6. Transportation

Overview

A safe and well-maintained multi-modal transportation system is essential for the vitality, connectedness, and economic success of East Palo Alto. The City oversees most street, pedestrian, and bicycle facilities while also coordinating with partners like CalTrans and SamTrans for highways and transit service. This chapter defines the transportation system envisioned for East Palo Alto and contains goals and policies for different modes of transportation throughout the City. It serves to reinforce the City's long-term strategy to improve access for all means of travel and design streets that accommodate all users. This chapter includes goals and policies for transportation; specific transportation improvements are listed in Chapter 12: Implementation, while the traffic analysis of the future year growth may be found in the EIR.

Statutory Requirements

The East Palo Alto Transportation Element meets state requirements for the "Circulation Element" as defined in Section 65302(b) of the California Government Code. As per State law, the Element must contain "the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, any military airports and ports, and other local public utilities and facilities, all correlated with the land use element of the plan." Additionally, as of 2011, Circulation Elements must "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan."

Issues and Opportunities

East Palo Alto has a diverse transportation system that is used for both local and regional travel. It consists of a network of roads, transit routes, and paths for bicyclists and pedestrians in various states of repair.

The transportation goals and policies of this chapter directly respond to current conditions, including issues and opportunities, to direct change and advance community priorities. This Issues and Opportunities section represents an overview of current conditions, and is organized according to the following topics:

- Transportation Patterns
- Connectivity and Accessibility
- Vehicle Traffic and Roadways
- Transit
- Bicycling
- Walking
- Parking

Transportation Patterns

The ways in which people get around are important indicators of the success of a transportation system, shedding light on which modes are most popular, convenient, and safe.

According to the U.S. Census' American Community Survey, East Palo Alto residents currently own cars at a much lower rate than the county average (9% of households have no vehicle, as compared to 6%

Countywide), but are almost as likely to use a car to get to work and are less likely to take transit given the lack of convenient alternatives to the car. Comparing vehicle ownership rates to journey to work mode split data, shown in Table 6-1, it is clear that East Palo Alto exhibits a larger than average transit dependent population, but poor east-

Table 6-1: Journey to Work Mode Splits		
Mode	**East Palo Alto**	**San Mateo County**
Drive Alone	69%	71%
Carpool	14%	11%
Transit	6%	8%
Bicycle	4%	1%
Walk	4%	3%
Telecommute	2%	5%

Source: American Community Survey, 2007-2011 5-year estimates

west transit connectivity and little bicycle and pedestrian infrastructure. This dynamic serves to discourage travel via non-car modes, and commuting patterns are thus dominated by automobile travel, be it persons driving alone or as part of a carpool. As such, there likely exists a sizeable latent demand for improved transit service and bicycle and pedestrian facilities. Improving transit, bicycle, and pedestrian connectivity will help decrease traffic, increase mobility and access to jobs, reduce greenhouse gas emissions, and improve East Palo Alto's overall health, wellness, and quality of life.

Connectivity and Accessibility

There exists a lack of connections within East Palo Alto (be it bicycle, pedestrian, or transit) to regional transit corridors such as Caltrain and El Camino Real, and job and activity centers in neighboring municipalities. In particular, the barriers created by U.S. Highway 101, and the lack of adequate bicycle and pedestrian crossing accommodations on the University Avenue (State Highway 109) and Willow Road (State Highway 114) overpasses, further limit connectivity. Moreover, people with disabilities often face additional obstacles to mobility, encountering parked cars blocking sidewalks by driving over rolled curbs.

By improving the multimodal connectivity of the transportation network, residents would enjoy improved access to employment, services, recreational opportunities, and activity centers. Palo Alto, followed by Menlo Park, is the primary location of employment for many East Palo Alto residents; therefore, non-motorized alternatives in these areas need to be prioritized.

The University Avenue overpass includes no bicycle lanes and an uninviting pedestrian sidewalk. (Image Source: Bryan Goebel)

Vehicle Traffic and Roadways

Private and commercial vehicles (including trucks) are a large part of the transportation system in East Palo Alto. Generally, traffic volumes within East Palo Alto are relatively low on most streets, with the exception of two key arterials: University Avenue, which runs through the heart of the City, and Willow Road, which delineates the northernmost border between Menlo Park and the City.

There is a significant amount of regional traffic between the Dumbarton Bridge and Highway 101 cutting through the City via these two streets, increasing delay and localized air pollution. As of 2015, University Avenue carries an estimated 25,000 vehicles on most segments, including the US 101 overpass, with higher volumes – just over 30,000 – on the segment just north of East Bayshore Road. Approximately 84% of this traffic is "cut-through" traffic that neither originates nor ends in East Palo Alto. Willow Road carries similar amounts, representing, along with University Avenue, the City's highest volume streets.

Other streets, such as Pulgas Avenue, Clarke Avenue, Bay Road, Cooley Avenue and East Bayshore Road see significant cut-through traffic as well, though not to the degree of University and Willow.

Figure 6-1: Truck Routes

Truck routes on existing streets within East Palo Alto include portions of University Avenue, East Bayshore Road, West Bayshore Road, Donohoe Street, Willow Road, and Bay Road. The new street to be constructed as part of the Ravenswood/4 Corners TOD Specific Plan is a proposed future truck route.

