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East Palo Alto is currently served by an established circulation system. Convenient access to the community is provided by the Bayshore Freeway (Highway 101), while State Route 84 also offers access to and from the East Bay. A rail line extends through the northerly portion of the City to the East Bay and north through San Mateo County, offering potential for future rail transit service to the community. San Francisco International Airport is located approximately 18 miles to the north. Established bus transit service provides alternative transportation opportunities for residents of the community.

The Circulation Element guides continued development of the circulation system to support planned growth. The anticipated development pattern, as identified in the Land Use Element, will increase the demand for local and regional roadways. This element establishes the circulation plan components and identifies improvements required to maintain service levels. The use of a variety of transportation alternatives such as transit, walking, and bicycling is promoted to reduce the demand for transportation system improvements and improve air quality.

Purpose of the Circulation Element

The purpose of the Circulation Element is to provide a safe, efficient and adequate circulation system for the City. State planning law requires:

"...a circulation element consisting of the general location for proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element plan."

To meet this purpose, the Circulation Element addresses the circulation improvements needed to provide adequate capacity for future land uses. The Element establishes a hierarchy of transportation routes with typical development standards described for each roadway category.

The state General Plan Guidelines (Section 65302) recommends that the circulation policies and plans should:

- Coordinate the transportation and circulation system with planned land uses;
- Promote the efficient transport of goods and the safe and effective movement of all segments of the population;
- Make efficient use of existing transportation facilities; and
- Protect environmental quality and promote the wise and equitable use of economic and natural resources.

The Guidelines indicate that the Circulation Element should address all facets of circulation including streets and highways, transportation corridors, public transit, railroads, bicycle and pedestrian facilities and commercial, general and military airports. The East Palo Alto Circulation Element fulfills state requirements with a strategy to

provide effective circulation facilities supporting desired community development. State law also requires the Circulation Element or other General Plan element to address public utilities. The East Palo Alto General Plan provides a discussion of utilities in its Land Use Element.

Scope and Content of the Element

This element contains goals and policies to improve overall circulation in East Palo Alto. For vehicle transportation, a hierarchical roadway network is established with designated roadway types and typical design standards. The roadway type is linked to anticipated traffic levels. Because local circulation is linked with the regional transportation system, the element focuses on participation in regional programs to alleviate traffic congestion. Alternative transportation modes are also emphasized in the element to reduce dependency on the automobile and thereby improve environmental quality.

The Circulation Element is comprised of three sections: 1) Introduction; 2) Issues, Goals and Policies; and 3) the Circulation Plan. In the Issues, Goals and Policies section, major issues pertaining to the transportation system are identified, and related goals and policies are established.

The goals are overall statements of the City desires and are comprised of broad statements of purpose and direction. The policies serve as guides for planning circulation improvements to accommodate anticipated population growth, maintaining acceptable levels of transportation service while development occurs, promoting alternative transportation modes, and coordinating with local and regional jurisdictions to provide

regional transportation facilities. The Circulation Plan explains how the goals and policies will be achieved and implemented. Specific implementation programs for circulation are contained in the General Plan Implementation Program (Appendix A).

Related Plans and Programs

Several transportation plans prepared by the State, County and regional agencies focus on the regional transportation system. Strategies to handle anticipated traffic levels from future development are discussed. Other plans have also been prepared to locate future routes for public transit including rail service. Plans and programs related to the Circulation Element include the following:

Bay Area Clean Air Plan The Bay Area Air Quality Management District (AQMD) is a regulatory body responsible for improving air quality in the Bay Area. The Bay Area 1991 Clean Air Plan (CAP) is required by the 1988 California Clean Air Act. Prepared by AQMD in cooperation with the Metropolitan Transportation Commission (MTC) and ABAG, its main objective is to attain state air quality standards for ozone and carbon monoxide. The plan includes a specific measure which urges cities and counties to formulate and adopt local air quality elements, or the equivalent, in their general plans (*Air quality is addressed in the Land Use, Circulation, Economic Development, and Conservation and Open Space Elements of the East Palo Alto General Plan*).

**Regional
Transportation
Plan**

The Metropolitan Transportation Commission's Regional Transportation Plan (RTP) guides Bay Area transportation improvement projects and shows how they will help attain regional air quality objectives. The plan promotes projects that: a) provide reasonable and predictable mobility within the region; b) ensure that all people have equitable access to transportation; c) support a healthy environment and mitigate any adverse impacts; and d) promote economic vitality within the region.

**Congestion
Management
Plan**

With the passage of the gas tax increase (Proposition 111) in June 1990, each county in the state was required to prepare a Congestion Management Plan (CMP). The main goals of the CMP are to establish a political process through which countywide roadway congestion can be controlled or relieved, and to develop a comprehensive strategy to respond to countywide transportation needs. The CMP is updated biennially to reflect changing transportation needs and conditions within the county. The CMP capital improvement program must be submitted to MTC every two years to be incorporated into the Bay Area Regional Transportation Improvement Plan.

**Countywide
Transportation
Plan**

The Countywide Transportation Plan (CTP) is an overall plan prepared by the City/County Association of Governments of San Mateo County (C/CAG). The objectives of the plan are to determine the most effective road and transit improvements and the most effective land use plan that will: a) improve mobility; b) decrease congestion; c) reduce air pollution; and d) stimulate

economic activity. One phase of the CTP planning process involves the preparation of a *CTP Alternatives Report* designed as a set of land use and transportation options for C/CAG to consider as the basis for selecting a preferred alternative around which the entire CTP will be structured.

**Project Study
Report for
Route 109**

The Caltrans Route 109 Project Study Report (PSR) is a preliminary evaluation of alternatives for connecting the Dumbarton Bridge to destinations along the Bayshore Freeway (Highway 101). A PSR is generally required before freeway modification projects can be included in the master priority list of state highway projects (the State Transportation Improvement Program or STIP). The PSR does not provide a recommended alternative, but indicates that the next step in the study process is a request by Caltrans to the California Transportation Commission (CTC) to proceed with a route adoption study through incorporation into the STIP.

