intracity mobility as efficiently as possible. In addition to interconnecting the various parts of the city, arterial streets also provide some access to abutting lands. Compared to other communities, arterials in Arcata have fewer traffic control devices at intersections. As of 1998, all of the traffic signals in Arcata were located on state facilities. Examples of arterials include the "G" and "H" Street one-way couplet, Alliance Road, Samoa Boulevard and L.K. Wood Boulevard.

Minor Arterials. Local streets, while providing access to development on adjacent lands, primarily provide mobility between arterial and collector streets. Examples include Buttermilk, Jacoby Creek (within the sphere of influence) West End, Union, and Upper Bay Road.

Collector Streets. Collector streets provide both mobility and access to land in about equal proportions. These roadways move vehicular, pedestrian, and bicycle traffic within and between residential, commercial, and industrial areas. As the name implies, collector streets are intended to collect traffic from local streets and channel it to the arterial street system. Examples of collector streets include 7th Street, 14th Street, Union Street, Buttermilk Lane, and Fickle Hill Road.

Local Streets. Local streets mainly serve to provide access to development on abutting parcels of land. These low-speed roadways provide access between land uses and collector streets. Local streets serve all types of land use including residential, commercial, and industrial. Often, local streets in residential areas are utilized by through traffic, resulting in complaints from residents about speeding and high traffic noise volumes.

Rural Roads. Rural roads are generally two-lane unimproved facilities located on the outer edges of the community. Their primary function is to provide connection and access to farms, isolated residential areas, and industrial uses. Rural roads usually do not have typical urban improvements such as underground drainage, lighting, sidewalks, or curbs and gutters. Examples of rural roads in the Arcata area include Mad River Road, Upper Bay Road, Jackson Ranch Road, the western portion of Foster Avenue, and Jacoby Creek Road.

FIGURE T - a STREET FUNCTIONAL CLASSIFICATIONS (11x17)

FIGURE T - a STREET FUNCTIONAL CLASSIFICATIONS (part 2)

= = = =

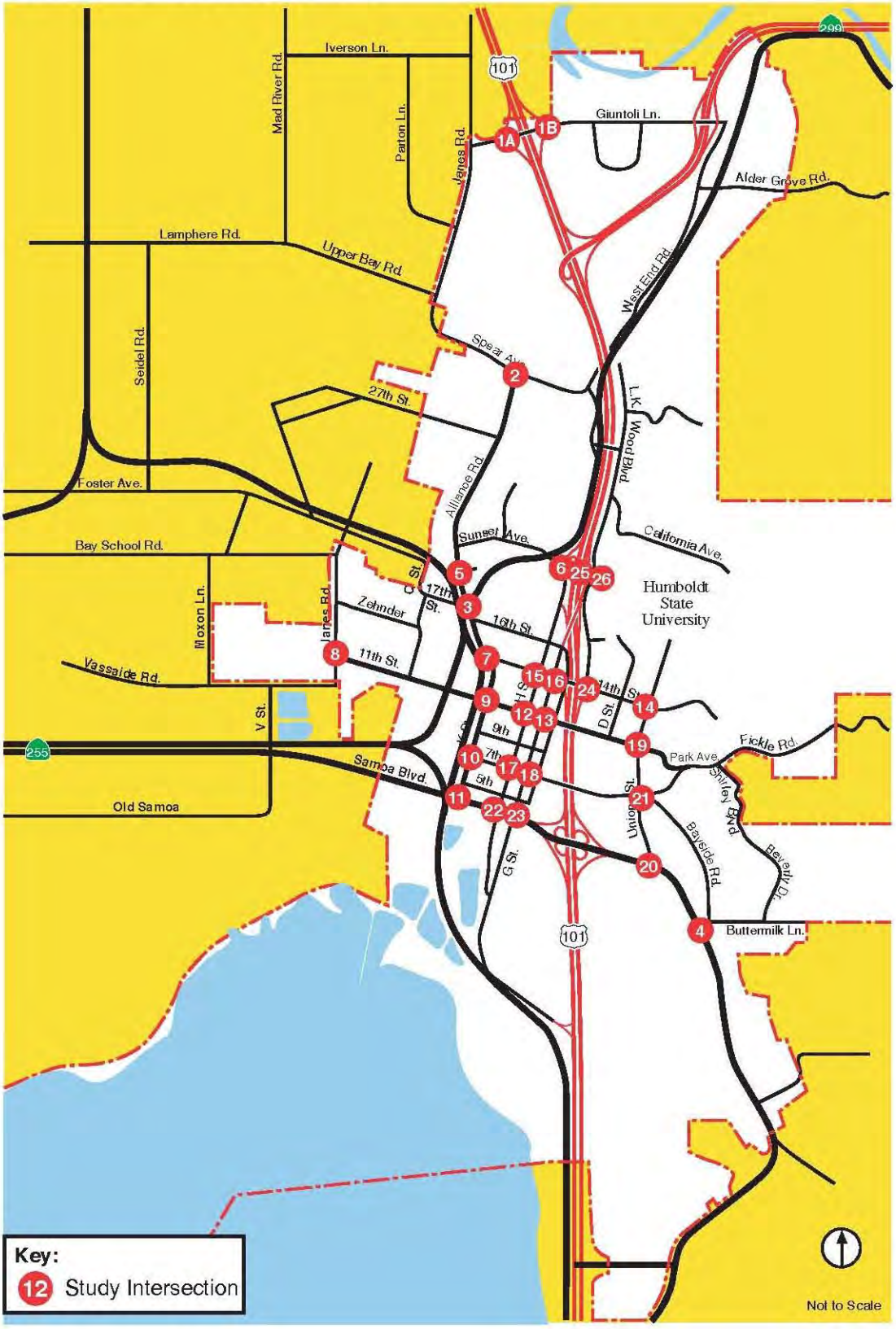
Existing and Projected Traffic Volumes and Intersection Levels of Service.

Existing and projected future average weekday traffic volumes are shown for selected street locations in Figure T-c. Existing volumes were established with traffic counts conducted in 1996. Projected traffic volumes were developed using the Arcata Citywide Traffic Model. The model was created to evaluate three potential year 2020 growth or "buildout" scenarios for Arcata. The traffic volumes reported in Figure T-c represent the buildout scenario associated with the land use plan. Table T-1 provides levels of service definitions for intersections. Existing and projected future volume/capacity ratios and afternoon peak hour levels-of-service for key intersections are shown in Table T-2. The locations of key intersections analyzed are shown in Figure T-b.

Traffic Volumes. Arterial streets with the highest daily traffic volumes are Samoa Boulevard, Alliance Road, Spear Avenue, "K" Street, and 11th Street. Collector and local streets carry considerably less traffic than arterial streets. The highest projected traffic volume on a surface street is on Samoa Boulevard west of State Route 101, with an average daily volume of over 17,000 vehicles. The largest percent increases in daily traffic volumes are on Alliance Road, "K" Street, and 11th Street east of "K" Street. Projected future traffic volumes on State Route 101 range from nearly 41,000 vehicles per day north of Arcata to 43,000 vehicles per day south of the City. Traffic volumes on Highway 299 east of Arcata are projected to increase from about 10,000 vehicles per day to over 16,000. Traffic volumes on these freeways reflect continuing growth in areas outside Arcata that will result in increased through traffic, particularly McKinleyville to the north along State Route 101.

Intersection Levels-of-service. Level of service (LOS) is a qualitative and quantitative description of intersection operations defined in terms of a letter grade and either the volume to capacity ratio or total stopped delay per vehicle during the peak hour. Levels of service range from LOS A, representing free flow conditions to LOS *F* which signifies excessive delays, long vehicle queues, and generally unacceptable conditions. The level of service criteria, defined in the 1995 Highway Capacity Manual prepared by the Transportation Research Board, are used by local agencies nationwide to establish standards of acceptability. What is considered acceptable may vary from one jurisdiction to another.

Figure T - b Key Intersections



Level of service for a signalized intersection is defined by its volume to capacity ratio. A ratio of 1.00 indicates that the intersection's volume equals its capacity. At unsignalized intersections, the total stopped delay is applied only to vehicles required to stop.

TABLE T-1 LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

LEVEL OF SERVICE	SIGNALIZED INTERSECTIONS	UNSIGNALIZED INTERSECTIONS
A	Uncongested operations; all queues clear in a single cycle. Volume to capacity ratio of 0.00 to 0.60.	No delay for stop controlled approaches. Delay equals 0 to 5 seconds.
B	Uncongested operations; all queues clear in a single cycle. Volume to capacity ratio of 0.61 to 0.70.	Minor delay for stop controlled streets. Delay equals 5.1 to 10 seconds.
C	Light congestion; occasional backups on critical approaches. Volume to capacity ratio of 0.71 to 0.80.	Moderate delay for stop controlled approaches. Delay equals 10.1 to 20 seconds.
D	Significant congestion of critical approaches but intersection remains functional. Some vehicles required to wait through more than one cycle during brief periods. No long queues formed. Volume to capacity ratio of 0.81 to 0.90.	Long delay for stop controlled streets. Delay equals 20.1 to 30 seconds.
E	Severe congestion with long standing queues on critical approaches. Blockage of intersection may occur if intersection does not provide protected left turns. Queues may extend into adjacent intersections. Volume to capacity ratio of 0.91 to 0.99.	Very long delays for stop controlled intersections, reaching level of tolerance for average driver. Delay equals 30.1 to 45 seconds.
F	Total breakdown; stop and go operations. Volume to capacity ratio of 1.00 or greater.	Extreme congestion, intolerable delay for stop controlled vehicles. Delay equals 45.1 seconds or greater.

Source: 1994 Highway Capacity Manual (Special Report 209) & Circular 212, Transportation Research Board. Delay for unsignalized intersections is based on average stopped delay in seconds per vehicle.

Table T-2 identifies the existing and projected service levels a t the two signalized and twenty-one unsignalized key intersections within the City. Projected service levels are based on the estimated buildout of the land use plan by the year 2020.