It should also be noted that while University Avenue is currently predominantly used by regional traffic, it is also the main local transportation spine of East Palo Alto. As such, it represents a prime candidate for potential redesign to improve its local function as a community focal point and gathering place. Potential redesigns for the roadway could include buffered and painted bicycle lanes, streetscape improvements such as benches and pedestrian scale lighting, and mid-block crossings.

Finally, as regional through traffic contributes to localized congestion within East Palo Alto, a plan for truck traffic is an important tool to protect neighborhood streets from noise and traffic impacts. Figure 6-1 maps existing and proposed truck routes within city limits.

Transit

There are currently frequent, convenient transit options throughout much of East Palo Alto. Most commute hour bus lines serving East Palo Alto operate on 15 minute headways, thus requiring short waits between buses. However, on average, transit riders in East Palo Alto spend 25 more minutes commuting per day than the citywide average across all modes, as shown in Figure 6-2. This equates to 500 more minutes per month, and 6,000 minutes (100 hours) per year.

Figure 6-2: Means of Transportation to Work by Travel Time
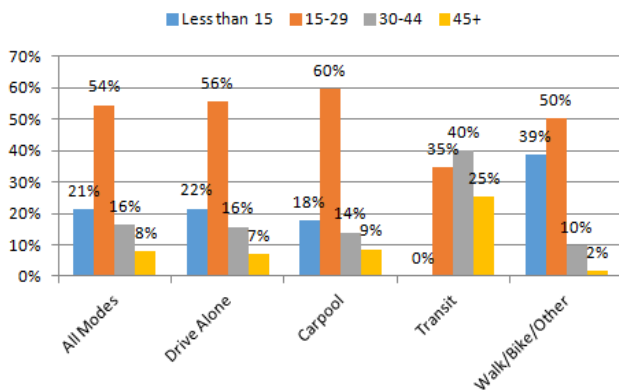
More specifically, five SamTrans routes have stops within the City limits, including:

- **Route 280** with service to the Stanford Shopping Center, Palo Alto Caltrain Station, and the Ravenswood Shopping Center (1 hour headways)

- **Route 281** with service to the Stanford Shopping Center, Palo Alto Caltrain Station, East Palo Alto, and the Onetta Harris Community Center (15 minute peak headways)

- **Route 296** with service to Redwood City, Atherton, and Menlo Park (15 minute peak headways)

- **Route 297** with service to Redwood City and Palo Alto (4 times daily on weekdays, 10 times on weekends)

- **Route 397** with late night service to San Francisco, South San Francisco, San Francisco International Airport, Burlingame, San Mateo, Belmont, San Carlos, Redwood City, and Palo Alto (hourly)

SamTrans is also currently studying ways of restructuring bus service in East Palo Alto, particularly as new development projects are completed.

AC Transit operates two Dumbarton Express routes which stop only at Newbridge and Willow, offering connections between the city of Menlo Park and the East Bay (including the Union City BART station), as well as Palo Alto and Stanford University. Both routes only operate during peak commute hours (6AM to 8PM with hour long headways).

The proximity of high capacity transit service, however, such as Caltrain, bus service along El Camino Real, and proposed rail service along the Dumbarton Corridor, presents an opportunity to improve connectivity between East Palo Alto and regional employment and activity centers. Figure 6-3 shows existing and planned transit service. Currently, the San Mateo County Transportation Authority is considering restoring train service or establishing bus rapid transit service on a 4.5-mile segment of the Dumbarton Rail Corridor between the Redwood City Caltrain Station and Willow Road in Menlo Park, near Facebook's campus.

Encouraging the increased use of public transportation can help reduce vehicular emissions and pollution, increase access to employment and activity centers for those without a car, and also help individuals meet daily requirements for physical activity.

Figure 6-3: Existing and Planned Transit Service

Existing transit service is predominantly provided by SamTrans, though new rail service is proposed along the Dumbarton rail corridor, with potential station locations in Menlo Park and East Palo Alto.

Bikeability

East Palo Alto's existing bicycle network is relatively modest, even though the bicycle mode share in the City is four times the countywide average (4% versus 1%). Existing facilities do afford both north-south and east-west bicycle connectivity, but key facility gaps exist, particularly across Highway 101. The University Avenue corridor – particularly at Bay and University – is the most common site of vehicle collisions with bicycles. Figure 6-4 shows the number of bicycle collisions from 2007 to 2011, and helps illustrate the need for improved bicycle accommodations.

The new bicycle and pedestrian overpass for Highway 101 at Clarke Avenue, however, represents an investment to improve connectivity across the freeway, and a focal point around which to plan additional connecting infrastructure. Figure 6-5 shows the existing and planned bicycle network. Connecting the planned bicycle network to neighboring jurisdictions will improve accessibility to existing bikeways. The East Palo Alto Bicycle Transportation Plan, adopted in 2011, describes many potential improvements (as well as some improvements which are currently being implemented, such as the Highway 101 overcrossing). The 2011 Bicycle Transportation Plan was adopted as an interim plan, to acknowledge that this General Plan Transportation Element may incorporate and/or supersede its contents.

The benefits of walking and bicycling to school or work, for daily errands, and for recreation include increased physical activity, stress reduction, and better cardiovascular fitness and cardiovascular risk factors among working-age adults. Additionally, when more people bicycle for transportation, car emissions decrease. This can improve air quality (and respiratory health) and reduce carbon emissions that contribute to climate change. Finally, walking and cycling are no- or low-cost transportation options, saving money that individuals would otherwise spend on fuel and car expenses.