**Dumbarton
Rail Corridor
Study**

Alternative combinations of rail service for linking the Peninsula, East Bay, South Bay and inland Sacramento and Stockton areas are assessed in Dumbarton Rail Corridor Study. A major component of the alternatives examined is the easterly link across the Dumbarton rail line bridge. The study also identifies possible station locations, including those near East Palo Alto.

Relationship to Other General Plan Elements

According to state planning law, the Circulation Element must be independent, but consistent with the other General Plan Elements. All elements of the General Plan are interrelated to a degree, and certain goals and policies of each element may also address issues that are the primary subjects of other elements. The integration of overlapping issues throughout the General Plan elements provides a strong basis for implementation of plans and programs, and achievement of community goals. The Circulation Element relates most closely to the Land Use, Conservation and Open Space, Noise, and Public Safety Elements.

The Land Use and Circulation Elements are inextricably linked. The planned development identified in the Land Use Element is the basis for determining future road improvements. The circulation policies and plans ensure that existing transportation facilities will be improved and new facilities will be constructed to adequately serve traffic generated by planned development. An efficient circulation system is a critical factor for diversifying and expanding local economic activities. In addition, the Circulation Element promotes alternative transportation modes to minimize the regional impacts of planned local development.

The Circulation Element provides for a bikeway and pedestrians system that accommodates bicycles and pedestrians. Bikeways will connect with recreational areas and support the City recreational goals identified in the Conservation and Open Space Element. In addition to promoting bicycle and pedestrian transportation, the Circulation Element promotes the use of public transit.

Alternative transportation modes will help achieve the air quality goals identified in the Conservation and Open Space Element. The policies in the Circulation Element also work in concert with policies contained in Noise and Public Safety Elements regarding transportation noise and emergency response.



East Palo Alto has a local circulation system that includes vehicular, public transit, bicycle and pedestrian components. An interdependent system is created by the connection of this local system with a larger regional circulation system. A safe and convenient circulation system operation is needed to support planned land use in the community.

Five major issues are addressed by the goals, policies and plan of the Circulation Element. These major issues include: 1) supporting regional transportation facilities; 2) improving City roadways; 3) providing public transit and other travel methods; 4) improving neighborhood traffic safety; and 5) increasing transportation system efficiency. Each issue and the related goals and policies are included in the following section of the Element.

Regional Transportation Facilities

Circulation Issue 1: Desire to support the development of regional transportation facilities.

Transportation in East Palo Alto is directly related to an overall transportation network for the Bay Area. Roadway facilities within East Palo Alto accommodate regional traffic resulting in congestion on the Bayshore Freeway (U.S. 101), University Avenue, East Bayshore Road, and Willow Road. Planning for the needs of the community necessarily includes recognition of the related transportation needs and planning efforts of

the surrounding communities, county and region. With that recognition is the need for the City to actively monitor transportation planning in the surrounding area.

Circulation Goal 1.0: Support development of an efficient regional transportation system.

Policy 1.1: Support implementation of the Countywide Transportation Plan.

Policy 1.2: Work closely with adjacent jurisdictions and transportation agencies to ensure that development projects within and near East Palo Alto can be accommodated by the regional transportation system.

City Roadways

Circulation Issue 2.0: Need to provide an adequate system of City roadways.

A well-designed local roadway system is needed to provide safe and convenient access to activities in East Palo Alto. The local roadway system serves the community's primary need for mobility and includes a hierarchy of City streets to meet that need.

Certain local roadways, such as University Avenue, East Bayshore Road and Willow Road accommodate regional traffic traveling through the community. During periods of heavy congestion, other local roadways are also affected by regional traffic.

Circulation Goal 2: Provide a system of local roadways that meets community needs.

Policy 2.1: Coordinate improvements to the City circulation system with other major transportation improvement programs, such as improvement of the University Avenue/Bayshore Freeway (U.S. 101) interchange.

Policy 2.2: Improve the East Palo Alto circulation system roadways in concert with land development to maintain adequate levels of service.

Public Transit and Other Travel Methods

Circulation Issue 3: Need to increase the availability and use of public transit and non-vehicular methods of travel.

Many residents and employees in East Palo Alto rely on public transit. This option to the traditional use of an automobile for traveling within and outside the community represents an important way of controlling congestion. Regional rail facilities may exist near East Palo Alto in the future and need to provide convenient service to City residents and employees. Non-vehicular methods of modes of travel, such as bicycling or walking, can also reduce demands on the roadway system where necessary improvements exist to promote those methods. Together, public transit and non-vehicular modes of travel can provide appropriate alternatives to travel by automobile.

Circulation Goal 3.0: Increase use of public transit and non-vehicular methods of travel.

Policy 3.1: Promote greater provision of public transit facilities and services by the San Mateo County Transit District (Samtrans).

Policy 3.2: Promote greater access and public transit service between East Palo Alto and region-serving transportation centers, including airports, in adjacent communities.

Policy 3.3: Provide and maintain a circulation system that supports bicycle and pedestrian travel.

Neighborhood Traffic Safety

Circulation Issue 4: Desire to improve traffic safety within residential neighborhoods.

Certain residential areas in East Palo Alto experience a substantial amount of through traffic. In some cases, this traffic is also traveling at higher speeds, creating a safety problem for local residents. Traffic management or "traffic calming" techniques may be necessary to reduce the attractiveness of these neighborhood streets to through traffic. A number of residential neighborhoods also need additional improvements to their local streets to provide safe vehicular and non-vehicular movement.

Circulation Goal 4.0: Improve traffic safety in residential neighborhoods.

Policy 4.1: Provide traffic management improvements within residential neighborhoods where through traffic creates public safety problems.

Policy 4.2: Install additional street improvements within residential

neighborhoods where necessary to improve vehicular and non-vehicular safety.