Figure T - c Traffic Volumes

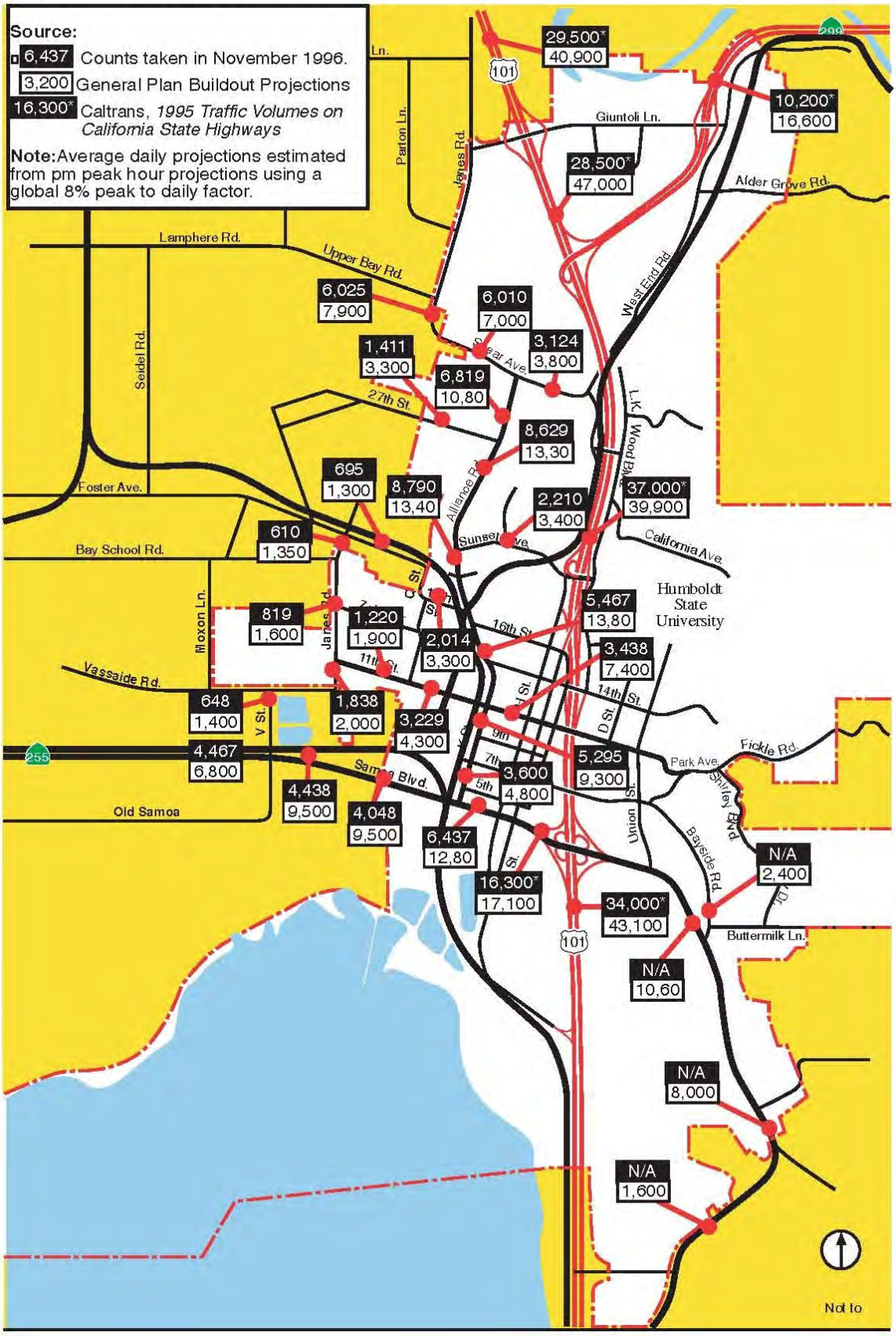


TABLE T-2 AFTERNOON PEAK HOUR INTERSECTION SERVICE LEVELS

SIGNALIZED INTERSECTIONS[1]	EXISTING		PROJECTED	
	V/C RATIO	LOS	V/C	LOS
23) G Street / Samoa Boulevard	<1	A	<1	A
22) H Street / Samoa Boulevard	<1	A	<1	A
Unsignalized Intersections[1]	**Delay**	**LOS**	**Delay**	**LOS**
1A) Giuntoli / 101 SB Ramps	8	B	>45	F
1B) Giuntoli / 101 NB Ramps	3	A	>45	F
2) Alliance Road / Spear Ave.	5	A	6	B
3) Alliance Road / 17th Street	1	A	14	C
4) Bayside Road / Crescent Way	4	A	7	B
5) Alliance Road / Foster Ave.	1	A	11	C
6) Sunset Ave. / "G" & "H" Streets	4	A	9	B
7) Alliance Road / 14th Street	1	A	4	A
8) Janes Road / 11th Street	2	A	5	A
9) K Street / 11th Street	6	B	10	B
10) K Street / 7th Street	1	A	9	B
11) K Street / Samoa Boulevard	>45	F	>45	F
12) H Street / 11th Street	7	B	15	C
13) G Street / 11th Street	10	C	23	D
14) Union Street / 14th Street	2	A	5	A
15) H Street / 14th Street	7	B	12	C
16) G Street / 14th Street	12	C	16	C
17) H Street / 7th Street	4	A	7	B
18) G Street / 7th Street	4	A	11	C
19) Union Street / 11th Street	2	A	3	A
20) Union Street / Samoa Boulevard	4	A	>45	F
21) Union Street / 7th Street	3	A	4	A
24) L.K. Wood Blvd. / 14th Street	5	A	5	B
25) Sunset Ave. / US 101 NB Ramp	2	A	10	B
26) Sunset Ave. / L.K. Wood Blvd.	8	B	11	C

[1] See Figure T - b for intersection locations. V/C Ratio = volume to capacity ratio.
< less than, > greater than.

All of the intersections analyzed presently operate at LOS C or better with an average delay of twelve seconds or less per vehicle in the afternoon peak hour. The one exception is the intersection of "K" Street with Samoa Boulevard, which operates at LOS F for the

southbound to eastbound left turn. This movement must wait for gaps in both directions of traffic on the four-lane segment of Samoa Boulevard.

Table T-2 also presents the projected afternoon peak hour intersection levels of service for the buildout scenario. At buildout, the two signalized intersections ("G" and "H" Streets at Samoa Boulevard) continue to operate well under capacity at LOS A. Two of the City's unsignalized intersections are projected to operate at LOS F. These are:

1. Giuntoli Lane/US 101 Southbound Ramps – failed service level is for left turn movement from the southbound off-ramp approach onto Giuntoli Lane. This intersection meets the Manual of Uniform Traffic Control Devices' (MUTCD's) peak hour volume warrant for signalization. This intersection should be monitored for possible installation of a traffic signal, all-way stop control, or traffic roundabout.
2. Giuntoli Lane/US 101 Northbound Ramps – failed service level is for left turn movement from the northbound off-ramp approach onto Giuntoli Lane. This intersection meets Manual of Uniform Traffic Control Devices (MUTCD's) peak hour volume warrant for signalization. This intersection should be monitored for possible installation of a traffic signal, all-way stop control, or traffic roundabout.

Other intersections which operate near or over capacity include the unsignalized intersection of "K" Street/Samoa Boulevard. This intersection currently operates at LOS F for the southbound left turn onto Samoa Boulevard, and continues to operate poorly for this movement with buildout under the land use plan. All of the remaining unsignalized intersections are projected to operate at LOS D or better. Most intersections, however, operate at LOS A or LOS B. Existing and projected peak hour service levels are based on existing intersection control and lane configurations as of 1998. Improvements anticipated by this plan will likely improve the LOS to acceptable levels for all intersections.

Existing and Projected Transit Ridership. The Arcata & Mad River Transit System (A&MRTS) and Humboldt Transit Authority are the two transit systems providing service in the City of Arcata. Transit services are offered along major streets in the city and to major inter-route transfer points including the Arcata Transit Center and Humboldt State University (HSU). HSU student ridership is significant during the school season when extra shuttles are provided to accommodate overflows in the morning peak hour. Table T-3 shows existing and projected A&MRTS bus ridership.

During the school season, A&MRTS ridership increases significantly, by more than150%. As of 1998, HSU subsidized student bus fares by $0.60 resulting in increased ridership and

reduced vehicle travel to the university. The subsidy is funded through parking fines at the University. A 1995 survey indicated that 75% of A&MRTS riders are traveling to and from school, 12% for work, and the remaining 14% for various purposes including shopping, recreational, and personal trips.

TABLE T-3 A&MRTS RIDERSHIP SUMMARY: EXISTING AND PROJECTED

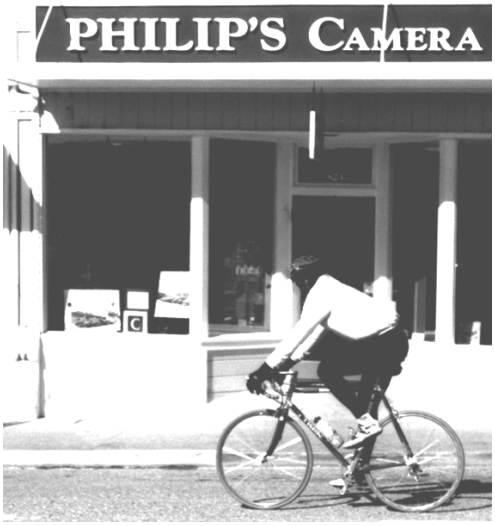
PASSENGER TYPE	AVERAGE SUMMER MONTHLY RIDERSHIP	AVERAGE SUMMER DAILY RIDERSHIP	AVERAGE SCHOOL SEASON MONTHLY RIDERSHIP	AVERAGE SCHOOL DAILY RIDERSHIP
All Passengers	5,900	300	14,900	850
Students			11,000	750
DAILY STUDENT RIDERSHIP BY PERIOD				**STUDENT RIDERS DURING PERIOD**
7 to 11 AM				400
11 to 3 PM				250
3 to 7 PM				200
PM Peak Hour - All Passengers				70
Source: A&MRTS superintendent Larry Pardi. Note: A&MRTS provides extra shuttles to HSU during school season to accommodate overflow in the morning peak, extra shuttles are not required in the afternoon peak, but buses have standing room only.				
PROJECTED A&MRTS INCREASE IN RIDERS (AT 2020 LAND USE PLAN BUILDOUT)				
		1% Increase in Riders	**3% Increase in Riders**	**5% Increase in Riders**
Passengers		62	183	304
Note: Increase in daily ridership based on projected land use in traffic analysis zone's [TAZ's] within 1/4 mile of transit corridor stops and 1990 census mode split within each TAZ.				

In 1997, fares represented 20% of the A&MRTS capital and operating costs. The balance of the costs are funded through Transportation Development Act (TDA) funds (70%), State Transit Assistance (STA) funds (5%), and Federal Transit Administration (FTA) Section 18 funds (5%). The two A&MRTS fixed routes serve most of the City, and most points are within 1/3 mile of a bus stop. As of 1998, the system runs on weekdays from 7:00 AM to 7:00 PM with sixty-minute headways. Saturday service is from 9:00 a.m. to 5:00 p.m. with 120-minute headways. In addition to fixed routes, A&MRTS provides "demand responsive" dial-a-ride service. This service accommodates about fifteen to twenty passengers per day. The majority of these passengers are elderly or disabled with destinations to the Mad River Adult Day Health Center.

The Humboldt Transit Authority provides regional public transportation through the Redwood Transit System (RTS). This fixed route system serves cities along the Highway 101 corridor from Trinidad to Scotia. The RTS has four stops in Arcata including Humboldt State University and the Arcata Transit Center. The City of Arcata contributes to the funding for RTS. The Arcata Transit Center, located on "F" Street between 9th and 10th Streets, provides a centralized transit facility for buses operated by A&MRTS, RTS, Greyhound, and Amtrak. The Transit Center provides a park-and-ride lot and secure bicycle facilities.

The A&MRTS 1995 Transit Development Plan projected a 16% increase in ridership between 1995 and the year 2000 based on an equal projected increase in population. The plan recommends service improvements comprised of redesigning the present “Red Route” creating a more direct and faster route with consistent thirty-minute headways between downtown and Humboldt State University, and thirty-minute headways between downtown and Sunny Brae. If additional resources become available, the plan recommends providing evening service on the Red Route during the school season and providing a third bus on the Red Route during the school season to achieve thirty-minute headways.

Table T-3 also presents year 2020 projected increases in average school daily riders. This information is derived from growth in population and employment in Traffic Analysis Zones (TAZs) within transit corridors and 1/4 mile from bus stops, and a 1%, 3% and 5% increase in riders over 1990 census mode split information. While relatively small percentages, the increases represent a large increase in riders for Arcata. A sensitivity analysis indicates that these increases in riders could reduce vehicle trips between 0.5% and 2.3% and reduce annual vehicle miles of travel between 0.2% and 1.1%.



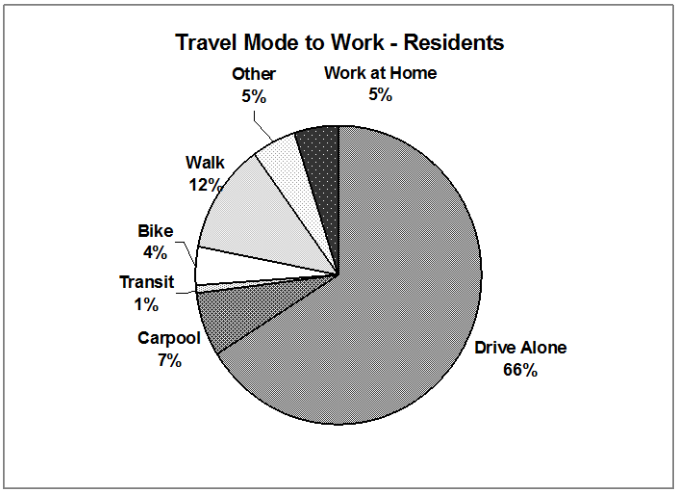
Bicycle and Pedestrian Facilities. Arcata’s bicycle transportation system consists of Class II bike lanes and Class III bike routes on public streets. Class II bike lanes are on-street facilities delineated from motor vehicle travel lanes by pavement striping and markings. Class III bike routes are specially designated corridors in which the travel lanes are shared by motor vehicles and bicycles. Arcata presently provides a comprehensive bike lane system connecting most major areas of the City on primary arterial streets. Most Class II bike lanes are located on north-south streets, while Class III bike routes provide east-west connection on key streets. The western portion of the City (west of Alliance Road) is least served by bike lanes, providing an opportunity to expand the bike lane system to encompass more residential areas.

Pedestrian facilities are provided throughout Arcata in the form of sidewalks on public

streets. The City's design standard for streets includes five-foot wide sidewalks on both sides of the street with a fifty-foot wide right of way. Many streets, particularly local, collector, and rural roads, do not have curb and gutters or sidewalks – forcing pedestrians to walk on unpaved shoulders or within the travel lanes. While the downtown and areas surrounding Humboldt State University provide a continuous sidewalk system in other areas of the City, there are many gaps in the sidewalk system. The City's standard five-foot wide sidewalk meets the minimum Americans with Disabilities Act (ADA) requirements, but wider sidewalks are desirable for high-traffic pedestrian locations and to encourage walking. Narrow sidewalks are often obstructed with utility poles, signs, and street furniture, further reducing their effectiveness. In addition, the City's street standards lack sufficient width for a planting strip or street trees, which are important elements in promoting walking as an alternative mode of transportation. Opportunities exist, however, within the standard fifty-foot wide right of way to provide street trees in planter boxes located in the parking lane, or to add a planting strip between the sidewalk and travel lanes when new development projects are considered.

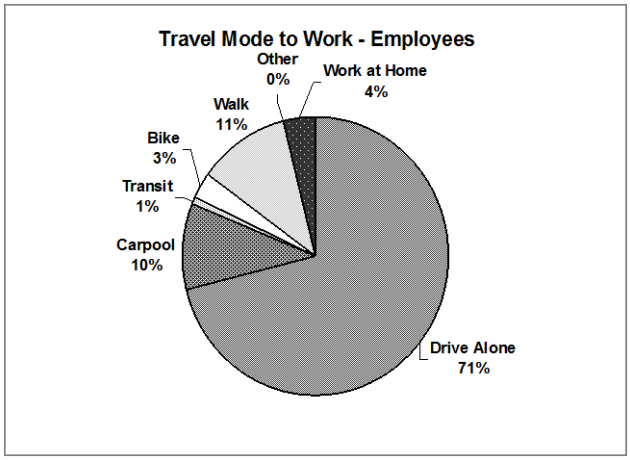
Existing Freight and Railroad Transportation Systems. Arcata has designated truck routes on several key arterial and collector streets including Giuntoli Lane, Valley West/Valley East Boulevard, West End Road, Alliance Road, "K" Street, Spear Avenue, L. K. Wood Boulevard, 11th Street, Fickle Hill Road, Janes Road, and Samoa Boulevard. These streets provide intracity connections for freight travel and serve most of the industrial areas of the City. All state facilities including Routes 101, 299, and 255 are designated truck routes.