Walkability

Similar to bicycling, walking represents a no-cost transportation mode that improves health outcomes, reduces congestion, and improves air quality.

Numerous streets in East Palo Alto lack sidewalks on either one or in many cases both sides, as shown in Figure 6-6. Additional sidewalk gaps exist across key barriers, such as Highway 101 and the San Francisquito creek. Additionally, some East Palo Alto streets, such as those in the Gardens Neighborhood, are slender and have rolled curbs, which frequently results in drivers parking on sidewalks. Wheelchair users and other pedestrians are then forced to walk in the street. Various traffic calming improvements can help reduce vehicle speeds and improve bicyclists and pedestrian safety. These improvements could be utilized along key corridors shown in Figure 6-7, and could include speed humps, roundabouts, bulbouts, high visibility crossings, pedestrian refuges, raised crosswalks, motion-activated beacons, conversion of rolled curbs to vertical curbs, and mid-block crossings.

Parking

There is currently a significant parking problem in certain areas of the City, particularly in the area west of Highway 101 (the Westside), and the Gardens neighborhood. This is as a result of limited on-street parking and relatively few off-street parking spaces given the number of dwelling units or the number of residents (on average) per unit. In the Gardens neighborhood, the parking shortage is likely attributed to the conversion of garages into living space, curb cuts that reduce on-street parking and narrow street widths which limit the possibility of parking parallel on both sides of the street. Furthermore, parking is also influenced in the Westside's Willows Neighborhood bordering Menlo Park whose city ordinance prohibits overnight parking.

The efficient provision and management of parking can help provide sufficient space for vehicles while also encouraging more efficient use of existing facilities, reducing the impact of parking facilities, and reducing automobile use.
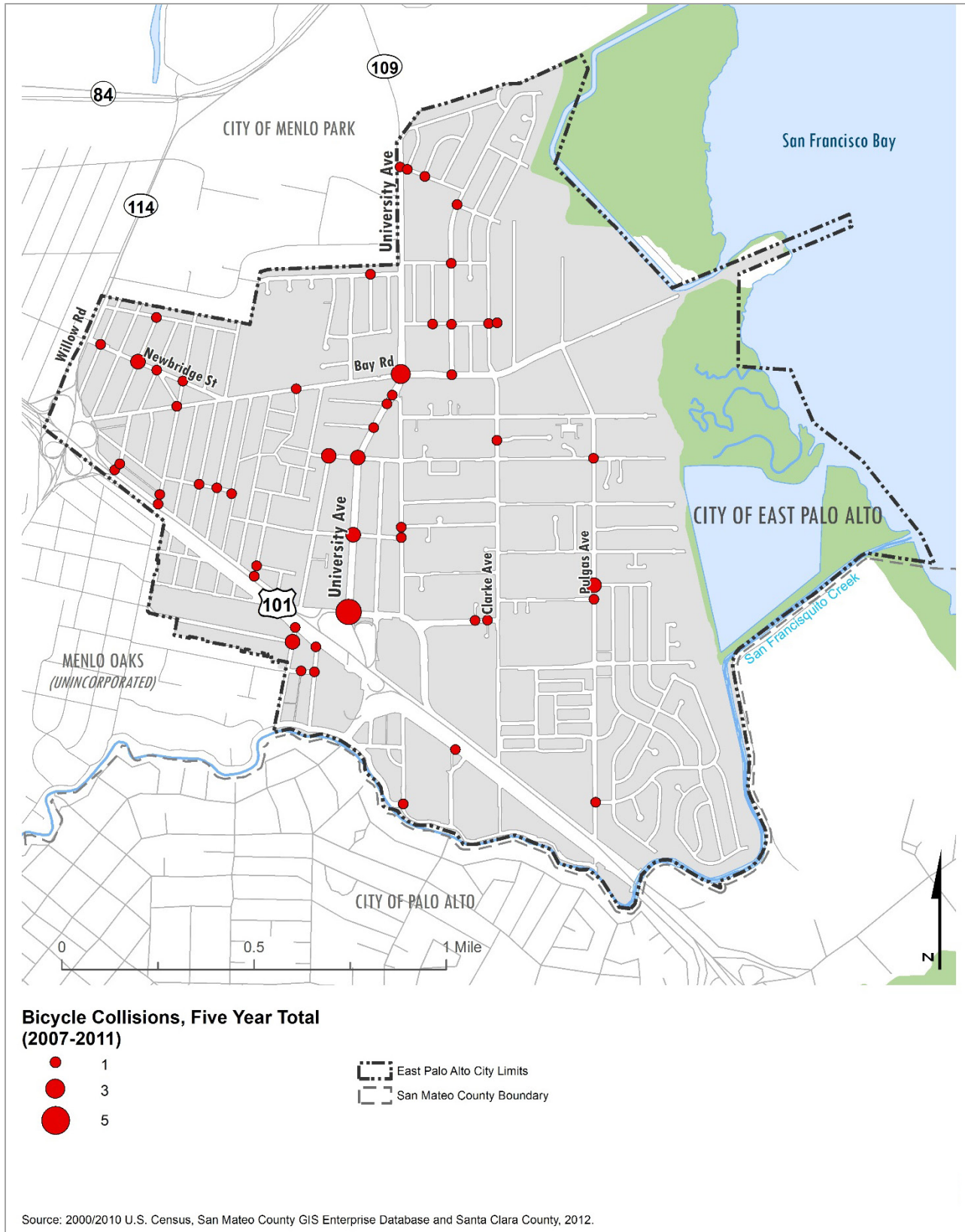
**Figure 6-4: Bicycle Collisions, 2007-2011**

Figure 6-5: Existing and Proposed Bicycle Network

The existing bicycle network in East Palo Alto exhibits various gaps, particularly across Highway 101. Planned facilities, such as the bicycle and pedestrian bridge across Highway 101 and bicycle lanes along Pulgas Avenue will improve connectivity, though additional potential new bicycle corridors should be studied, and cou d include: University Avenue (buffered lanes), Bell Street, Clarke Avenue, Newell Road, an additional crossing over Highway 101 north of University, and various connections to the Bay Trail.