Policy 4.3: Discourage the flow of commuter traffic through residential neighborhoods.

*Transportation System
Efficiency*

Circulation Issue 5: Need to improve the efficiency of the transportation system and control demands on the system - particularly University Avenue and other roadways carrying regional traffic.

Transportation system management (TSM) and transportation demand management (TDM) methods are a necessary part of an overall strategy to improve transportation. These methods can improve system effectiveness and provide relief from increasing demands for more costly improvements to transportation facilities.

Circulation Goal 5.0: Improve transportation system efficiency.

Policy 5.1: Improve operational measures of the traffic system designed to maximize the efficiency of the system for residents and shoppers, as well as commuters, while minimizing delay and congestion.

Policy 5.2: Improve intersection capacity with additional lanes at key intersections to improve traffic flow.

Policy 5.3: Improve regional transportation routes to alleviate congestion within East Palo Alto.

Related Goals and Policies

The goals and policies described in the Circulation Element are related to and support subjects included within other General Plan Elements. In turn, many goals and policies from the other elements directly or indirectly support the goals and policies of the Circulation Element. These supporting goals and policies are identified in Table C-1.

**Table C-1
Circulation
Related Goals and Policies by Element**

Circulation Issue Area	Related Goals and Policies by Element						Housing
	Land Use	Circulation	Conservation and Open Space	Noise	Safety	Economic Development	
Regional Transportation Facilities	1.1, 4.2		4.1, 4.2, 4.3				
City Roadways	1.1, 2.1, 2.2, 2.3, 4.1			1.1, 1.2, 2.1		9.1	
Public Transit and Other Travel Methods	2.2, 4.1, 4.2		8.2				
Neighborhood Traffic Safety	2.2, 3.2, 4.1				2.4		
Transportation System Efficiency	1.1, 1.3, 3.2, 4.2		8.2			9.1	

East Palo Alto is supported by a diverse circulation system with vehicular, transit, bicycle and pedestrian links. The local system connects with the larger regional system and operation of the two systems is interdependent. The Circulation Plan summarizes the approach to ensure safe and convenient operation of the circulation system, and identifies improvements required to accommodate traffic from planned development.

Vehicular transportation is presently the primary mode and a Roadway Plan is established with hierarchical roadway designations and typical design standards for roadway designations. The use of alternative transportation modes is promoted to reduce dependency on automobile transportation.

The Plan is based on goals and policies identified in the previous section. The Circulation Element Implementation Program, included as an appendix to the General Plan, is an extension of the Circulation Plan and contains specific programs to coordinate planned development with circulation improvements.

Regional Transportation Facilities

In general, San Mateo County and the South Bay area have experienced rapid urban growth over the last two decades. The success of existing and future development is dependent on the availability of an effective regional transportation system. The system must link

localities with major activity centers and regional transportation hubs. In addition, the regional circulation system must meet the needs of local residents.

East Palo Alto is tied closely to the regional circulation system. The Bayshore Freeway (U.S. 101) extends through the southerly portion of the community, while the Bayfront Expressway (State Route 84) connecting San Mateo County and the East Bay, extends just north of the City. These two regional roadways are connected by University Avenue (State Route 109) between SR 84 and Kavanaugh Drive, a north/south arterial traversing the central part of East Palo Alto, and Willow Road (State Route 114), a Menlo Park arterial roadway adjacent to the west boundary of East Palo Alto. University Avenue carries 29,000 vehicles per day and is subject to long delays and congestion. These four roadways carry a substantial amount of regional traffic and, during peak morning and evening periods, experience significant congestion and delays.

Regional Transportation Alternatives

The City/County Association of Governments of San Mateo County (C/CAG) prepared its *Countywide Transportation Plan Alternatives Report (1996)* addressing nine land use and transportation system scenarios to see how well each comparatively relieves traffic congestion. The report contains the following findings which are important considerations for East Palo Alto:

- All of the land use scenarios increase households and jobs in the County from

1990 to 2010 which, in turn, increases congestion. Even with planned transportation improvements, maintaining 1990 levels of congestion will not be possible and congestion is expected to increase.

- The automobile is currently the dominant mode of travel in the County (97% of all trips) and will remain the dominant mode of travel (95% of all trips) in 2010.
- Locating more housing closer to jobs causes vehicle miles traveled and vehicle hours traveled to increase the least and travel speeds to decrease the least.
- Transit ridership could increase from about 6% to 12% of total work trips. The automobile is currently the dominant mode of travel in the County for work trips (94%), but the addition of substantial transit improvements would reduce its dominance to 88% of all work trips.
- In 2010, as in 1990, a relatively high percentage (42%) of San Mateo County residents will commute to jobs in other counties. In 1990, this was the highest percentage of out-commuting for any county in the Bay Area.
- In 2010, as in 1990, a relatively high percentage of workers (36%) in the County will be non-resident workers who commute in from other counties. In 1990, this was the second highest percentage of in-commuting for any county in the Bay Area.

The results of this report suggest that East Palo Alto will continue to experience congestion during the morning and evening peak periods as commuters travel to work along area roadways in their automobiles.

Route 109

A potential component of the regional circulation system not considered in the C/CAG alternatives report is the addition of a Bayside Route 109 alignment connecting the Dumbarton Bridge to the Bayshore Freeway. Several years ago Caltrans completed a Project Study Report (PSR) for Route 109 evaluating several alternatives, including widened University Avenue, a depressed University Avenue, and an alignment along the Bayside of East Palo Alto connecting to the Bayshore Freeway at the Embarcadero or Oregon Expressway interchanges. Implementation of this Bayside alignment would provide significant relief from commuter traffic to University Avenue and Willow Road, as well as providing the possibility of a connection with Bay Road in East Palo Alto.

Although the completion of a Bayside Route 109 through East Palo Alto would require the cooperation of other state, county, regional and local agencies, this important link is depicted in the City Roadway Plan (see Figure C-2) and its general alignment may also be paired with a future alignment for rail transportation (see Figure C-4 *Rail Transit Concepts*).