Arcata has a railroad mainline managed by the North Coast Railroad Authority, with spurs serving industrial properties. Although most rail service was suspended following damage to tracks caused by storms in 1997, the main line and many spurs in Arcata were active prior to that time. They served several industrial uses in the northeast and southwest areas of the City and were used to move freight between Arcata and Eureka. Service consisted of one round trip at night between the hours of 7:30 p.m. and 7:30 a.m. The North Coast Railroad Authority has permitted passenger service between Arcata and Eureka on certain holidays each year as special event excursions. There has been discussion about initiating regular passenger rail service between Arcata and Eureka, but no plans have been developed.



Existing Modes of Travel. Based on 1990 census data, the majority of Arcata residents drive alone to work (66%) as shown in the accompanying figure. Walking and bicycling modes make up 12% and 4% respectively. About 5% of Arcatans work at home. Public transit is the least utilized mode of travel at 1%. While low on a citywide

basis, public transit usage is higher in some areas of the City when examined at the census block level. Transit mode of travel in the downtown area, for example, is about 8%. Similarly, walking and bicycling modes are high in certain areas, up to 16%. Travel modes for people who work in Arcata are similar to those of residents, with the exception that more employees drive alone (71%) and carpool (10%). Compared to residents, fewer employees walk (11%) and bike (3%), while the same amount (1%) use public transit.



Existing Travel Demand Management. The most comprehensive use of Transportation Demand Management (TDM) measures is by the City's largest employer, HSU, which has the following programs:

1. HSU subsidizes free travel on A&MRTS buses for students, faculty, and staff. This subsidy covers $3.00 for every $11.00 spent for transit service.
2. The University's "Ease the Crunch" campaign offers information to students explaining the proximity of the campus to residential areas and the convenience of transit use. The information includes transit routes and subsidy programs available.
3. HSU provides approximately 2000 bike racks on campus to ensure safety of bicycles.
4. HSU purchased bike racks for buses, enabling members of the university community to combine bus and bicycle commutes to and from the campus.
5. HSU provides the fee for bicycle licensing.

<u>Guiding Principles and Goals.</u>

A. Provide a transportation system which allows safe and efficient travel.
B. Create a transportation system which provides a choice of travel modes.
C. Provide for increased use of alternatives to the single-occupant vehicle, including walking, bicycling, public transit, carpooling/vanpooling, and ridesharing.
D. Manage the street and highway system to promote more efficient use of existing capacities rather than increase the number of travel lanes.
E. Create a transportation system which will improve the livability of residential neighborhoods, including use of methods to calm or slow traffic and reduce through-traffic on local neighborhood streets.
F. Educate residents, employees, and students about the importance of using alternative forms of transportation instead of the single-occupant automobile.
G. Promote land use patterns that encourage walking, bicycling, and public transit use.
H. Establish a set of curb parking prices that are high enough to maintain an adequate supply of available spaces.

2.8 POLICIES

The Transportation Element includes the following policies:

T-1 Balanced Transportation System with Choice of Modes
T-2 Travel Demand Management
T-3 Bus Transit System
T-4 Streets and Highways Plan
T-5 Bicycle and Pedestrian Facilities
T-6 Parking Supply and Parking Management
T-7 Rail and Freight Transportation
T-8 Financing Transportation Improvements

POLICY T-1 BALANCED TRANSPORTATION SYSTEM WITH CHOICE OF MODES

Objective. Create and maintain a balanced transportation system with choice of bus transit, bicycle, and pedestrian as well as private automobile modes. Reduce the percentage of trips that are made by automobile and provide the opportunity and facilities to divert trips from automobiles to other modes.

T-1a **Investment in alternative modes.** In order to provide a realistic and cost-effective balance between travel modes, the City shall emphasize investment in alternative modes (bikeways, etc.) as a priority over increasing vehicular capacities of streets.

T-1b **Interconnections and transfers between travel modes.** The City shall provide and maintain a Transit Center to facilitate interconnection and transfers between bus routes and systems. As funding permits, Transit Center facilities shall be improved to encourage its use as a multi-modal transfer point. Pedestrian and bicycle amenities shall be provided at other locations which serve as modal transfer points such as bus stops and park-and-ride lots.

T-1c **Intercity travel.** The City shall coordinate with Humboldt County and Caltrans to provide adequate facilities for vehicles, buses, and bicycles to serve intercity demand. Joint efforts may include transportation improvements outside of Arcata which serve intercity travel, such as bicycle links, timed-transfer bus stops, park-and-ride lots, and regional transit service and development of park-and-ride lots in Arcata to reduce intercity vehicular travel.

T-1d **Critical transportation facilities.** Critical transportation facilities for emergency vehicle access and emergency evacuation shall be maintained and improved as a priority need. Critical transportation facilities include the major routes into and out

of the City such as Highways 101, 299, and 255, their interchanges with City streets and primary intra-city street connections including Samoa Boulevard, 11th Street, "G" and "H" Streets, Sunset Avenue, L.K. Wood Boulevard, Alliance Road, Janes Road, and Giuntoli Lane. Due to the potential for structural failure of these facilities in a seismic emergency, alternative routes and procedures for their use shall be identified.

T-1e **Parking and public transit service study.** The City shall undertake a comprehensive study of parking and public transit service options for the downtown/uptown area and HSU, with cost/revenue implications presented for each option. This study shall be undertaken jointly with HSU.

POLICY T-2 TRAVEL DEMAND MANAGEMENT

Objective. Reduce the percentage of automobiles and reduce the annual vehicle-miles of travel.

T-2a **Land use development patterns.** The City encourages and supports travel demand management efforts. The City shall promote land use and development patterns that encourage walking, bicycling and transit use. In recognition of the link between land use and transportation, the land use plan shall discourage low density, homogenous land-use patterns that foster automobile travel and are impractical to serve with transit. Land use planning shall emphasize high density and mixed land-use patterns which translate into higher transit and pedestrian travel in the downtown and neighborhood commercial areas. Infill, redevelopment, and reuse of underutilized property at higher densities shall be encouraged prior to outward expansion of City boundaries. The following land use measures are emphasized:

1. Mixed-use neighborhood centers within transit corridors which include housing and commercial services near employment.
2. Land use patterns which maximize linking trip opportunities by assembling uses, thus allowing people to take care of a variety of daily needs with a single trip.
3. Clustering of higher density housing and incorporation of residential apartments on upper floors of buildings in the downtown area.
4. Integration of new housing into neighborhood shopping centers, including Sunny Brae, Westwood, and Valley West.
5. Pedestrian-oriented land use and urban design, including the following elements:
    a. Pedestrian-scale block patterns.
    b. Incorporate pedestrian and bicycle amenities into public and private projects.
    c. Design streets for multi-modal use.
    d. Integrate transit stop facilities into public and private projects.
    e. Orient buildings and houses to street.

f. Provide attractively landscaped streets and buffers.
g. Preserve existing and historic urban fabric.
h. Eliminate blank wall facades.
i. Incorporate bicycle routes and enhancements in public and private projects.

6. A fixed urban services boundary to reduce sprawl and infrastructure costs.
7. Focused growth along existing or planned transit corridors rather than extension of transit to serve new isolated development.
8. Prevention of large areas of single uses. Isolated single-use developments at the edge of the City could encourage automobile travel for commuting and errands.
9. Provision of convenience retail and services in ground floor space in the downtown to accommodate the needs of employees and reduce the need for mid-day automobile trips.

POLICY T-3 BUS TRANSIT POLICY

Objective. Maintain a bus transit system which connects and serves major commercial and employment areas within Arcata, Humboldt State University, public schools, and higher density residential areas. Increase average citywide transit mode share of daily person trips to 5% from the 1998 level of 1%.

T-3a **5-year transit plans.** The City shall maintain the existing A&MRTS routes (as shown in Figure T-d), frequency, and level of service until increased demand, additional development, and transit planning studies identify the need for either route modification, an expanded route system, or increased service on existing routes. The transit planning studies should evaluate the cost-effectiveness and feasibility of increased routes and service based on projected capital and operating costs, fare box recovery, and federal subsidies (see Policy T-3c for planning criteria).

T-3b **Regional transit service.** Short- and long-range transit plans shall be coordinated with the regional transit service provided by the Redwood Transit System. The City supports regional transit plans which improve service and timed transfers, and reduce headways for intercity travel.

T-3c **Bus route system.** Public transportation is an enterprise activity and its services must be designed to be as efficient and productive as possible. As a transit operator, the City must balance demand with resources for a sustainable system. The City shall consider adding transit routes or modifying existing transit routes and level of service based on the transit planning efforts described in Policy T-3a. Criteria to evaluate and identify thresholds for changes to the A&MRTS system shall be

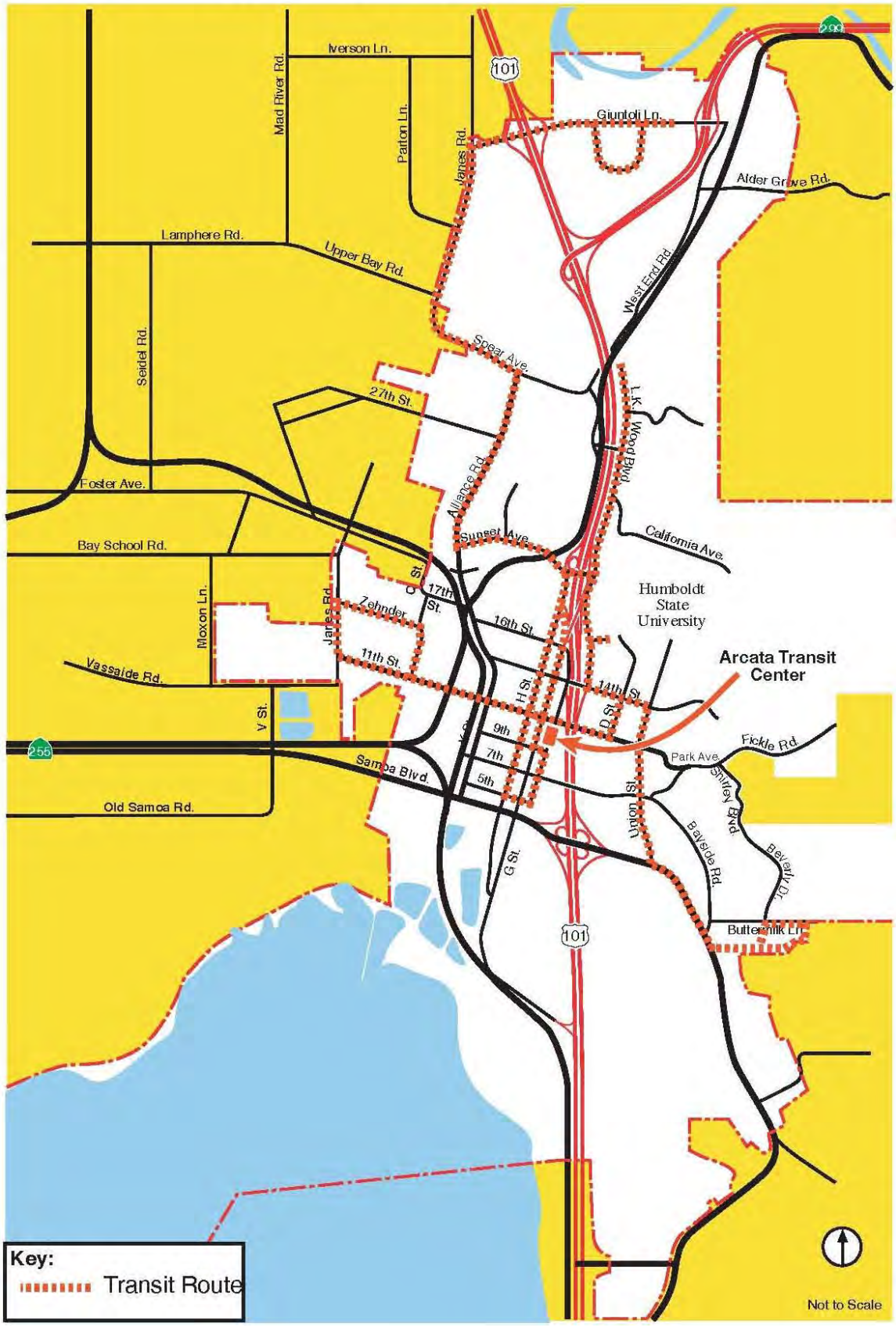
developed. General guidelines for planning future routes and service include:

1. Accessibility of route to residents and employees. Calculate the number of people living or working within walking distance of the route (typically 1,000 feet). Assuming 1% to 8% of that population would use transit (based on existing transit mode share by census block), determine if the route will serve an adequate population for cost-effective service.