Figure 6-6: Existing and Proposed Pedestrian Network
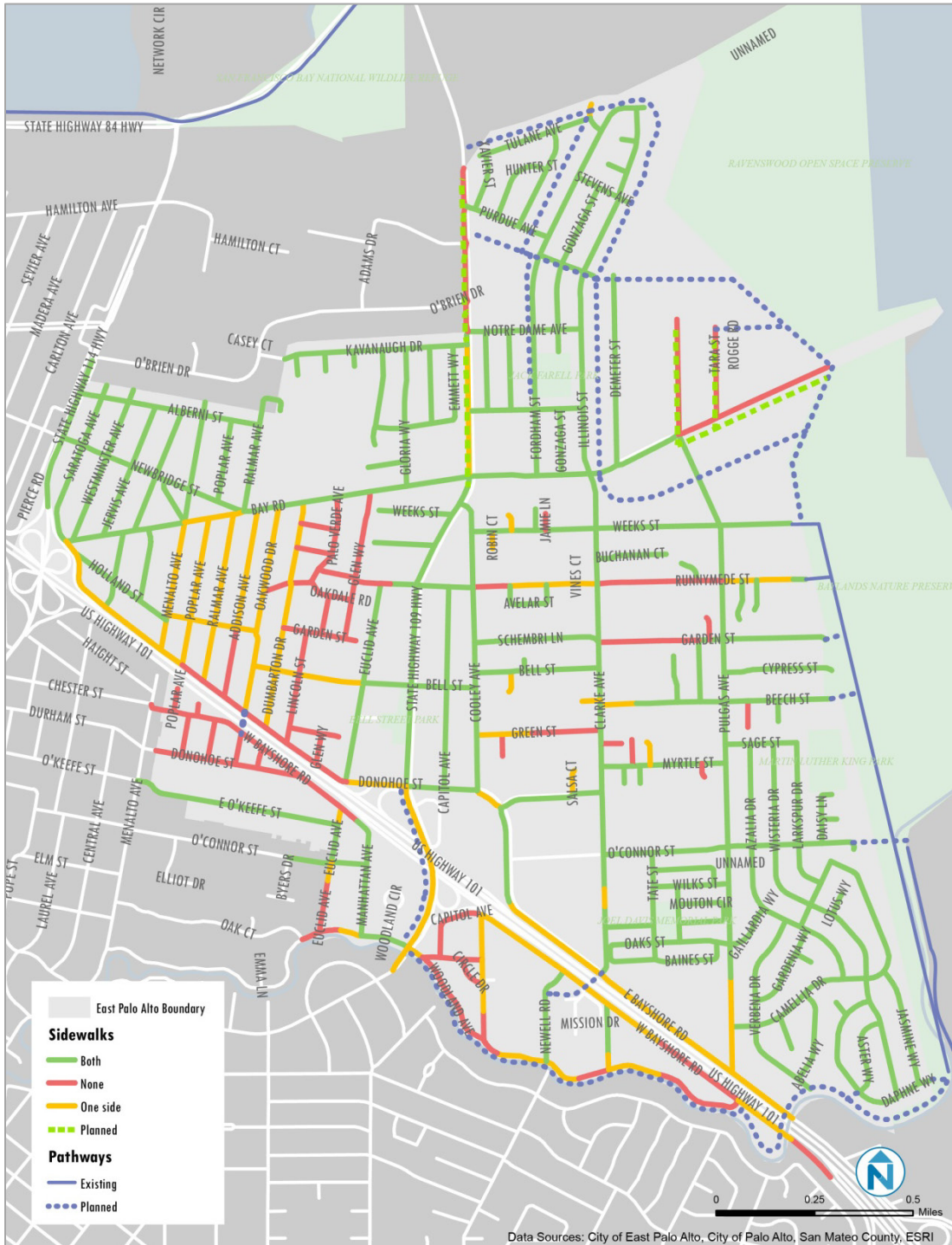
Many streets in East Palo Alto lack sidewalk facilities on one or both sides. The policies spelled out in this Circulation Element call for eliminating these gaps in the pedestrian network whenever feasible to improve safety, increase pedestrian comfort, and benefit public health.

Figure 6-7: Traffic Calming Priority Corridors

Traffic calming priority corridors include roadways with high levels of bicycle and pedestrian collisions, existing or planned bicycle infrastructure, and those leading to schools, parks, and other community facilities. These represent priorities for implementation of traffic calming policies, as stated in Goal T-1 and Policy T-1.2.