University Avenue Interchange

Upgrading of the University Avenue/Bayshore Freeway interchange in East Palo Alto represents a improvement to both the regional and local circulation system. Substantial additional capacity to handle traffic exiting the Bayshore Freeway will be provided by this upgrade. The northbound off-ramp will be widened and realigned, and ramp metering will be added to the on-ramps. This represents an important infrastructure improvement supporting implementation of the Gateway/101 Corridor Redevelopment Project and is funded through

ISTEA (Intermodal Surface Transportation Efficiency Act).

City Roadways

The City roadway system is the most important component of the City's overall circulation system and is defined using a hierarchical classification system for major streets. The Circulation Element roadway categories are differentiated by size, function and capacity, and do not include local streets.

Roadway Categories There are three basic categories in the hierarchy, ranging from a four-lane divided roadway with the highest capacity, to a two-lane undivided roadway with the lowest capacity. Figure C-1 *Typical Roadway Cross-Sections* on the following page provides schematic cross sections of each category. These sections represent desirable standards, but variation in right-of-way width and specific road improvements will occur in certain cases due to physical/community character constraints and/or right-of-way limitations. Any of the roadway classifications may deviate from standards where physical constraints exist or where preservation of community character dictates special treatment. Although specific roadway design may vary, the overriding objective is that all roadways carry the designed volume of traffic.

The City roadway categories are summarized as follows:

Four-Lane Divided Roadway: Typically constructed within a right-of-way width of 100 feet with a curb-to-curb pavement width of 84 feet. A four-lane divided roadway forms

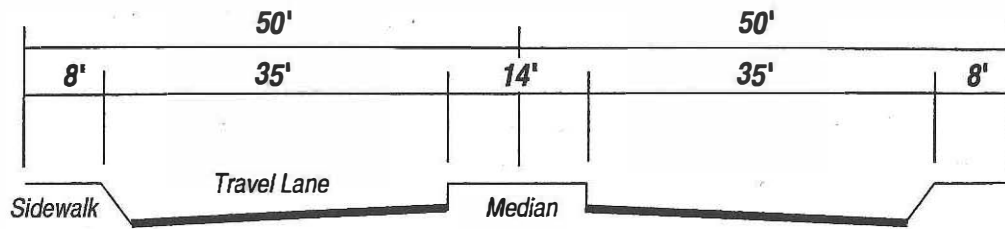
an important component of the regional and local transportation system.

Four-Lane or Two-Lane Undivided Roadway: Typically constructed within a right-of-way width of 80 feet with a curb-to-curb pavement width of 64 feet (60 feet and 40 feet, respectively for four- and two-lane). These roadways serve as collectors, distributing traffic between local streets, and larger arterial roadways.

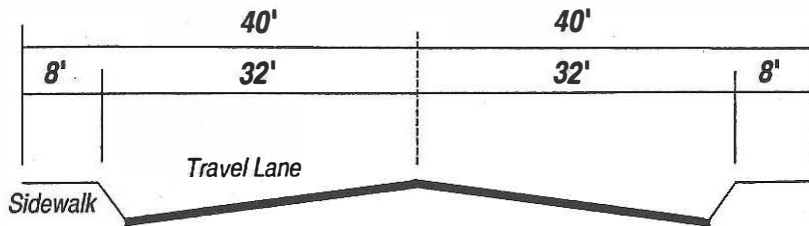
Two-Lane Undivided Local Roadway: A local roadway typically constructed within a right-of-way of 60 feet with a curb-to-curb width of 36 to 40 feet. This category of roadway is designed to provide access to individual parcels of land in the City.

Performance Criteria The performance of the roadway system can be determined by comparing its traffic carrying capacity with projected traffic volumes. The use of performance criteria rely upon a statement of City policy establishing a desired level of service (LOS) within the community. Performance can be measured using a volume-to-capacity (V/C) ratio. V/C ratios are calculated based on existing or future average daily traffic (ADT) volumes and daily capacity values for various types of roadways. A level of service scale is used to evaluate roadway performance based on V/C ratios. These levels range from "A" to "F", with LOS A representing free flow conditions and LOS F representing severe traffic congestion. Descriptions of traffic flow for the different levels of service are provided in Table C-2 *Roadway Levels of Service*.

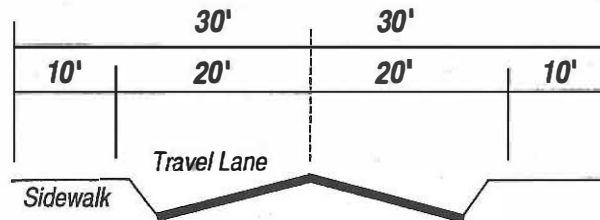
Various LOS policy standards have been established for evaluating observed traffic conditions, future development plans and circulation system modifications. At the



Four-Lane Divided Arterial 100' R/W



Four-Lane Undivided Collector 80' R/W



Two-Lane Undivided Collector 60' R/W



*Figure C-1
Typical Roadway Cross-Sections*

Table C-2
Standards for Roadway Levels of Service

LEVEL OF SERVICE	TRAFFIC CONDITIONS	V/C VALUE
A	Primarily free flow operations at average travel speeds usually about 90 percent of free flow speed. Vehicles can maneuver unimpeded within the traffic stream. Delay at signalized intersections is minimal.	.00 - .60
B	Reasonably unimpeded operations at average travel speeds usually about 70 percent of free flow speed. Ability to maneuver is only slightly restricted and stopped delays are not bothersome. Drivers are not subjected to appreciable tension.	.61 - .70
C	Represents stable operations, however, ability to maneuver and change lanes in midblock locations may be more restricted. Longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of free-flow speed. Drivers will experience some appreciable tension.	.71 - .80
D	Borders on a range in which small increases in flow may cause substantial increases in approach delay, and hence, decreases in arterial speed. Causes range from adverse signal progression, inappropriate signal timing, high volumes, or any combination. For planning purposes, this Level of Service is the lowest that is considered acceptable. Average travel speeds are about 40 percent of free-flow speed.	.81 - .90
E	Characterized by significant approach delays and average travel speeds of one-third of free-flow speed or lower, caused by adverse progression, high signal density, extensive queuing at critical intersections, inappropriate signal timing, or some combination.	.91 - 1.00
F	Characterized by arterial flow at extremely low speeds below one-third to one-quarter of free flow speed. Congestion is likely at critical signalized intersections, resulting in high approach delays. Adverse progression is frequently a contributor to this condition.	Above 1.00

regional planning level, the statewide Congestion Management Plan (CMP) specifies LOS E (V/C ratio less than or equal to 1.00) as the operating standard for roadways on the CMP highway system.