2. Review the housing density within the proposed route corridor. Minimum densities of at least seven dwelling units per acre are necessary to support local transit service. Ideally, the average housing density within a transit corridor or transit served nodes should range between eighteen to twenty dwelling units per acre, depending on the proximity to stops.
3. Evaluate the efficiency and directness of future routes. Compare bus travel time with automobile travel time to avoid a disproportionality which favors automobile use. Determine if the route requires inefficient loops which take riders out of their way and discourages transit use. Design routes to be as direct as possible with turnarounds at endpoints.
4. Evaluate the diversity of the destinations served. Efficient routes serve a diversity of land uses including residential, employment, schools, and shopping. Evaluate the number of activity centers connected by the route and the transfer opportunities provided.

T-3d **Transfers between routes and systems.** The public transit system shall provide convenient transfers between routes, other transit services, and other modes of travel. The Arcata Transit Center shall serve as the primary multi-modal transfer station. Bus stops should be located near municipal parking lots or future park-and-ride lots. The A&MRTS and Redwood Transit System schedules shall be coordinated to provide a timed-transfer system at key stops.

Figure T - d A&MRTS Transit Routes



T-3e **Bus stops.** Existing bus stops should be improved and new bus stops on future routes should be designed with appropriate amenities and features. Design elements include either bus stop lanes or bus turnouts. Bus stop design amenities which increase rider comfort and feeling of safety and encourage walking and bicycling are emphasized, including shelters, benches, lighting, shade trees, signs, information kiosks, waste receptacles, paved surfaces, and secure bicycle parking. Bus stop areas should be consistently maintained and cleaned, including vandalism repair and graffiti removal. Developers shall be required to provide bus stops and amenities on their frontage if the property is located on an existing or future bus route and is an appropriate location for a stop. Pedestrian and bicycle access should be provided to neighborhood bus stops.

T-3f **Transit subsidies.** The City supports continued A&MRTS contract services with Humboldt State University to provide subsidized fares to its students and employees. This subsidy, which allows these users to ride without cost to the individual, is the single most important Transportation Demand Management strategy for Arcata.

T-3g **Transit implications of new development.** The public works department and A&MRTS shall evaluate proposed new development projects and make recommendations prior to project approval regarding transit improvements and road designs.

T-3h **Increased weekend transit service.** The feasibility and cost-effectiveness of providing weekend bus service to Eureka should be studied.

POLICY T-4 STREETS AND HIGHWAYS PLAN AND POLICY

Objectives. Plan an internal street system consistent with Arcata's small-town, non-metropolitan character and which: 1) efficiently utilizes existing facilities and reduces need for investment in new or expanded street and highway facilities or capacities; 2) improves connectivity of streets to provide for direct routes between origins and destinations; 3) has a high quality of regular maintenance and repair; and 4) maintains a level of service which minimizes delays, but allows for higher levels of congestion during the short peak periods on weekdays.

T-4a **Freeways and Highways.** State Routes 101 and 299 are designated as freeways for their entire length in the City. State Route 255 is designated as both an arterial and a highway within the City. The following standards shall apply to these classifications:

1. Function. The function of freeways is to provide for high speed automobile and freight movement for intercity and regional travel. Freeway access is highly controlled to achieve this function. Freeway operations, design, and maintenance are under the jurisdiction of the State. Highways (Route 255) also function to move automobiles and freight at relatively high speeds with little friction from intersections and conflicting traffic. Access is controlled on highways, but not as restrictive as freeways. [See functional classification map in Figure T-a.]
2. No additional travel lanes. The City does not support development of any additional through-travel lanes to State Routes 101, 299, or 255 in Arcata or nearby areas. Existing and projected traffic volumes do not warrant additional lanes on these facilities.
3. Auxiliary lanes. The City does not support construction of auxiliary lanes between existing interchanges, or any new interchanges, on State Route 101.
4. Interchange improvements. The City supports interchange improvements that reduce potential conflicts created by unrestricted access from freeway off-ramps.
5. Landscaping. The City encourages Caltrans to maintain and improve landscaping along freeway corridors in Arcata and surrounding areas to improve aesthetics, provide a visual and noise buffer, and maintain the rural and small-town character of the region.
6. Undesignated right of way. All public rights of way with no land use designation (i.e. freeways, highways and associated interchanges) shall be used for transportation purposes only, including multi-modal use. All land uses within these rights of way shall be for transportation or related (i.e. lighting, drainage, utilities, pedestrian and bicycle) purposes. If vacated these areas shall be designated in accordance with the Land Use Code.

T-4b **Arterial Streets.** Routes designated as arterial streets are shown on the functional classification map in Figure T-a. The following shall apply to these routes:

1. Functional classification and designated routes. Arterial streets are intended to provide a high degree of mobility and serve longer trips within the City. Arterials connect various neighborhoods within Arcata and provide direct connections to the state highway system. Arterials are intended to emphasize traffic movement over access to property.
2. Alternative street cross-sections for arterial streets. The Department of Public Works shall prepare alternative cross-sections for new arterial streets utilizing a smaller right-of-way, and prepare alternative cross-sections for existing rights-of-way that reduce traffic speed and safely accommodate bicycle and pedestrian traffic.
3. Arterial street connectors. Extend existing roads to increase the City's arterial connectivity if proposed development creates significant traffic congestion or overwhelms existing neighborhoods. The Foster Avenue to Sunset connector is a planned road extension if feasible. This project will extend Foster Avenue east of Alliance Road to connect with Sunset Avenue near the State Route 101

interchange to create an east-west facility between Spear Avenue and 14thStreet. This extension would bypass the residential neighborhoods on Sunset Avenue, provide a direct arterial connection from Alliance Road to State Route 101, and improve and facilitate bus routing.

4. No additional automobile travel lanes on arterial streets. Street projects to improve traffic flow shall emphasize intersection improvements and facility maintenance. Construction of additional arterial street travel lanes shall be considered only when no other feasible congestion management methods are available.
5. Minimize the installation of new traffic signals. New traffic signals shall be provided only in instances where there is no feasible alternative to relieve a demonstrated safety problem at an intersection (based on documented accidents). Alternatives which shall be studied prior to signals include roundabouts or installation and monitoring of all-way stop signs.
6. Minor improvements at intersections. Minor projects to improve traffic safety include redistributing lane allocations and coordination of traffic signals. Improvement projects shall be designed to accommodate the needs of pedestrians and bicyclists.

T-4c **Collector Streets.** Routes designated as collector streets are shown on the functional classification map in Figure T-a. The following shall apply to collector routes:

1. Functional classification and designated routes. Collector streets serve to provide access to land use and movement of traffic, pedestrians, and bicycles within residential, commercial, and industrial areas. Collectors generally penetrate, but should not have continuity through residential neighborhoods. Collector streets collect traffic from local streets and distribute it to the arterial street system.
2. Alternative street cross-sections for collector streets. The Department of Public Works shall prepare alternative cross-sections for new collector streets utilizing a smaller right-of-way, and prepare alternative cross-sections for existing rights-of-way that reduce traffic speed and safely accommodate bicycle and pedestrian traffic.
3. No additional automobile travel lanes on existing collector streets. No additional travel lanes are planned on collector streets. If congestion occurs, it shall be managed using alternative methods such as intersection improvements or diversion of trips to other travel modes.
4. Intersection Improvements. No new traffic signals are planned on collector streets. Other alternatives that may be considered to improve safety at intersections include stop signs, roundabouts, or other traffic calming measures.

T-4d **Local Streets.** All streets within the city not classified in another category in Figure T-a are designated as local streets. The following standards apply to these streets:

1. Functional classification and designated routes. Local streets function to

provide access to adjacent land use and exist in any land use setting such as residential, commercial, and industrial areas. Movement on local streets is intended to involve traveling to and from a collector facility. Therefore, the trip length on a local street is intended to be short, volumes should be low, and speeds slow.

2. Alternative street cross-sections for local streets. The Department of Public Works shall prepare alternative cross-sections for new local streets utilizing a smaller right-of-way, and shall prepare alternative cross-sections for existing rights-of-way that reduce traffic speed and safely accommodate bicycle and pedestrian traffic.

T-4e **Rural Roads.** Routes designated as rural roads are shown on the functional classification map in Figure T-a. The following standards shall apply to these roads:

1. Functional classification. Rural roads serve very low density land uses (mostly agricultural and rural residential) outside of the urbanized area of Arcata. Rural roads are usually not intended to serve through traffic, but often accommodate truck traffic related to the land uses served.
2. Maintain rural character. Rural roads shall be maintained in a manner which will retain their rural character and discourage use as alternatives to arterials and highways for longer distance travel.

T-4f **Traffic calming.** The City shall employ the following measures to reduce speeds and "calm" traffic in the various neighborhoods:

1. Neighborhood Traffic Management. A Neighborhood Traffic Management Program (NTMP) shall be developed to respond to problems in a consistent and methodical approach. The NTMP should be a two-phase program, with the first phase involving education and community-driven measures, and the second phase involving installation of restrictive physical devices in appropriate circumstances. Neighborhood residents and businesses should be invited to participate in the program so that they can evaluate the benefits and trade-offs of various measures and be involved in the decision-making process.

T-4g **Street closures.** All neighborhood streets shall be kept open unless there is a demonstrated safety problem. The following traffic calming measures will keep streets open and safe, and will reduce through-traffic:

1. Full or partial diverters or closures of streets.
2. Median barriers at intersections.
3. Diagonal diverters at intersections.
4. Entrance barriers at beginning of street.
5. Conversion of street to one way.

T-4h **Street maintenance.** The Pavement Management System shall be maintained to

identify and prioritize street maintenance projects in the City's Capital Improvement Program (CIP). The maintenance program shall include regular street cleaning and repair of pavement, sidewalks, and bicycle lanes, and pay particular attention to conditions that discourage bike usage.

TABLE T-4 PASSIVE AND RESTRICTIVE TRAFFIC CALMING MEASURES

PHASE I PASSIVE MEASURES	PHASE II RESTRICTIVE MEASURES
Neighborhood campaigns for traffic safety or speed watch reporting	Traffic circles or roundabouts
Passive traffic controls such as stop signs	Medians
Parking restrictions or modifications	Raised intersections and raised crosswalks
Active police enforcement	Speed humps/speed tables
Pavement markings and signage	Curb extensions at intersections or midblock
Neighborhood gateway features	Chicanes or slow points
Visual cues at neighborhood entries	Narrowing travel lanes
Emphasis on visual rather than physical deterrent	Reduced curb radii
Textured crosswalks	

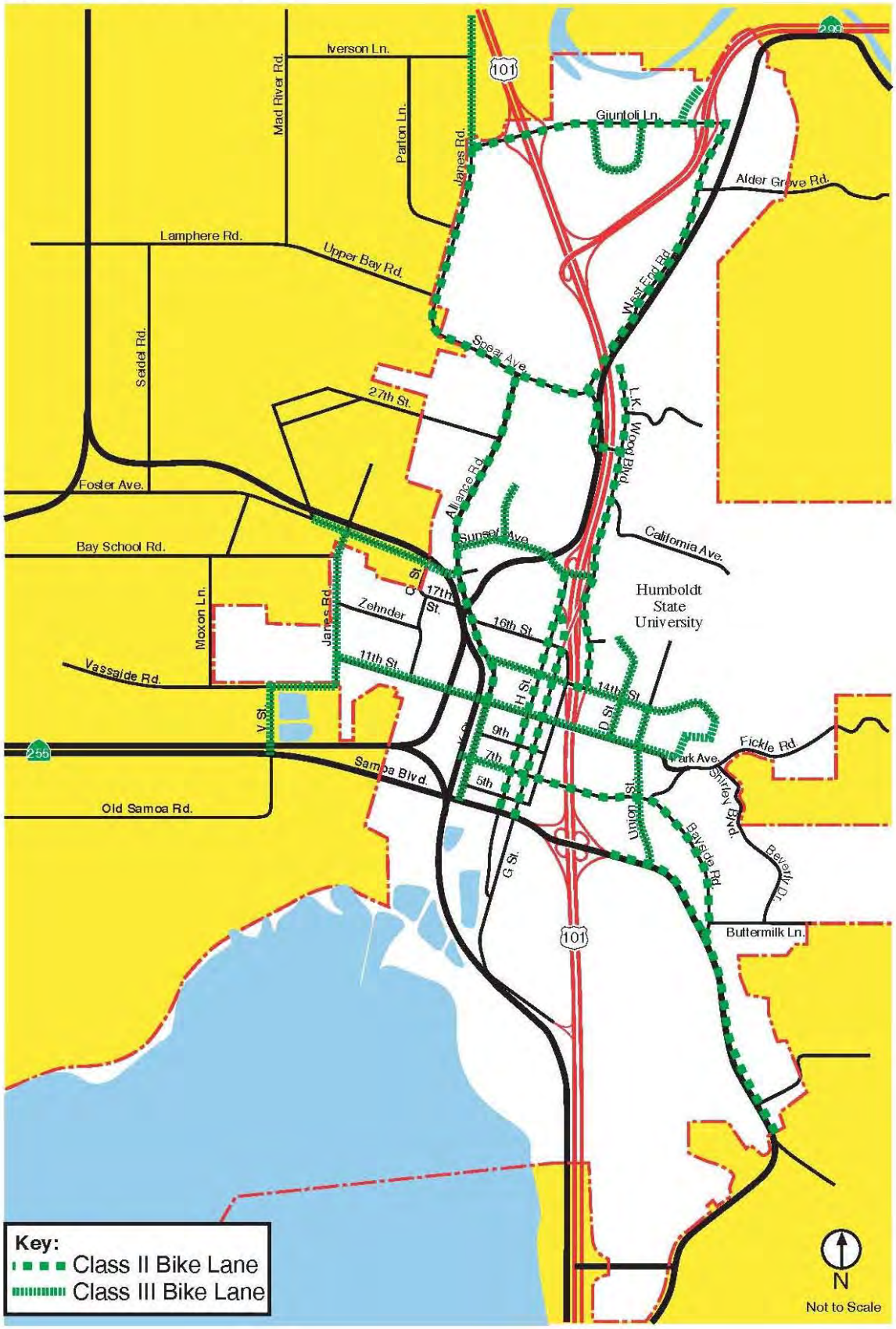
POLICY T-5 BICYCLE AND PEDESTRIAN FACILITIES

Objective. Create a complete, interconnected bicycle and pedestrian circulation system. Increase the percentages of person trips via walking and bicycling. Provide a pedestrian and bicycle system which serves commuter as well as recreational travel.