Street Network

Street Types

The General Plan's system of street types will inform future roadway improvements and performance measurement for new and reconfigured streets to carry out mobility priorities more effectively and to balance the needs of all travel modes. Definitions of street types consider surrounding land uses and designate priority levels for different travel modes within each street type. Combined, the types represent a hierarchical network linked to typical design standards and anticipated traffic levels.

Table 6-3 and Figure 6-8 delineate the planned roadway circulation system at full build-out of the General Plan, while Figures 6-9-14 serve as illustrative examples of each street type. Each street type is based upon a corresponding street type defined in the National Association of City Transportation Officials (NACTO) *Urban Street Design Guide*. Additional definition of and information about each street type is provided in the NACTO *Urban Street Design Guide*. As noted in the Implementation section of this document, the City will develop updated City standards for each street type.

Street types include the following:

- Major Thoroughfare
- Connector
- Residential Boulevard
- Neighborhood Main Street
- Neighborhood Connector
- Neighborhood Street
- Yield Street

Federal Guidance on Functional Classification

Functional classification is required by the Federal Highway Administration for projects receiving federal funds. This system is primarily auto-centric and does not take into consideration local context, land use, or built form. The street types presented in this document are an alternative to conventional functional classification. To ensure that East Palo Alto remains eligible for federal transportation funds, Table 6-2 converts street types into FHWA functional classification terminology.

Table 6-2: Relationship between Street Types & Existing FHWA Classifications			
	Arterial	**Collector**	**Local**
Major Thoroughfare	●		
Connector		●	
Residential Boulevard		●	
Neighborhood Main Street		●	
Neighborhood Connector		●	
Neighborhood Street			●
Yield Street			●

Table 6-3: Street Types

Type	Mode Priority	Description and Guidelines
Highway	Vehicle: ● Other modes: N/A	*Limited access, major regional freeways that are part of the state and regional network of highways and subject to state design standards.*
Major Thoroughfare (Arterial)	Bicycle: ◐ Pedestrian: ● Transit: ● Vehicle: ●	*Major arterial with higher frequency of transit service and mixed commercial and retail frontages.* Provides access and safe crossings for all travel modes along a regional transportation corridor. Emphasizes walking and transit and accommodates regional vehicle trips in order to discourage such trips on nearby local roadways, through collaborations with other cities and agencies. In areas of significant travel mode conflict, bicycle improvements may have lower priority, particularly where parallel corridors exist.
Connector (Collector)	Bicycle: ● Pedestrian: ● Transit: ● Vehicle: ◐	*Streets with mixed residential and commercial frontages that serve as a main route for multiple modes.* Distributes trips to residential and commercial areas. Provides a balanced level of service for vehicles, transit, bicycles and pedestrians wherever possible. Bicycle priority is greater along identified bicycle corridors. Pedestrian improvements are comfortable to walk along, and provide safe crossings at designated locations.
Residential Boulevard (Collector)	Bicycle: ● Pedestrian: ● Transit: ◐ Vehicle: ◐	*Primarily residential street that serves a significant destination.* Prioritizes walking and bicycling. Accommodates intra-city trips while also distributing local traffic to other streets and areas. Accommodating vehicle traffic while ensuring a high quality of life for residents is a key design challenge.
Neighborhood Main Street (Collector)	Bicycle: ● Pedestrian: ● Transit: ◐ Vehicle: ◐	*Mixed-use street that serves a significant destination.* Serves as a nexus of neighborhood life, with high pedestrian volumes, frequent parking turnover, key transit routes, and bicyclists all vying for limited space.
Neighborhood Connector (Collector)	Bicycle: ● Pedestrian: ● Transit: ○ Vehicle: ◐	*Low-medium volume residential through street.* Primarily serves residential neighborhoods. Provides high quality conditions for walking and bicycling and distributes vehicle, pedestrian and bicycle trips to and from other streets.
Neighborhood Street (Local)	Bicycle: ● Pedestrian: ● Transit: ○ Vehicle: ○	*Low volume residential street, serving mostly local traffic.* Provides access primarily to abutting uses. These streets should offer safe and inviting places to walk and bike.
Yield Street (Local)	Bicycle: ● Pedestrian: ● Transit: ○ Vehicle: ○	*Narrow, low volume residential street serving mostly local traffic.* Residential environments where drivers are expected to travel at low speeds and pedestrian and bicycle comfort is prioritized.

● *= High Priority*
◐ *= Medium Priority*
○ *= Low Priority*
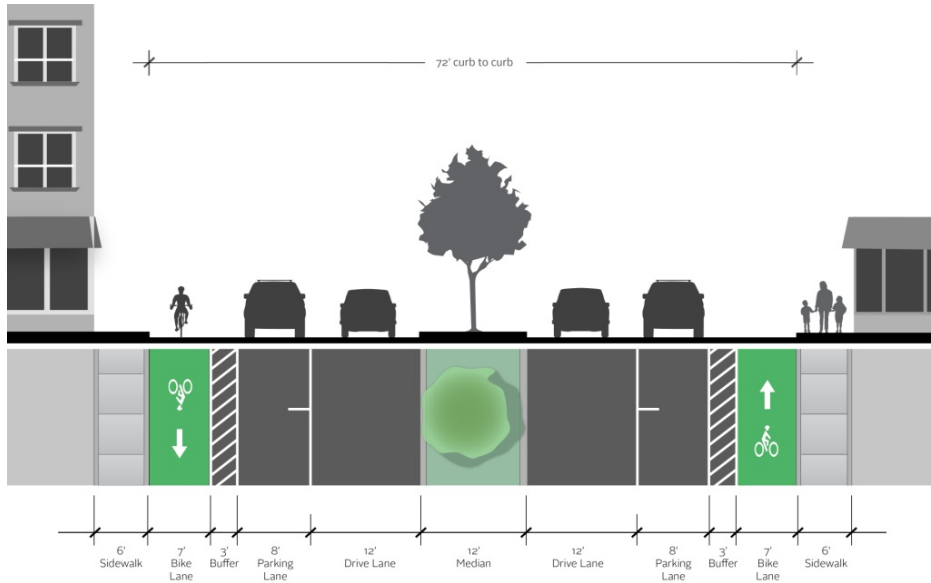
Figure 6-8: Street Network