For the East Palo Alto General Plan, LOS is calculated from average daily traffic (ADT) volumes, consistent with long-range planning of this type. This is in contrast to CMP analyses which use short-range time frames and focus on peak hour volumes and capacities at intersections. The performance criteria for evaluating volumes and capacities of the East Palo Alto roadway system is LOS D.

The daily capacity values in Table C-3 below are for calculating roadway V/C ratios. Due to the generalized nature of ADT capacities, the values are typically viewed as general rather than absolute guides for estimating levels of service and sizing the future roadway system.

Monitoring the operation of major roadways can be accomplished to ensure that the City roadway system meets desirable performance criteria.

As the V/C ratio exceeds the LOS standards,

roadway capacity can be expanded by restricting on-street parking, improving signal timing, widening intersections, and adding through and turn lanes.

Where the City determines that proposed development projects will cause LOS standards to be exceeded, appropriate mitigation will be required to improve roadways to meet LOS standards.

Roadway Plan

The circulation goals and policies emphasize the need for a circulation system capable of serving both existing and future traffic. Maintaining community values and aesthetic character must be balanced with expanding the circulation system. The location, design, and modes of the circulation system have major impacts on air quality, noise, community appearance and other environmental resources.

The plan accommodates anticipated traffic levels and the hierarchical roadway classification system is implemented to avoid community impacts. The East Palo Alto Roadway Plan shown in Figure C-2 on the following page delineates the planned roadway circulation system.

**Table C-3
ADT Capacities by Roadway Type**

Type of Roadway	ADT Capacity
4 Lane Divided Roadway	37,500
4 Lane Undivided Roadway	25,000
2 Lane Undivided Roadway	12,500



SOURCE: City of East Palo Alto

Figure C-2
Roadway Plan

Public Transit and Other Travel Modes

One of the key components of the Circulation Plan is the promotion of alternative transportation modes such as transit, bicycling, and walking. Many East Palo Alto residents are dependent on public transit as their primary mode of transportation for work and other trips. Increasing the use of alternative transportation modes also produces a number of community benefits including reduced traffic, less need for costly roadway improvement projects, and improved air quality. Facilities for bicycling and walking provide recreational benefits as well.

Bus Service

Public bus service in East Palo Alto is provided by Samtrans. As shown in Figure C-3

Existing Bus Routes on the following page, an established network of bus routes (routes 50C, 50V, and 6A) offers access to employment, shopping and recreation in the City and surrounding communities. Lines 50C and 50V both connect East Palo Alto with the Stanford Shopping Center via University Avenue, running on 30-minute peak and mid-day headways. Route 6A also runs on 30-minute peak head-ways between East Palo Alto and Menlo Park, Redwood City and Canada College.

Although not specifically serving East Palo Alto, AC Transit's Dumbarton Bridge service (Route DB1) runs along the Bayfront Expressway and Willow Road. AC Transit service on this route is principally intended to provide express service to the Stanford Research Park.

To increase ridership, transit facilities will

need to serve major new development and redevelopment projects. As new development and redevelopment occurs, the City will work with Samtrans to provide better service and connection to regional transportation centers.

Shuttle Service

Other proposals to provide greater public transit service to East Palo Alto include the "Smart Shuttle" concept. This proposal includes fixed-route shuttle service during peak-period commuting times to destinations in the area, such as the Main Post Office, Stanford University, Stanford Hospital, Stanford Shopping Center, Caltrain stations in Palo Alto and Menlo Park, nearby commercial centers with supermarkets, and El Camino Real for access to the regional Samtrans routes. During non-peak periods, both fixed route and dial-a-ride service may be provided in East Palo Alto and surrounding communities.

"Smart Shuttle" features may include:

- Shuttle reservation service (e.g., dial-a-ride) accessible by telephone;
- Shuttle arrival/departure times available by telephone;
- Shuttle arrival/departure times available at bus/shuttle stops; and
- Multi-lingual phone service.


Rail Service


The Palo Alto Caltrain Depot is located approximately two miles east of the City. The Peninsula commuter rail service connects Palo Alto with communities along the Highway 101 corridor from San Francisco to San Jose.

Other concepts for rail transit service for the East Palo Alto area are included in the Dumbarton Rail Corridor study. This study



Bus Routes

 50C (Samtrans)

 50V (Samtrans)

 6A (Samtrans)



0' 2000'

East Palo Alto



General Plan

SOURCE: City of East Palo Alto

*Figure C-3
Existing Bus Routes*

examines alternatives for the provision of regional rail service connecting the San Francisco and the Peninsula with South and East Bay communities, as well as Stockton and Sacramento. A major component of this system is the easterly link across the existing Dumbarton rail line bridge to Newark. Assumed in the study is a rail station at Chilco, northeast of East Palo Alto along the Bayfront Expressway between Willow Road and University Avenue.

Another concept for a connecting link with the alternatives addressed in the Dumbarton Rail Corridor study is identified in the General Plan Circulation Element for the City of Palo Alto in Santa Clara County. This link would generally extend from the Dumbarton rail line along the northeast edge of East Palo Alto in a southerly direction along the eastern edge of East Palo Alto to the Oregon Expressway in Palo Alto. From there, the line would extend into Palo Alto along the Oregon Expressway corridor.