T-5a **Overall bicycle route system and connectivity.** The bicycle route system plan is shown in Figure T-e. The bicycle route system shall be improved and expanded as necessary to serve new development and activity centers. Routes that provide access to and between major destinations including public facilities, schools, parks and open space, employment, and shopping, shall be the highest priority. Future improvements may be made which upgrade bike routes to a higher class. The City shall:

1. Regularly (at least every two years) update the Arcata Bicycle Plan and coordinate planning efforts with Caltrans and the Humboldt County Council of Government's bicycle plans and advocacy groups to provide continuous bicycle routes.
2. Maintain existing bicycle routes and provide additional routes where feasible connecting the various neighborhoods with Humboldt State University. Class II bike lanes shall be provided on routes with the highest bicycle demand, or where there is sufficient right of way.

Figure T - e Bikeway Map



3. Improve and maintain bicycle infrastructure including removal of height differences between pavement and gutter pans, smooth pavement on street edges, drainage inlet grates, and street cleaning to remove debris from street shoulders.
4. Consider developing standards for a "Bicycle Boulevard," a low-volume and low-speed through-street where bicycles have priority over vehicles, conflicts between vehicles and bicycles are minimized or eliminated, and bicycle travel time is reduced by removal of stop signs and other impediments.

T-5b **Class I bikeways.** Class I bikeways are within completely separated right of way for exclusive use of non-motorized modes. They generally serve corridors not served by streets and provide a recreational opportunity or a high-speed commuter route. Class I bikeways can be multi-use trails serving bicyclists, pedestrians, rollerbladers, and equestrians. A Class I bikeway shall be included on the proposed Sunset-Foster arterial. The following standards shall apply to development of Class I bikeways:

1. Bikeway continuity. Off-street bikeways do not need to be continuous but need to connect to other types of facilities at each end of the bikeway to provide an interconnected system.
2. Right of way opportunities. As opportunities arise, the City shall utilize existing or acquire new easements or right of way for Class I bikeways. Such opportunities may include connecting dead-end streets in new developments with existing neighborhoods, along streets with excess width and unpaved right of way, along drainage channels or creeks, or along abandoned railroad rights of way.
3. Design standards. Two-way Class I bikeways shall be constructed with a minimum width of eight feet and a preferred width of ten feet (five feet for one-way travel). Caltrans design standards shall be used for other design elements such as drainage slope, clearance, signing and striping, and control where bikeways intersect streets.

T-5c **Class II bikeways.** Class II bikeways are lanes located on the outside edge of roadways, including all arterial streets, and delineated from vehicle travel lanes with striping and pavement markings. The following standards apply to Class II bikeways:

1. Design standards. Caltrans design standards shall be used for Class II facilities. Minimum widths are five feet adjacent to on-street parking or vertical curb without on-street parking, and four feet on streets without curb and gutter. Appropriate signing and pavement markings shall be provided to identify the bicycle lane. Caltrans standards shall be used for bike lane markings or transitions at intersections.
2. Required street width. The standard street width of forty-feet curb-to-curb can accommodate Class II bike lanes in both directions if parking is eliminated from one side of the street and vehicle travel lanes are reduced to eleven feet. Bike

lanes should be provided in both directions, if feasible, unless the street is one-way. Streets appropriate for Class II bike lanes include those where on-street parking needs are not critical. Alternatively, prohibition of parking on one side of the street during certain hours of the day may be considered to accommodate bicyclists.

3. Bike lanes in new development areas. New collector streets in new development areas should have a cross-sectional standard with a minimum curb to curb width of forty-eight feet, which can contain two twelve-foot vehicle travel lanes, seven-foot wide parking lanes, and five-foot wide bike lanes.

T-5d **Class III bikeways.** Class III bikeways are unmarked bicycle routes which share the street with other vehicles. This type of facility is usually established on low-volume local neighborhood streets, but can be located on any type of street. Many of the existing City designated bicycle routes consist of this type of facility. Any Class III bike routes on routes to school with younger bicyclists should have wider outside lane widths (fourteen to sixteen feet). Prohibition of parking during school hours may be considered to achieve the desired width.

T-5e **Bicycle parking facilities.** Secure bicycle parking facilities should be provided at important activity centers, civic facilities, apartment complexes, employment centers, shopping centers, major bus stops, and schools. Bicycle parking facilities include racks, lockers, and bollards.

Developers shall be required to provide a minimum number of bicycle parking devices at convenient and visible locations within the development. The required number of bicycle parking spaces shall be calculated as a proportion of the number of vehicle parking spaces.

T-5f **Pedestrian enhancements.** Prioritize implementation of improved pedestrian facilities and enhancements in areas of the city with the greatest need including the Arcata Plaza, Westwood Center area, the Sunset Avenue neighborhood, Samoa Boulevard, Alliance Road, Spear Avenue, Janes Road in the vicinity of the Pacific Union School, and Bayside Road in the vicinity of Jacoby Creek School. The following pedestrian improvements and safety enhancements should be considered in future planning for these areas:

1. Close sidewalk gap.
2. Install vertical curbs to keep vehicles from parking on sidewalks.

3. Reduce street crossing distance with curb extensions and smaller curb radii.
4. Use on-street parking as a pedestrian buffer.
5. Install textured crosswalks.
6. Provide adequate street lighting focused on crossings.
7. Restrict parking near crosswalks to improve sight distance.
8. Install rumble strips on approaches to crosswalks.
9. Plant street trees or place street trees in planters in the parking lane.
10. Relocate intersection stop bars five feet back from crosswalks to improve driver and pedestrian visibility.

T-5g **Pedestrian pathways and multi-use trails.** Pedestrian pathways or multi-use trails for the exclusive use of non-motorized transportation modes should be provided. Pathways may be long facilities located along corridors or short facilities providing direct access through development projects or connecting areas not directly accessible by streets. Pathways should be planned to serve both recreational and commuter needs. The following shall apply to pedestrian pathways or multi-use trails:

1. Easement dedication. Dedication of easements for pathways through new private developments may be required.
2. Cooperation with local and regional agencies and jurisdictions. The City shall cooperate with other agencies to establish and maintain off-street pathways and trails utilizing creek, utility, and railroad right of way.
3. Foster Avenue Extension. Multi-use paths or trails shall be included in the Foster Avenue extension to Sunset Avenue.
4. Other Locations. Other potential locations for multi-use paths are within the North Coast Railroad right of way from Giuntoli Lane to Samoa Boulevard, along the west side of Samoa Boulevard/Old Arcata Road east of State Route 101, and along the perimeter of Arcata Bay towards Manila.

T-5h **Sidewalks.** A continuous and interconnected system of sidewalks shall be provided throughout the City. The existing standard right of way of most arterials, collectors, and local streets (fifty feet) permits a five-foot sidewalk in each direction, the minimum width to comply with Americans with Disabilities Act (ADA) requirements. Some commercial areas in downtown Arcata should have wider sidewalks to accommodate higher levels of pedestrian traffic and window-shopping. The following standards shall apply to sidewalks:

1. Sidewalk continuity. Gaps in existing sidewalks should be closed to provide a continuous pathway. Cul-de-sacs should be discouraged because they disrupt pedestrian connectivity.
2. Sidewalk widths. New development projects shall be required to construct or reconstruct sidewalks along the property frontage. Required widths for new or reconstructed sidewalks are shown in Table T-5.

3. Sidewalk Requirements. Where adequate width exists to maintain ADA minimum clearance, sidewalk pedestrian amenities should be provided in the downtown commercial area. These include benches, bicycle parking, pedestrian-scale lighting, street trees, flower boxes, trash receptacles, drinking fountains, and awnings. Private development projects shall be required to include sidewalk improvements; other landowners are encouraged to provide improvements.
4. Sidewalk Maintenance. Sidewalk facilities shall be systematically inspected and maintained to clean and repair damaged surfaces and remove impediments such as poles, newspaper racks, and other paraphernalia that interfere with pedestrian flow.

TABLE T-5 SIDEWALK FUNCTIONAL WIDTH REQUIREMENTS

DESCRIPTION	WIDTH
Low density residential area for two-way pedestrian traffic	6 feet
Low intensity commercial area for two-way pedestrian traffic and window shopping	8 feet
Higher density commercial and residential area for two-way pedestrian traffic, window shopping, and street furniture allowance	10 feet
Minimum width of sidewalk at bus stop with bench on sidewalk, without a shelter	8 feet
Minimum width of sidewalk at bus stop with a shelter on sidewalk	12 feet
High intensity commercial area with high pedestrian traffic and a variety of outdoor sidewalk use such as shopping and dining	12 to 15 feet

POLICY T-6 PARKING SUPPLY AND PARKING MANAGEMENT

Objective. Provide an adequate supply of parking in perimeter lots downtown. Minimize the impacts of Humboldt State University parking into adjacent neighborhoods. Ensure that new development provides an adequate but not excessive supply of parking.

T-6a **Downtown parking.** The following shall apply to parking within the Plaza Area Commercial land use category:

1. Develop additional public parking lots. Municipal parking lots shall be provided in the perimeter of downtown to create an adequate parking supply to serve existing businesses, future development, and to replace on-street parking removed for pedestrian, bicycle, and landscaping improvements. One municipal lot is planned to complete the City's parking system, but additional parking lots may be provided if additional demand or opportunities arise.
2. In-lieu fee for on-site parking. Payment of a fee in-lieu of providing required parking spaces may be permitted in the Central Commercial District or for Landmark Historic Structures. Fees collected shall be used exclusively to fund municipal off-street parking lots or alternative travel mode facilities.

3. On-site parking standards. The City shall consider reducing the parking standards applicable within the Plaza Area Commercial land use category. New development is encouraged to pay in-lieu fees rather than provide parking on-site within the immediate Plaza area. Any on-site parking in the downtown should be located to the rear or side of buildings.

T-6b **Parking in neighborhoods impacted by Humboldt State University (Not applicable in Coastal Zone).** The City shall employ the following measures to reduce the impacts of HSU-related parking on the surrounding neighborhoods:

1. Management of on-street parking. Metered on-street parking shall continue to be provided along local streets in the neighborhoods south of Humboldt State University to prevent all-day parking by students.
2. Preferential parking zones. The restrictive residential permit parking program shall be maintained for neighborhoods severely impacted by HSU to provide residents and their visitors more on-street parking and to discourage students from driving to campus.
3. Other parking management approaches. Alternative parking management approaches shall be considered if the student population and parking demand increases. Alternative approaches include time limit parking without meters, increasing no-parking zones to decrease supply of spaces, and implementing a strictly enforced tow-away policy. The City encourages Humboldt State University to reduce parking impacts on the City.

T-6c **Parking standards for new development.** The City's parking standards shall be revised to specify a maximum parking ratio as well as a minimum parking ratio for new development. Parking lots should be located, where feasible, to the rear or side of commercial and multi-family residential buildings.

T-6d **Shared or joint-use parking for commercial development.** A 25% reduction in the individual use parking requirements may be allowed where two or more non-residential uses provide joint parking. Developers of projects with appropriate land uses for effective shared parking are encouraged to provide joint parking facilities. Examples of compatible land uses include office buildings and any use that generates primarily an evening parking demand such as restaurants and theaters. The Urban Land Institute (ULI) Shared Parking manual shall be used to establish criteria for the parking generation characteristics of land uses.

POLICY T-7 RAIL AND FREIGHT TRANSPORTATION

Objective. Provide a transportation system which adequately serves the freight shipment needs of the City's industrial and commercial uses. Recognize that freight transportation via truck or railroad is an essential element of the area's economic base.

T-7a **Retention of railroad right of way.** The North Coast Railroad Authority is encouraged to maintain railroad rights-of-way even if service is abandoned. The City may consider purchase of right of way should the Authority decide to sell. Railroad right of way may potentially be used for creation of multi-use trails. Long range potential uses of railroad right of way include an exclusive bus transitway or passenger rail service.