As described above on page 6-12, the City's street network contains a variety of types intended to support a wide spectrum of users and adjacent land uses. Combined, the types represent a hierarchical network linked to typical design standards and anticipated traffic levels.

Figure 6-9: Major Thoroughfare
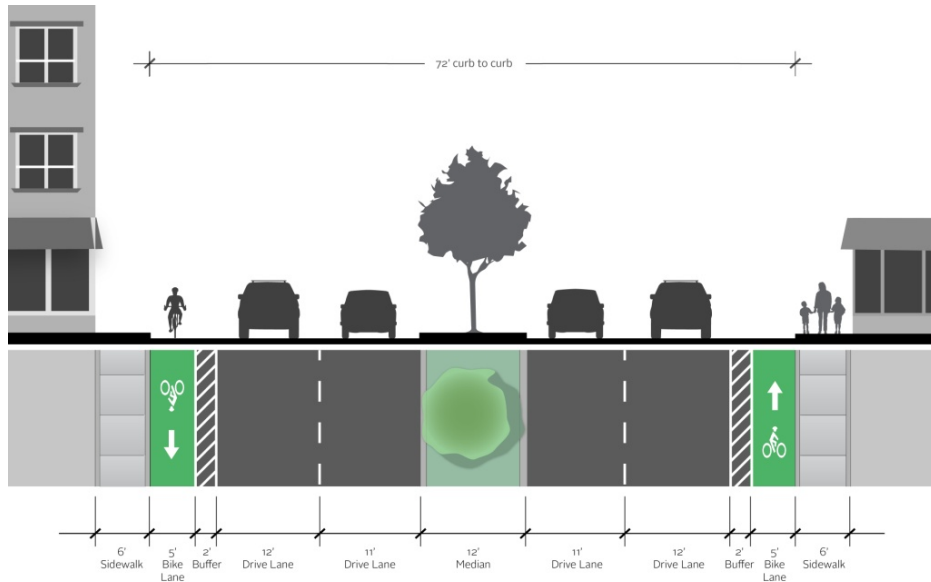

UNIVERSITY AVE | OPTION 1

UNIVERSITY AVE | OPTION 2

University Avenue, Willow Road, and portions of Donohoe and East Bayshore are designated as Major Thoroughfares. This street type is referred to in the NACTO Urban Street Design Guide as a "Downtown Thoroughfare". Additional information on this street type is provided on pages 12-13 of the Urban Street Design Guide. (Image source: NACTO Urban Street Design Guide.)

Figure 6-10: Connector
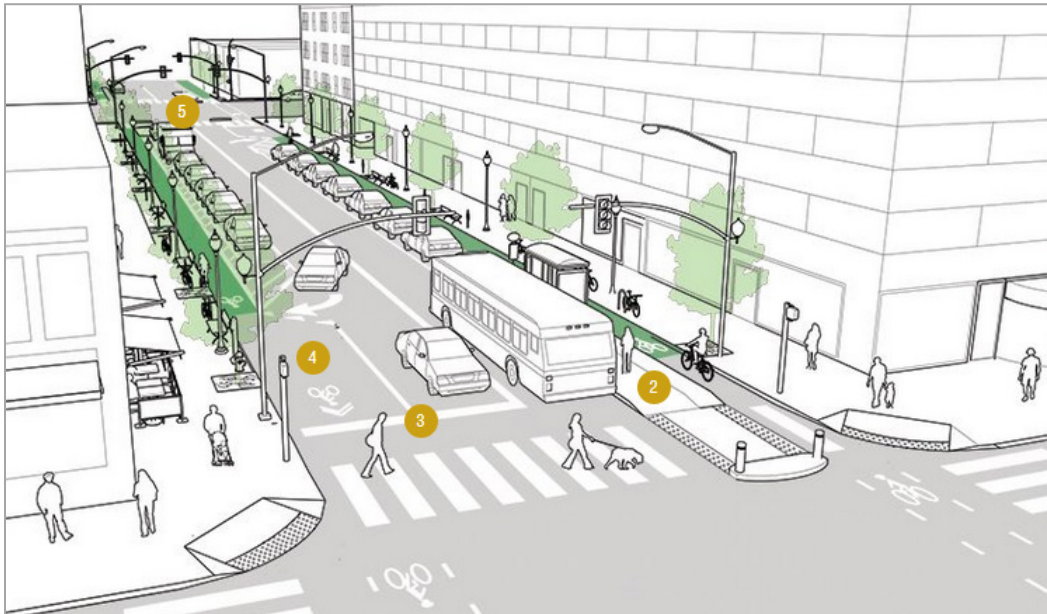
Manhattan Avenue, Woodland Avenue and portions of Donohoe, West Bayshore Road and East Bayshore Road are designated as Connectors. This street type is referred to in the NACTO Urban Street Design Guide as a "Downtown 2-Way Street". Additional information on this street type is provided on pages 10-11 of the Urban Street Design Guide. (Image source: NACTO Urban Street Design Guide.)