These rail service concepts are illustrated in Figure C-4 *Rail Transit Concepts* on the following page.

This concept for an additional rail service link may work in concert with the Route 109 roadway concept described earlier in this Circulation Plan. Such a link between the Dumbarton bridge and the Bayshore Freeway could provide a corridor for private vehicular traffic, bus service and rail service in the future.

Bikeways and Pedestrian Movement

East Palo Alto has a number of existing and planned bikeways designated as bicycle routes, bicycle lanes, or bicycle paths.

Descriptions of these three classifications of bikeways are provided in Table C-4 *Bikeway*

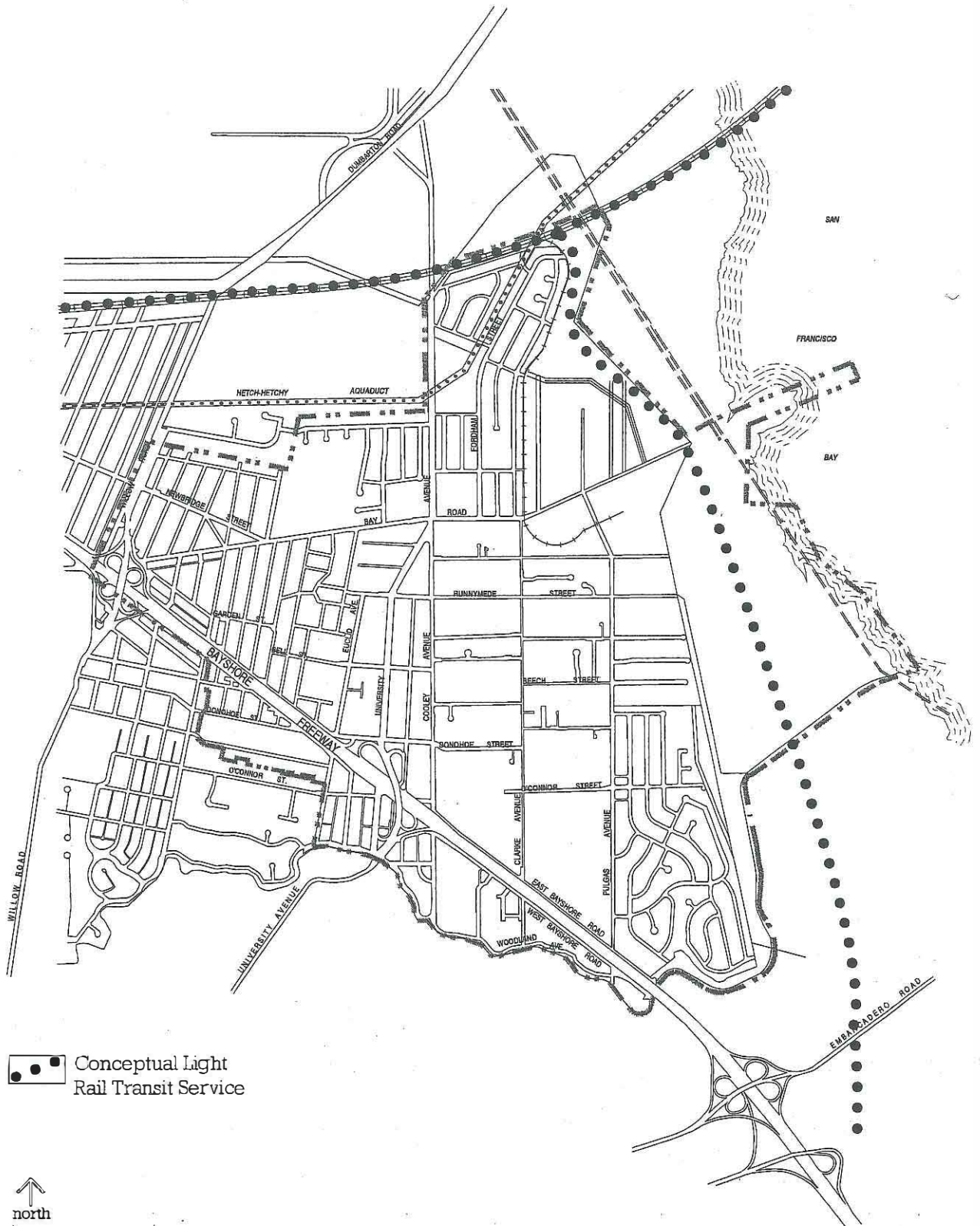
Classification Descriptions. Planned bikeways are illustrated in Figure C-5 *Bikeway Plan*.

Enhancement of the bikeway system will continue as roadway improvements occur. Bikeway system projects will focus on closing gaps in the existing system, making City bikeways continuous with the regional bikeway system, and eliminating on-street parking in marked bicycle lanes where accepted standards indicate that such parking is not advised.

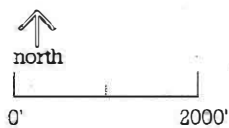
Two major bikeway/pedestrian projects include the University Avenue Bicycle Lanes and the Bayfront Bicycle Trail. The University Avenue Bicycle Lanes Project involves the design and construction of pavement rehabilitation, street lighting, striping, and signage to provide bicycle lanes on University Avenue from Donohoe Street to the northern City limit.

This project will be constructed as part of the University Avenue Reconstruction Project to create a regional bikeway that connects bicycle lanes in the cities of East Palo Alto, Palo Alto and Menlo Park.

The Bayfront Bicycle Trail Project involves the construction of a bicycle path along the levee, tying to the existing regional bicycle trail system. Continuous bicycle travel from Menlo Park to Palo Alto along a safe and scenic route would be provided by this improvement. This project includes several recreational amenities, including rest stops with bicycle parking and seating, an exercise course with substations along the path, and nature-observing overlook stations.