T-7b **Train service.** Existing or improved levels of freight train service to industrial uses is encouraged as demand increases. The City supports improvements to facilities and operations and increases in freight service as a necessity for maintaining a viable industrial economy. However, freight train service during the day, particularly in the peak morning and afternoon hours, is discouraged. The possibility of providing passenger train service between Arcata and Eureka using renovated historic trolleys should be considered.

T-7c **Truck routes.** The transportation system shall be planned to provide truck mobility to serve all commercial and industrial land uses in Arcata. Specific truck routes are designated in Figure T-f, although other highways, arterials, and collector streets may be designated in the future. The City shall actively enforce truck routes and speed limits.

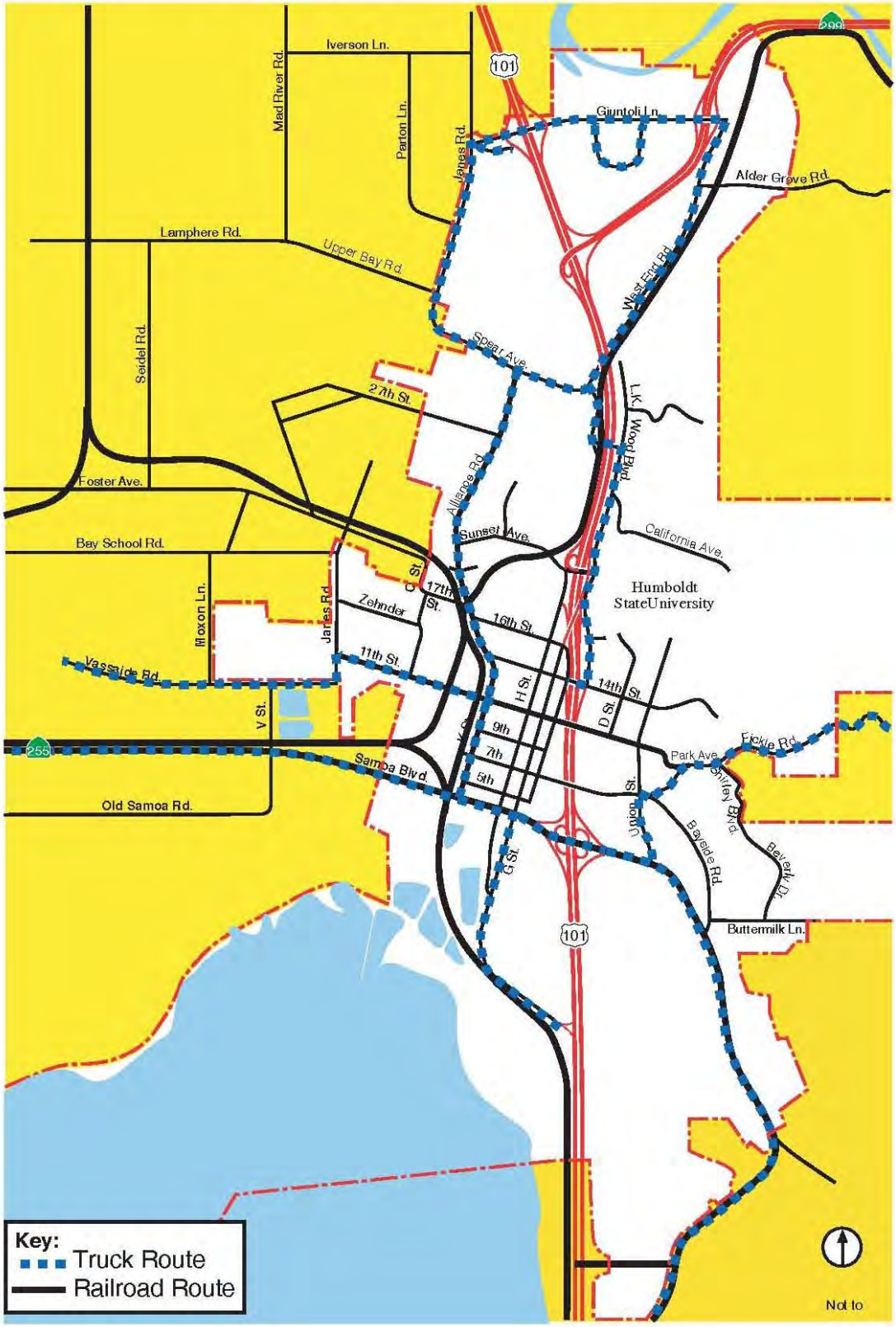
T-7d **Rails to trails conversions.** The City supports plans to convert abandoned railroad rights-of-way to provide multi-use trails. Planning efforts shall be coordinated with federal, state, and regional agencies to obtain funds to purchase or lease abandoned lines if the railroad authority selects not to dedicate the right of way. If feasible, active railroad lines may be used for multi-use trail purposes.

POLICY T-8 FINANCING TRANSPORTATION IMPROVEMENTS

Objective. Ensure that adequate funding is available to implement transportation improvements required to adequately serve the amount of growth allowed by the land use plan. Ensure that private development provides on-site transportation improvements and contributes an appropriate share of funding for off-site improvements.

T-8a **Developer responsibilities and exactions.** Developers shall be required to construct transportation improvements along their property frontages. Where appropriate, a traffic impact study shall be required which identifies on-site and off-site impacts and mitigation measures.

FIGURE T - f FREIGHT AND RAIL ROUTES



The developer shall be required to provide all necessary access and circulation facilities within the property and such facilities shall be designed to meet City standards. The following improvements may be required:

1. If development is located on an existing street:
   a. dedication of right of way;
   b. widening of street along property frontage to provide for a travel lane;
   c. bicycle lane and parking lane;
   d. reconstruction of curb, gutter and sidewalk;
   e. transit facilities and landscaping within the right of way.
2. If development is located in a new growth area not served by streets:
   a. dedication of right of way to construct a street to connect the project site to a public street;
   b. construction of the street and connecting intersection(s) to City standards;
   c. after the dedication is accepted, the City will maintain the street.
3. In all instances, the developer shall be responsible for mitigating any off-site traffic impacts of the proposed development in a manner consistent with the policies of this plan. Measures may include a reduction in the size or density of the development; installation of pedestrian, bicycle and transit amenities to encourage alternative travel modes; or implementation of Transportation Demand Management measures.

T-8b **Subdivision improvements.** All on-site transportation infrastructure shall be constructed using standards approved by the City. Developers are required to establish mechanisms, such as homeowners associations, to provide future maintenance of on-site streets and intersections that are not dedicated. The City may elect to require streets connecting to a public street to be dedicated to the City.

T-8c **Traffic impact fees.** The City may adopt a citywide traffic impact fee in accordance with the requirements of AB 1600 to fund transportation improvements to mitigate the traffic impacts of new development. The traffic impact fee may substitute in whole or in part for the off-site mitigation requirements described in Policy T-8a, but would be in addition to the developer's responsibility for on-site and frontage improvements. The traffic impact fee may be used to fund roadway extensions, intersection improvements, safety improvements, transit facility improvements, and pedestrian and bicycle facilities or amenities.

T-8d **Transit finance.** A&MRTS should continue to fund capital and operating expenses through fare box revenue, Humboldt State University subsidies, and state and federal subsidies. The City will explore the possibility of new development contributing a one-time fee towards A&MRTS capital expenses through the citywide traffic mitigation fee ordinance.

2.9 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURE DESCRIPTION	RESPONSIBLE PARTY	TIME FRAME
LU-1	**Amend LUC to Incorporate Street Standards** Add Street Standards to City's LUC (formerly LUDG)	Community Devel. Dept.	Year 1
T-1	**Create Neighborhood Traffic Management Program** Prepare and adopt a two-phase traffic management program. Phase 1 will involve education and community-driven measures, including developing a handbook describing procedures for residents to initiate a local NTMP. At a minimum, the handbook should define the procedures for initiation, types of data to be collected, a toolbox of measures, a method for establishing priorities, and potential funding mechanisms. Phase 2will involve installing traffic calming devices in appropriate circumstances.	Public Works Dept.	Year 1
T - 2	**Pavement Management Program** A pavement management program will evaluate roadway conditions, and schedule and complete needed maintenance and repair in a timely manner.	Public Works Dept.	Ongoing
T-3	**Capital Improvements Program (CIP)** Include transportation improvements, including bicycle and pedestrian facilities, in the City's CIP	Public Works Dept.	Annually
T-4	**Adoption of Traffic Mitigation Fee Ordinance** Adopt a citywide traffic impact fee in accordance with AB 1600 to mitigate the traffic impacts.	Public Works Dept.	Year 1
T-5	**Develop Additional Public Parking Lot on West Side of Downtown**	Community Devel. Dept.	Year 2
T-6	**Develop Comprehensive Pedestrian Plan and Priorities** Seek sidewalk improvement program funding.	Public Works Dept.	Ongoing
T-7	**Bicycle Boulevards** Provide primary bicycle corridors between major activity centers. Clearly sign all bicycle boulevards and include traffic calming measures to discourage automobiles.	Public Works Dept.	Year 1
T - 8	**Foster Avenue Connection** Secure funding for the Foster Avenue connection, including bicycle paths.	Public Works Dept.	Year 3

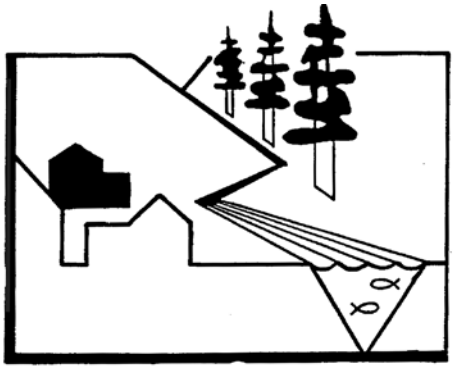
PUBLIC FACILITIES & INFRASTRUCTURE ELEMENT

2.10 INTRODUCTION

Overview of Arcata's Water Supply and Delivery System. Community water systems divert free-flowing and subsurface water sources for domestic use. The City of Arcata recognizes that water and other natural resources are vital to the community, but also must be conserved. The City provides economic incentives and educational materials for water conservation, and also integrates water reclamation and wastewater treatment at the Arcata Marsh and Wildlife Sanctuary.

The City of Arcata uses a system of trunk lines and mains, above ground water tanks, and booster pumps to deliver domestic water to residents, businesses, industry, and other facilities within the City's Urban Services Boundary. The City water supply, drawn from wells located in the bed of the Mad River, is provided by the Humboldt Bay Water District which pumps, treats, and sells the water to the City. The City's Urban Water Management Plan defines water sources, conservation measures, usage, projections and shortage contingencies. In addition to the existing Mad River water source, the Management Plan also identifies a moderately deep groundwater aquifer in the north Arcata area as an additional water source. The City's Water Master Plan addresses the function and capacity of the water system, including equipment efficiency and life expectancy, water storage, pumping, storage, and fire flows.

Overview of Arcata's Stormwater and Wastewater Collection and Treatment Systems.



Arcata's best known public facility is the Arcata Marsh and Wildlife Sanctuary (AMWS) where municipal wastewater is treated and re-used for wetlands, ponds, and related wildlife habitat. The AMWS complies with California State Water Quality Board and California Coastal Zone Wetlands Enhancement Program policies and standards. But more importantly, the AMWS employs natural systems to successfully treat and reuse wastewater that most other communities dump or export. Treated wastewater flows through five marshes in the 170-acre sanctuary, where

natural organisms filter the water before it is released into Arcata Bay. The resulting nutrient-laden water and habitat attracts more than 200 species of birds, as well as other species. The City has a Wastewater Treatment Plant Master Plan to guide plant operations.

The City also manages a stormwater drainage system, and has a Drainage Master Plan to guide management practices. The Plan includes a hydrological analysis, drainage management alternatives, a capital improvement program, needs-assessment and financial summary, and a recommended operational plan. The Plan's objectives are: to identify and quantify the existing stormwater and drainage system, including channels, wetlands, creeks, culverts and pipes; to determine the available capacity of the system; and to identify design, maintenance, and repair alternatives to improve the capability of the system.

DRAINAGE MASTER PLAN MANAGEMENT GOALS

- Minimize increases in the volume and the flow of stormwater runoff associated with new development so as to minimize an increase in the hazards and the costs associated with flooding.
- Minimize the erosion potential from a development or construction site so as to prevent deposition of sediment into streams and other receiving water bodies.
- Maintain the integrity of stream hydrology by preventing stream channel erosion so as to sustain the hydrologic functions of streams.
- Reduce the pollutant load in stormwater runoff from developing and urbanizing areas so as to preserve the natural biological functions of streams and other receiving water bodies (and flood management and stream habitat quality)
- To the extent practical, acquire easements and properties necessary for effective drainage management.

Overview of Arcata's Educational and Public Facilities. The educational opportunities available in Arcata include public and private schools for kindergarten through twelfth grades, vocational training programs, and Humboldt State University. These facilities have been integrated into the community and represent an important facet of Arcata's identity as a place to live, work, and learn.

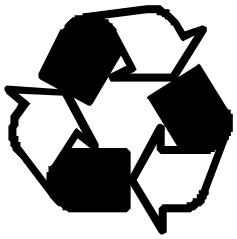
There are three public school districts (Pacific Union, Arcata, and Jacoby Creek Elementary School Districts) and several private schools that provide kindergarten through eighth grade education. High school education is provided by the Northern Humboldt Union High School District, which also serves the community of McKinleyville to the north. The College of the Redwoods Community College, located approximately fifteen miles south of Arcata, offers occupational, transfer and Associate degree programs.