Figure 6-11: Residential Boulevard

Newbridge Street and the portion of Bay Road west of University Avenue are designated as Residential Boulevards. Additional information on this street type is provided on pages 20-21 of the Urban Street Design Guide. (Image source: NACTO Urban Street Design Guide.)

Figure 6-12: Neighborhood Main Street

Bay Road east of University Avenue is designated as a Neighborhood Main Street. Additional information on this street type is provided on pages 14-15 of the Urban Street Design Guide. (Image source: NACTO Urban Street Design Guide.)

Figure 6-13: Neighborhood Street and Neighborhood Connector

Numerous local residential streets throughout the City are designated as Neighborhood Streets. Neighborhood Streets are wide enough to allow slow-flow operation, allowing vehicles moving in opposite directions to pass each other at slow speeds. Clarke, Euclid, Fordham, Pulgas and portions of Cooley, Glen Way, Runnymede and O'Connor are designated as Neighborhood Connectors. The typical physical dimensions and elements of these two street types are similar, and typical elements are illustrated in the figure above. The primary difference between the Neighborhood Connector and the Neighborhood Street type is that the Neighborhood Connector type is intended (a) to serve more destinations (such as local schools) than the Neighborhood Street, and (b) to distribute local traffic to neighborhood streets. Neighborhood Connectors are therefore designated to accommodate low-to-medium traffic volumes. By contrast, the Neighborhood Street serves primarily local traffic and is designated for low volumes. These street types are collectively referred to in the NACTO Urban Street Design Guide as "Neighborhood Streets". Additional information on this street type is provided on page 16 of the Urban Street Design Guide. (Image source: NACTO Urban Street Design Guide.)

Figure 6-14: Yield Street

The most slender local residential streets in the City are designated as Yield Streets. The Yield Street type is distinguished by a slender curb-to-curb width, and typically includes segments where two-way traffic is not possible when vehicles are parked at the curb: in such segments, some drivers must stop and yield the right-of-way to oncoming traffic. This is referred to as yield-flow operation. As noted in the Institute of Transportation Engineers' (ITE) Residential Streets, Third Edition, "Yield flow occurs when two-way traffic is impossible where parked vehicles are present. Thus, some motorists must stop and yield the right-of-way to oncoming vehicles. For decades prior to the 1960s, yield flow was the widely accepted norm for local streets. Thus, the vast majority of local streets throughout the United States operate at yield flow." Recent research has confirmed the traffic calming and safety benefits of this street type. Additional information on this street type is provided on page 17 of the Urban Street Design Guide and pages 12-50 of the ITE's Residential Streets, Third Edition. (Image source: NACTO Urban Street Design Guide.)

Goals and Policies

Goal T-1. **Improve safety through the design and maintenance of sidewalks, streets, intersections, and other roadway improvements.**

Intent: To ensure that human life and health is paramount and takes priority over mobility and other road traffic system objectives.

Policies:

1.1 **Vision Zero.** Eliminate traffic fatalities and reduce the number of non-fatal injury collisions by 50% by 2030.

1.2 **Traffic calming.** Implement traffic-calming and traffic-slowing measures on roads and at intersections with a high level of existing or planned pedestrian and non-motorized vehicle activity and/or collisions.

1.3 **Safe Routes to Schools.** Actively promote safety around schools, pursue funding to implement physical improvements around schools and student education programs around traffic safety (such as "walking school buses", walking audits, bike rodeos, classroom instruction and promotional events).

1.4 **ADA-compliant Sidewalks.** Ensure sidewalks are ADA compliant and free of blockage resulting from parked vehicles or other obstructions.

1.5 **Coordination with public safety.** Ensure that the Menlo Park Fire Protection District (MPFPD) and the City's Police Department review construction plans for roadway modifications, internal circulation, and establish, if needed, temporary alternative emergency routes to be used the duration of any construction project. During design review, ensure that roads and driveways are established that meet applicable code requirements for emergency access, including potentially including signal preemption mechanisms. Ensure that the MPFPD reviews related building plans for compliance with the Fire Code and establishes a future inspection schedule for continued compliance. Continue the existing practice of informing the MPFPD and the Police

Department of projects and proactively engaging with the MPFPD and the Police Department through the Development Review Committee (DRC) and the plan check process.

Goal T-2. **Foster the creation of complete, multimodal streets.**

Intent: To encourage multimodal and attractive streets that provide for the needs of diverse members of the community, balance the different modes of transportation, promote physical activity, and support environmental sustainability.

Policies:

2.1 **Accommodating all modes.** Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with disabilities, and persons of all ages and abilities.

2.2 **University Avenue.** As the main transportation spine of East Palo Alto, ensure that any future redesign of University Avenue include improvements for all modes of travel, focusing on its local function as a community centerpiece for local activity and travel. Design options could include buffered and painted bicycle lanes, streetscape improvements such as benches and pedestrian scale lighting, and mid-block crossings, reversible lanes, and the reintroduction of on-street parking. The City shall maintain control of University Avenue (not Caltrans).