 Conceptual Light Rail Transit Service



SOURCE: Dumbarton Rail Corridor Study,
 Palo Alto General Plan

Figure C-4
 Rail Transit Concepts

Table C-4 Bikeway Classification Descriptions

CLASS I BIKE PATH or BIKE TRAIL

Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians; crossflows with motorized vehicles minimized.

Sizing: Minimum width for Class I (two-way) is eight feet. Desirable width is 10-12 feet. Minimum shoulder width of two feet each side.

Minimum width for Class I (one-way) is five feet. Minimum shoulder width of two feet each side.

CLASS II BIKE LANE

Provides a restricted right-of-way on a roadway's shoulder designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited; vehicle parking and crossflows by pedestrians and motorists permitted. Vehicle parking in a Class II bike lane is not desirable and should be discouraged. Additional lane width (12 feet minimum and 13 feet desirable) shall be required if on-street parking is permitted.

Sizing: Typical width of eight feet. A reduction in width to allow for restriping of an existing roadway or for added turning lanes may be permitted. In such cases, a five-foot width, or gutter width plus three feet, whichever is greater, is the minimum width.

CLASS III BIKEWAY

Provides for shared use of roadway facilities. These bikeways share the street with motor vehicles or share the sidewalk with pedestrians. In both of these conditions, bicycle use is a secondary function of the pavement.

References: 1. Caltrans "Planning and Design Criteria for Bikeways in California"

Neighborhood Traffic Safety

Traffic in residential areas can create neighborhood safety problems when traveling at excessive speeds. The Circulation Plan addresses these potential problems with options for controlling or "calming" traffic.

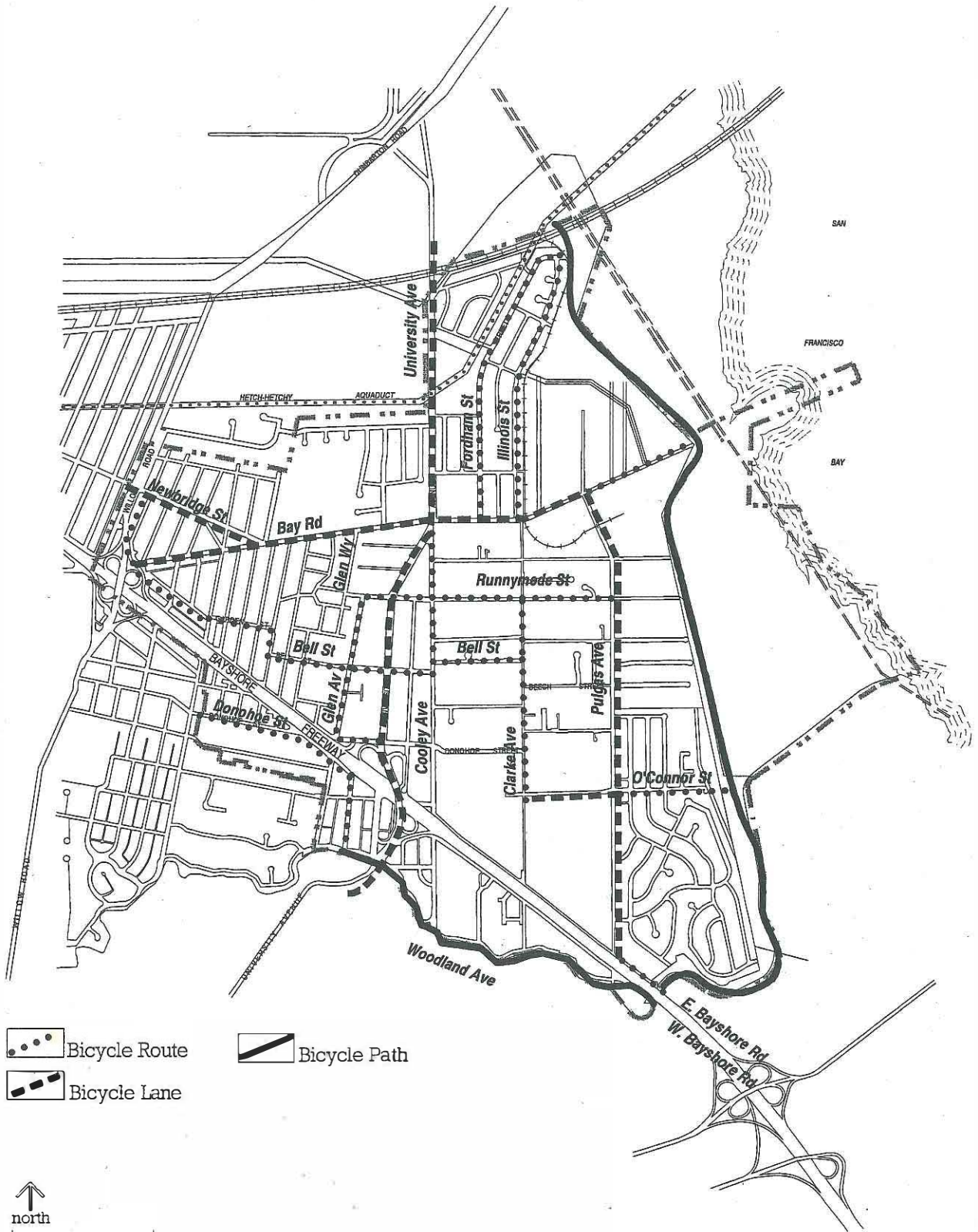
Traffic Calming

Traffic problems on local streets, particularly those in residential areas, can be addressed through public improvements that enhance pedestrian safety. For example, signage and streetscape improvements can be used to distinguish roadways for through traffic from local streets.

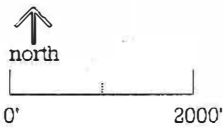
Other physical changes, such as the introduction of speed humps, diverters, turn prevention, and other techniques can be used to slow or deter vehicular traffic, improving safety for drivers, cyclists and pedestrians.