Humboldt State University, the northernmost of California State University's system of twenty campuses, offers undergraduate and graduate degrees in more than fifty subject areas. The University also offers cultural activities, music, art, theater and athletic events that are open to the community. The University's Master Plan includes a maximum enrollment limit of 8,500 full time equivalent students.

Public facilities offer locations for community interaction and events, ranging from community-wide celebrations to group meetings, instructional classes, and weddings. The City has enclosed spaces such as the Community Pool, Community Center, City Hall, schools, and places of worship. The City also has twenty-four separate parks including Redwood Park, the Marsh and its interpretive center and the Arcata Ballpark. Collectively, they provide gathering places for all manner of social, cultural, political, recreational, religious, educational, and entertainment events. Their physical form and design are also important in representing recognizable features that strengthen community identity. Arcatans have come to recognize that their public facilities are important components of community character.

Overview of Arcata's integrated waste management program. Arcata residents have a long-standing tradition of active commitment to resource conservation. Being far from the production centers of consumer goods, local native peoples and the City's early settlers were resourceful and "made do" with what they had. The civic and church-led drives for scrap metal and newspapers during WWI and WWII, and the youth and volunteer drives of the 1950 and 1960 set the stage for the citizen recycling activism following Earth Day 1970.

Since 1990, the City's role in source reduction, recycling and composting components of integrated waste management has shifted from facilitative to managing contracts for collection and processing of recyclable materials, composting organic debris from the City's operations, and direct performance of public education responsibilities. In 1989, the State of California passed Assembly Bill 939, requiring every city and county in the State to develop an integrated waste management planning document called a Source Reduction and Recycling Element (SRRE). AB939 and its accompanying regulations specify the content for the City's SRRE and require that the SERE provide a detailed plan for achieving "landfill diversion" goals of 25% by 1995, and 50% by 2000. The plan includes a "Waste Generation Study," (WGS) which reports the composition and quantity of solid waste disposed and diverted from disposal by Arcata. It is from this study, and its baseline projections of solid waste generation, that the City of Arcata is accountable for 25% and 50% diversion targets.



Prior to AB939, municipal solid waste management focused on collection and landfilling. With the passage and implementation of AB939, California cities and counties are required to adopt the "Integrated Waste Management Hierarchy". Emphasizing the "highest and best use" of secondary resources, the IWM Hierarchy establishes the following priority order for dealing with discarded materials:

1. Waste Prevention or "source reduction"-systems to prevent waste at the source.
2. Recycling and Composting-systems for collecting, processing, and manufacturing with discarded materials. Organic material is composted for soil amendment.
3. Transformation-a term for incineration disposal.
4. Landfill Disposal.

Reduce First
Reuse Second
Recycle Third

The City of Arcata has been in the forefront of recycling and has the oldest community-owned recycling center in the State. The Arcata Source Reduction and Recycling Element has eight main components are:

1. The **Source Reduction Component** identifies programs to be implemented by the City to reduce the quantity of waste generated.
2. The **Recycling Component** defines programs to be implemented to increase the type and quantity of materials recycled.
3. The **Composting Component** identifies programs to be implemented to increase the composting of organic wastes.
4. The **Special Waste Component** identifies wastes requiring special handling and disposal, and programs to manage special wastes which cannot be handled at current or future permitted disposal facilities.
5. The **Education and Public Information Component** describes educational and informational programs to be implemented to educate and increase public participation in the adopted Source Reduction and Recycling Element's programs.
6. The **Disposal Facility Capacity Component** identifies disposal capacity needed to meet the community's needs for fifteen years.
7. The **Funding Component** identifies costs and funding for the City's Source Reduction and Recycling Element plan implementation and how the City will fund those programs.
8. The **Integration Component** demonstrates that the programs to be implemented are sufficient to achieve a 25% diversion rate by 1995 and a 50% rate by the year 2000.

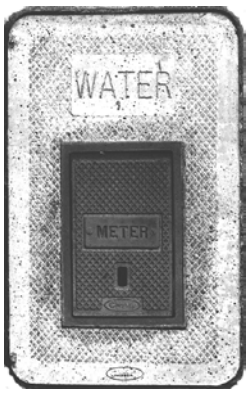
(Note: The Arcata Source Reduction and Recycling Element is not part of the General Plan.)

Each of these components includes the following integrated waste management goals:

ARCATA INTEGRATED WASTE MANAGEMENT GOALS:

1. Reduce the quantity of waste generated.
2. Educate Arcata residents to reduce, re-use, repair, compost, and recycle.
3. Maximize public involvement.
4. Minimize negative environmental impacts of solid waste management.
5. Increase economic incentives for source reduction, re-use, repair, composting, and recycling.
6. Improve measurement and standardize accounting of source reduction, re-use, composting, recycling, waste hauling, and disposal activities to increase knowledge and create a database for long term use.
7. Integrate source reduction, re-use, repair, composting, and recycling programs into all City activities.

Guiding Principles and Goals.



A. Provide an adequate water supply and delivery system for day-to-day and emergency needs.
B. Maintain the Arcata Marsh and Wildlife Sanctuary as an exemplary model of how natural systems can be effectively and efficiently used to treat and reclaim wastewater.
C. Utilize natural systems and processes for managing stormwater.
D. Promote lifelong learning by supporting educational facilities and programs at all levels.
E. Recognize that public facilities are the primary gathering places for social, cultural, political, educational and entertainment events/celebrations, and that these facilities are important components of the community's identity.
F. Publicly advocate reducing solid waste as the first priority for waste management; and promote recycling-based manufacturing through: City purchase of recycled products, education, and community support. Support new technology and education programs that reduce solid waste by an additional 10% every five years and maintain a long-term strategy for achieving "Zero Waste."

2.11 POLICIES

The Public Facilities and Infrastructure Element contains the following policies:

PF-1 Water Supply and Delivery
PF-2 Wastewater Collection, Treatment and Disposal
PF-3 Stormwater Management
PF-4 Educational Facilities
PF-5 Community Facilities
PF-6 Integrated Waste Management

POLICY PF1-1 WATER SUPPLY AND DELIVERY

Objective. Manage the City's potable water resources to ensure adequate quantities for community use, to promote water conservation, to maintain water quality, and not to deplete source supplies.

PF-1a **Water supply.** Surface and subsurface water quantities that supply the City are dependent on rainfall and adequate upstream storage. The City shall continually monitor the water quantity and quality in its system and adhere to the Humboldt Bay Municipal Water District's rationing system to ensure that adequate supplies reach all users. The City shall also develop additional water sources to meet current peak use and future use demands.

PF-1b **Capacity and management of City water delivery system.**
The City shall update its Urban Water Management Plan, at least every five years, to maintain current projections, management, and contingency programs for water delivery. The Plan shall identify needed water delivery system improvements and anticipated extensions so that they can be budgeted for in the City's Capital Improvement Program. The City water system shall not be extended beyond the Urban Services Boundary (except as provided for in Policy GM-4b of the Growth Management Element).

The City shall update its Water Master Plan, at least every five years, to assess system efficiency and ensure that there is adequate storage capacity and fire flows to meet City needs.

PF-1c **Water conservation.** The City shall use a combination of economic incentives, educational programs, and auditing to promote water conservation.

HUMBOLDT BAY MUNICIPAL WATER DISTRICT'S FIVE STAGE RATIONING SYSTEM

1. In effect at all times to assure best use of water in storage.
2. Goes into effect when the storage reservoir reaches between 60% and 55% of capacity, and Ruth Lake area rainfall is 70% or less of historical rainfall.
3. Goes into effect when Ruth Lake reaches 40% of capacity and rainfall is 60% or less of historical average. All wholesale and retail customers will be required to reduce usage by 10 to 15% over the previous two-year average.
4. Goes into effect when Ruth Lake reaches 30% of capacity and rainfall is 50% or less of historical average. All wholesale and retail customers will be required to reduce usage by 16 to 30% over the previous two-year average.
5. Goes into effect when Ruth Lake reaches 25% of capacity and rainfall continues at 50% or less of historical average. All wholesale and retail customers will be required to reduce usage up to 50% as may be determined by the rate of use of available supply and weather conditions.

Water rates will continue to be higher for consumption above baseline usage. Information about conservation devices such as flow restrictors, and practices such as off-peak irrigation, will be made available to the public. The City shall also implement water conservation measures through the water, wastewater, and drainage master plans, and through leak detection and inflow and infiltration (I/I) reduction programs.

PF-1d **Water quality.** The City shall perform periodic testing and, if necessary, treatment of its domestic water supply to ensure that it meets all state and federal safe drinking water standards, as required by the federal safe drinking water act.

POLICY PF-2 WASTEWATER COLLECTION, TREATMENT, & DISPOSAL

Objective. Collect and treat wastewater to achieve safe water quality standards, utilizing the City's internationally renowned marsh treatment facility.

PF-2a **Capacity and management of City wastewater collection system**. The wastewater collection system is designed to transport community sewage to the treatment plant. The City shall update its Collection System Maintenance Program, at least every five years, to maintain current projections, management, and contingency programs for wastewater collection. The Plan shall identify needed collection system improvements and anticipated extensions, so that they can be budgeted for in the City's Capital Improvement Program. The City shall continue to monitor groundwater infiltration and surface water inflow (I/I) and take necessary action to ensure that these sources do not cause the collection system or the treatment plant to exceed capacity. The City wastewater collection system shall not be extended beyond the Urban Services Boundary except as provided in Policy GM-4b.

PF-2b **Arcata Marsh wastewater treatment system**. The City shall update its Wastewater Treatment Plant Master Plan, at least every five years, to evaluate the entire system; reflect any changes in treatment standards; ensure wastewater treatment is meeting current standards; verify that there is adequate treatment system capacity; and assure adequate water flows to maintain habitat.

The City shall maintain the existing facilities of the Arcata Marsh and Wildlife Sanctuary and construct new facilities consistent with the Marsh Enhancement Plan adopted by the City Council.

PF-2c **Compliance with California Regional Water Quality Control Board wastewater treatment and discharge standards**. The City shall regularly test its wastewater and make necessary adjustments in treatment levels, to ensure that it meets California Regional Water Quality Control Board standards. The City shall also keep its National Pollution Discharge Elimination System Permit (NPDES) current and in compliance with U.S. Environmental Protection Agency standards.

PF-2d **Composting and disposal of sludge and other system byproducts**. The City includes sewage sludge in compost processed at the treatment plant. The City uses this composted material as a soil amendment. The City shall continue this practice as an efficient means of recycling treatment plant by-products and shall investigate the possibility of selling excess compost to generate revenue.

PF-2e **Treatment of wastewater from other communities**. The City, until 2012, accepts for treatment wastewater from the unincorporated community of Fieldbrook. This practice may continue as long as there is adequate treatment system capacity. The City shall not enter into any new agreements for processing wastewater from other communities.

PF-2f **Maintain the Joint City/ Humboldt State University Wastewater Utilization Program**. Humboldt State University faculty and students were instrumental in the design, testing, and development of the Arcata Marsh and Wildlife Sanctuary. The

City and the University jointly participate in a wastewater utilization program, which provides ongoing research projects for students studying wastewater, stormwater, and water quality issues. The City and University maintain a five-year agreement to operate the program, with the City providing the funding and the University providing the student research and faculty advisors. The City shall renew the program with the University when the current agreement ends, as long as there are funds available to compensate the University.

POLICY PF-3 STORMWATER MANAGEMENT

Objective. Implement the City's drainage master plan to utilize natural drainage systems; minimize increases in stormwater runoff, flooding, and erosion; maintain the integrity of stream hydrology; reduce pollutant loads; and acquire easements and properties for effective drainage management.

PF-3a **Utilization of City streams and watercourses as natural drainage systems.** Arcata's network of creeks provide a natural drainage system, however, they are very susceptible to damage from urban pollutants carried by runoff, and from drainage facilities that alter creek flows and natural functions. The City shall utilize creeks for urban drainage only when the basic natural functions will not be degraded.

PF-3b **Control of stormwater runoff, flooding, and erosion.** Stormwater runoff, especially at peak flows, can cause significant flooding and erosion if adequate precautions have not been taken. As stated in the Drainage Master Plan, the City shall manage the storm and surface water system in Arcata to maintain a hydrologic balance in order to protect water quality, prevent property damage, provide for the safety and enjoyment of citizens, and preserve and enhance habitat and sensitive areas.

PF-3c **Stormwater quality.** Enforce surface water controls, facilities such as detention basins and natural infiltration areas, and education programs to protect surface and ground-water quality.

PF-3d **City drainage system.** The City shall take a comprehensive approach to drainage system management in order to effectively control the quantity of stormwater runoff, assure water quality, and reduce potential flood damage from peak flows. As stated in the City Drainage Master Plan, the City shall gradually expand the City managed drainage system to:

1. Continue maintenance of all drainage facilities within public right-of-way, regardless of size.
2. Extend responsibility onto private property only when permanent easements are dedicated or otherwise available from the private property owner, and need is established based on technical criteria.
3. Define service limits upstream of the City as the point at which runoff from a publicly (not county) dedicated street enters the drainage system, or when a drainage feature needs repairs/improvements which have public benefits that exceed the cost of said repairs/improvements.