Truck Routes

East Palo Alto experiences moderate amounts of truck traffic generated by commercial and industrial uses and this traffic will increase in future years to support new businesses. Noise impacts and congestion are likely results from this increase in truck traffic. To minimize such impacts in the City, truck routes have been designated and signs will be posted to identify truck routes.



-  Bicycle Route
-  Bicycle Lane
-  Bicycle Path



SOURCE: City of East Palo Alto

Figure C-5
Bikeway Plan

To minimize noise and other impacts in residential areas, truck routes will be located along major roadways. In adopting a set of designated routes for truck traffic traveling through the City, steps will be taken to minimize the amount of truck traffic on roadways in residential areas that are sensitive to congestion and noise.

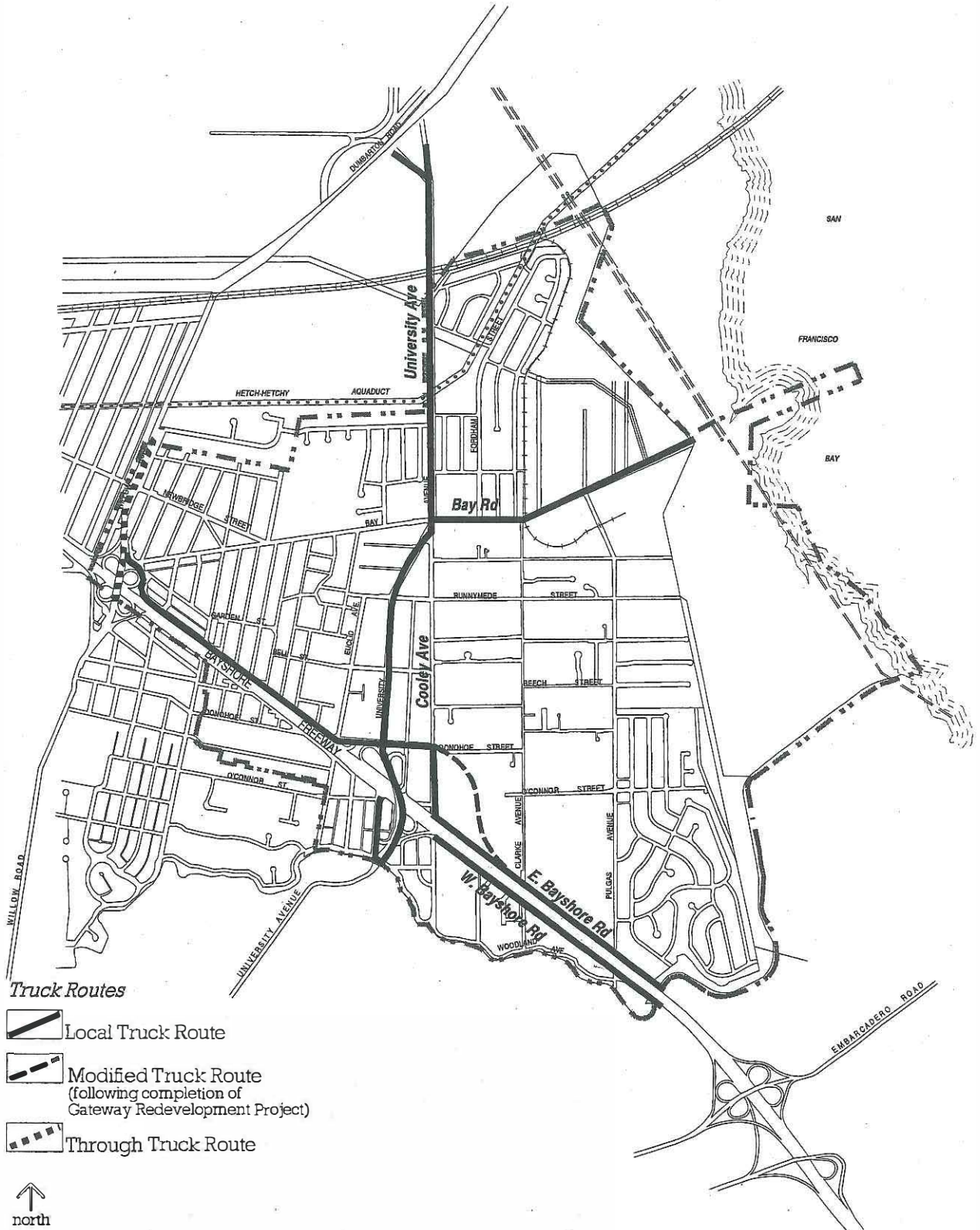
TDM requirements. Programs to increase transit service and transit ridership, car- and van-pooling and use of non-vehicular transportation, such as walking and bicycling will be actively pursued.

Existing truck routes are illustrated in Figure C-6 on the following page. A through truck route permits unrestricted use of trucks, while a local truck route can be used only by trucks with an origin and/or destination within East Palo Alto.




*Transportation System
Efficiency*

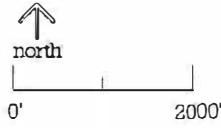
The efficiency of the circulation system can be maximized by using transportation system management (TSM) and transportation demand management (TDM) strategies. TSM involves physical improvements to the circulation infrastructure to expand capacity and increase traffic flow, while TDM involves reducing demand for vehicular transportation. In addition to enhancing the operation of the circulation system, TSM and TDM strategies provide relief from increasing demands for more improvements to transportation facilities.

Traffic signal coordination and intersection capacity improvements will be implemented as needed to maintain traffic flow. Traffic fees for traffic impacts of new development will be collected according to established local and regional fee programs. The City will support the implementation of employer TDM provisions of the Bay Area Clean Air Plan and participate in regional efforts to implement



Truck Routes

-  Local Truck Route
-  Modified Truck Route
(following completion of Gateway Redevelopment Project)
-  Through Truck Route



SOURCE: City of East Palo Alto

Figure C-6
Existing Truck Routes