PF-3e **Easements and properties for drainage management.** The City shall secure the easements and properties necessary to complete and maintain the drainage system identified in the Drainage Master Plan.

POLICY PF-4 EDUCATIONAL FACILITIES

Objective. Identify student enrollment increases, based on the projected future population of the City, and coordinate with local school (public and private) districts, Humboldt State University, and other education providers to maintain and improve educational facilities and services, while preserving established community/student ratios.

PF-4a **Coordination with Arcata, Pacific Union, and Jacoby Creek school districts**. The City shall provide demographic information to assist the School Districts in projecting future student enrollments. The City shall encourage the school districts to expand existing schools rather than designating new sites for this purpose.

PF-4b **Coordination with private and specialized education providers**. The City shall accommodate providers of private, vocational, and specialized education that fills an identified community need, when they desire to locate in the City.

PF-4c **Coordination and development review with Humboldt State University (Not applicable in Coastal Zone)**. The City shall designate at least one member of the City Council and one Planning Commission member as liaisons to Humboldt State University and request that the designated Council member be appointed to the University President's Advisory Council.

PF-4d **Joint use of school facilities for community events and recreation**. School facilities are primary locations for neighborhood level events and recreational activities. The City, school districts, and community organizations shall develop and maintain partnerships for the joint use of school facilities.

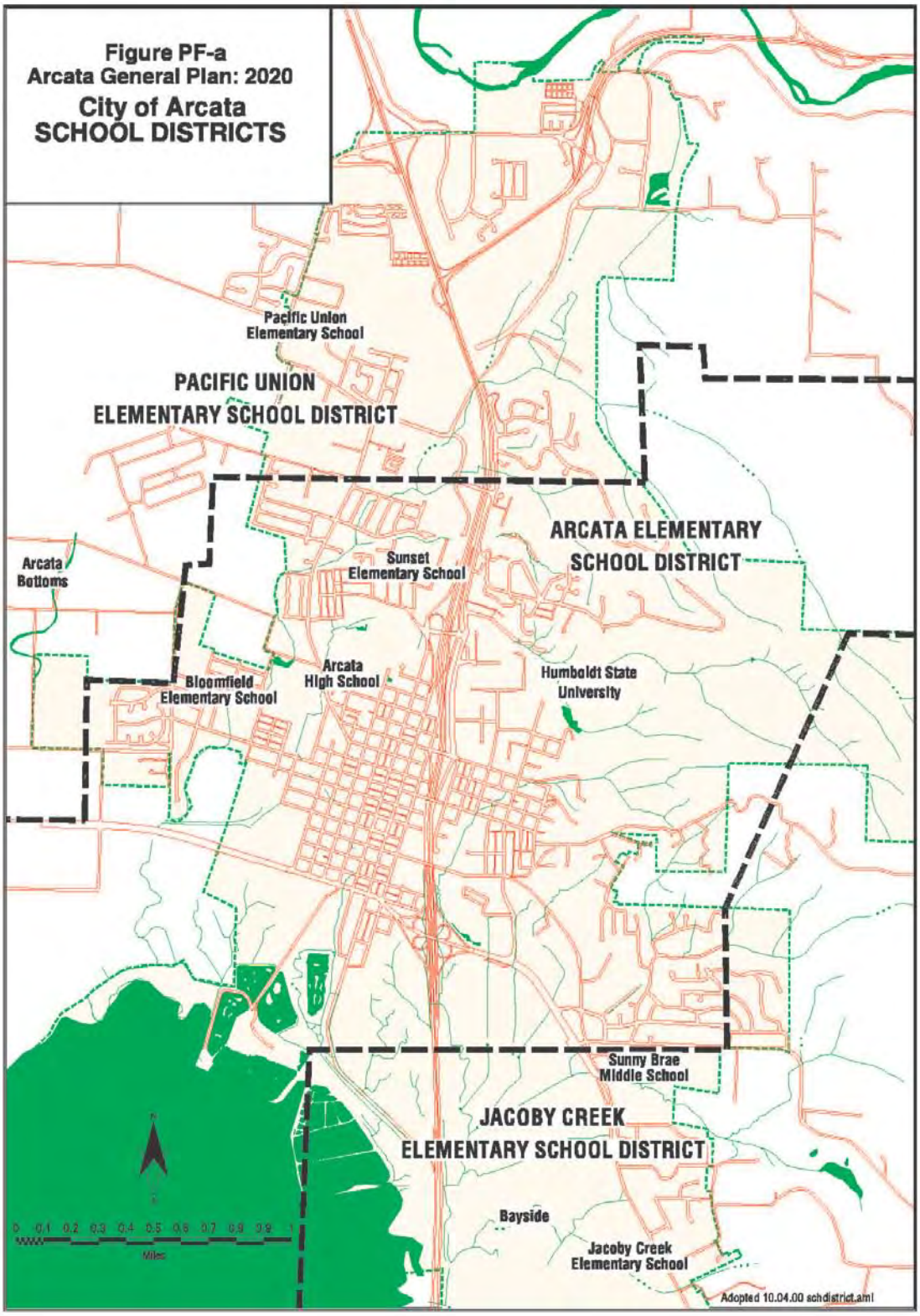


Figure PF-a
Arcata General Plan: 2020
City of Arcata
SCHOOL DISTRICTS
Pacific Union
Elementary School
PACIFIC UNION
ELEMENTARY SCHOOL DISTRICT
ARCATA ELEMENTARY
SCHOOL DISTRICT
Arcata
Bottoms
Sunset
Elementary School
Arcata
High School
Bloomfield
Elementary School
Humboldt State
University
Sunny Brae
Middle School
JACOBY CREEK
ELEMENTARY SCHOOL DISTRICT
Bayside
Jacoby Creek
Elementary School
Miles
Adopted 10.04.00 schdistrict.aml

POLICY PF-5 PUBLIC FACILITIES

Objective. Provide adequate facilities for services and programs administered by the City and other public service providers, including City administrative and meeting facilities (City Hall), police and fire departments, libraries, and community centers.

PF-5a **Facilities for community service and private organizations.** Community service organizations, as well as non-profit and private organizations offer shelter, assistance, training and other human services. These organizations also offer places for religious, cultural, social, entertainment and recreation activities. The City shall allow facilities, operated by community service and private organizations, to be located in incorporated areas designated General Commercial [C-G]; Central Commercial [C-C]; Residential High Density [RH]; Limited Industrial [I-L]; and Public Facility [P-F]. Operations and functions of these facilities may be subject to a use permit, to be granted and revocable at the discretion of the City.

PF-5b **City administrative and operations facilities and community centers.** The City shall limit development of the Corporation Yard facilities to within existing boundaries, and shall maintain a landscaped screen along the northern and eastern perimeter of the oxidation pond.

PF-5c **Public libraries and civic facilities operated by other agencies.** The City shall coordinate with Humboldt County to provide public library facilities in the City. The City shall also coordinate with other agencies, such as the Redwood Regional Transit System, to maintain joint-use facilities in the City.

PF-5d **Telecommunications facilities.** Telecommunication towers, commercial dishes and antenna, monopoles, and other transmitting and receiving facilities shall be co-located (grouped together) to minimize the number of facilities and shall be screened to reduce impacts. Placement of commercial (serving more than a single user) telecommunication facilities shall be limited to lands designated Public Facility [P-F], Industrial [I-L & I-G], and Commercial [C-G, C-C, & C-VS], with a use permit.

Cellular, broadcast, and receiving towers shall not exceed ten feet in height, unless it can be demonstrated that additional height (up to thirty feet) would not create adverse visual or safety impacts. These facilities shall be screened from view and associated equipment rooms and switching devices shall be designed and

landscaped to blend with their surroundings. In approving a use permit, findings must be made that the proposed location is the most appropriate for the neighborhood, that the facility is of the minimum size necessary for the intended use, and that it is set back and screened to reduce visual and safety impacts. Any proposed city construction projects involving trenching shall be reviewed for opportunities to extend high speed networking infrastructure.

PF-5e **Maintenance of City streets and right-of-ways.** The City's streets and right-of-ways shall be adequately maintained for public use. Utilities within rights-of-way shall be placed underground, when feasible, to reduce obstructions such as poles and above-grade utility boxes on sidewalks. Pavement and landscape management programs shall be periodically reviewed and prioritized.

POLICY PF-6 INTEGRATED WASTE MANAGEMENT

Objective. Reduce solid waste generation at the source; maximize re-use and repair of appropriate items and material; promote composting and recycling; and properly transport non-recyclable solid waste to approved disposal sites.

PF-6a **Source reduction.** Source reduction and materials re-use are the most cost effective ways to minimize solid waste. Source reduction, or waste prevention, reduces the growing costs of collection, recycling, and disposal systems. Source reduction and re-use shall be promoted through educational programs and incentives. Examples of effective source reduction and re-use activities that shall be promoted are:

1. Backyard composting, landscaping with low water needs, and grass mulching.
2. Purchasing durable re-usable goods instead of disposable items (e.g., cloth diapers, rechargeable batteries).
3. Repairing equipment and appliances.
4. Purchasing goods from second-hand stores, flea-markets and swap meets.
5. Reducing the use of packaging by buying in bulk or purchasing fresh food at farmers markets.
6. Electronic mail and forms, double-sided copying and re-use of scrap paper.
7. Reusable coffee cups and beverages provided in dispensers.
8. Termination of unwanted mail.
9. Incentives such as on-call garbage collection and differential solid waste fees shall be used to encourage source reduction.

The Source Reduction and Recycling Element shall be updated every five years and shall incorporate the most efficient and cost-effective source reduction programs.

PF-6b **Recycling.** The City’s recycling program shall continue and expand, unless a more efficient and cost-effective method of collecting and reusing materials is identified. The City shall continue to contract for recycling, collection, and processing, in order

to help meet and exceed the State diversion goal. The following programs shall also be promoted:

1. Collection of commercial corrugated cardboard.
2. Collection of office paper.
3. City procurement policies and practices favoring reusable and recycled products.
4. Implementation of density bonuses for buildings designed to promote recycling.
5. The City's active involvement in the Humboldt County Recycling Market Development Zone.
6. Educate the public to "close the loop" and buy locally-made products with recycled content.
7. Recycling education that includes self-haul services for recyclable materials not collected curbside.
8. Encourage the development and expansion of recycling-based manufacturing.

After the year 2000, in order to minimize increases in solid waste volumes and maximize the amount of material returned to productive use, the City shall continue these programs with a target of reducing landfill volumes 10% every five years.

PF-6c **Collection, transport and disposal of non-recyclable solid waste.** The City shall continue to contract for solid waste collection, transport, and disposal. Solid waste collected for disposal shall be transported to an approved landfill, or other approved solid waste processing or disposal facility. The City will provide education materials about proper use and disposal of household hazardous waste, non-toxic alternatives to household hazardous waste, and recycling of materials (e.g., motor oil, anti-freeze, paint, batteries) in conjunction with recycling centers and local businesses.

2.12 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURE DESCRIPTION	RESPONSIBLE PARTY	TIME FRAME
PF -1	**Water Master Plan** Update the City Water Master Plan, at least every five years, to assess system efficiency and ensure there is adequate storage capacity and fire flow. The Master Plan will also include economic incentives, education programs, and monitoring measures to promote water conservation.	Environ-mental Services Department	Every five years starting in Year 2
PF -2	**Wastewater Collection System Maintenance Program** Update the City Wastewater Collection System Maintenance Program, at least every five years, to assess collection system capacity and condition, ensure there is adequate treatment and disposal capacity, and recommend improvements necessary to reduce groundwater infiltration and surface water inflow. The Master Plan will also include economic incentives, education programs, and monitoring measures to reduce wastewater generation.	Environ-mental Services Department	Every five years starting in Year 3
PF -3	**Stormwater Management - Drainage Master Plan** Update the City Drainage Master Plan, at least every five years, to implement current provisions for minimizing increases in stormwater runoff, maintaining the integrity of stream hydrology, and reducing pollutant loads. The Master Plan will also include economic incentives, education programs, and monitoring measures to promote on-site retention and reduce flooding and erosion impacts.	Environ-mental Services Department	Every five years starting in Year 1
PF -4	**Source Reduction and Recycling Element** Update the Source Reduction and Recycling Element (SRRE), every ten years, to implement the most current technology for reducing solid waste generation at the source, maximize re-use and repair of goods, promote composting and recycling, and properly transport non-recyclable solid waste to approved disposal sites. The SRRE will also include economic incentives, education programs, and monitoring measures to achieve the City's goal of reducing solid waste volume by an additional 10% every five years, and the overall long-term strategy for "zero-waste."	Environ-mental Services Department	Every ten years starting in Year 10
PF -5	**Telecommunication Facilities Ordinance** Prepare a Telecommunication Facilities Ordinance that implements policy PF-5d and specifies findings required for a use permit.	Community Development Dept.	Year 2
PF -6	**Marsh Enhancement Plan**. Update the Marsh Enhancement Plan to reflect the City's acquisition and addition of the Hunt Property.	Environ-mental Services	Year 3

Chapter 3
Housing and
Parks & Recreation

Housing Element
Parks & Recreation Element

The Housing Element and Parks & Recreation Element are separately bound and are not part of this update.

Chapter 4
Environmental Quality and Management

Open Space Element
Resource Conservation and Management Element
Air Quality Element