2.3 **Fix It First**. Maximize the value of past investments by prioritizing infrastructure spending to support the maintenance and upgrading of existing transportation infrastructure before incurring the cost of constructing new infrastructure.

2.4 **Funding**. Pursue adequate and sustainable funding sources for maintaining all existing city transportation infrastructure.

2.5 **NACTO Design Guides.** Adopt the NACTO (National Association of City Transportation Officials) Urban Street Design Guide and Urban Bikeway Design Guide as supplements to the street types in this Plan and the California Manual for Uniform Traffic Control Devices.

2.6 **Pedestrian and bicycle crossings.** Encourage pedestrian and bicycle crossings at key locations and across existing barriers such as Highway 101 and to local employment and schools, such as Bay Road.

2.7 **Truck routes.** Update Municipal Code demarcating truck routes through East Palo Alto to conform to the new Truck Route map shown in this Circulation Element.

Goal T-3. **Create a complete, safe, and comfortable pedestrian network for people of all ages and abilities.**

Intent: To encourage a livable, healthy, and connected city with a safe and comfortable pedestrian network among its various neighborhoods, parks, trails, employment centers, community facilities, and commercial areas.

3.1 **Active transportation.** Increase the levels of active transportation.

3.2 **Loop road.** Pursue the new multimodal Loop Road, including the Bay Trail connection, as described in the Ravenswood/4 Corners TOD Specific Plan to alleviate congestion and neighborhood traffic

3.3 **Pedestrian network.** Create a safe, comfortable, and convenient pedestrian network that focuses on a) safe travel; b) improving connections between neighborhoods and commercial areas, and across existing barriers; c) providing places to sit or gather, pedestrian-scaled street lighting, and buffers from moving vehicle traffic; and d) includes amenities that attract people of all ages and abilities.

3.4 **Pedestrian and bicycling education, encouragement, and awareness.** Actively engage the community in promoting walking and bicycling through education, encouragement (such as Bike to Work Day, Walk to Work Day, and Bike/Walk to School days and programs), and outreach on improvement projects and programs.

3.5 **Coordination with neighboring jurisdictions.** Coordinate pedestrian and bicycle improvements with the plans of neighboring jurisdictions and the region.

Goal T-4. **Build a comprehensive and well-used bicycle network that comfortably accommodates bicyclists of all ages and skill-levels.**

Intent: To encourage a livable, healthy, and connected city with a safe and comfortable bicycle network and adequate bicycle parking to enhance bicycling as a convenient form of transportation for both commute and leisure trips.

4.1 **Bicycle network.** Improve facilities and eliminate gaps along the bicycle network to connect destinations across the city and create a network of bicycle facilities of multiple types that connect to neighboring cities, including a path along Newell Road between Highway 101 and San Francisquito Creek. The network should facilitate bicycling for commuting, school, shopping, and recreational trips by riders of all ages and levels of experience.

4.2 **Bicycle Transportation Plan.** Utilize the City's Bicycle Transportation Plan to help guide the location and timing for bicycle improvements

4.3 **Wayfinding.** Increase the convenience of walking and bicycling by supporting the phased implementation of a comprehensive citywide, consistent bicycle and pedestrian wayfinding system connecting major destinations.

4.4 **Bicycle safety.** Support bicycle education, encouragement, and enforcement activities that promote bicycle safety.

4.5 **Public bicycle parking.** Increase the amount of safe and convenient short- and long-term bicycle parking and storage available to the public throughout the city.

4.6 **Bicycle parking standards.** Require large public and private development projects to provide sufficient bicycle parking, shower and locker facilities.

4.7 **Bikeshare.** Support the expansion of the regional bike share pilot program, helping to identify appropriate locations for system expansion within East Palo Alto.

4.8 **San Francisco Bay Trail.** Support the completion of the San Francisco Bay Trail, including relevant portions within East Palo Alto.

Goal T-5. **Support local and regional transit that is efficient, frequent, convenient, and safe.**

Intent: To support planning and coordination of transit services to accommodate diverse community needs for safe, comfortable, and efficient local and regional transit.

5.1 **Dumbarton rail service.** Support ongoing regional efforts to reintroduce passenger rail service along the Dumbarton corridor and support multimodal access improvements to future rail station(s).

5.2 **Coordination with transit agencies.** Coordinate with transportation service providers to improve transit service and access in the City, focusing particularly on areas with high concentrations of zero vehicle households, areas that currently lack public transit options, and on the improvement of transfers and connections between systems.

5.3 **Transit priority.** Ensure transit vehicles retain priority over other vehicles along transit network streets (as shown in Figure 6-3), prioritizing transit speed and schedule reliability.

5.4 **Access to transit.** Provide connecting bicycle and pedestrian infrastructure and amenities to improve access to transit stations and stops, and encourage new development projects near transit to improve transit stop amenities.

5.5 **Transit stops.** Support the installation of transit stop amenities, including shelters, benches, real-time information panels, lighting, bike parking, bike sharing stations, etc.

5.6 **Local transportation services.** Create or partner with transit providers, employers, educational institutions, major commercial entities and event organizers to improve local transportation services, including developing discount transit pass programs for groups such as students.

5.7 **Connection to Dumbarton corridor.** Should Facebook be successful in lobbying for a fixed railway or Bus Rapid Transit (BRT) connection to their campus, request a pedestrian connection to a Willow Road station that transects the office park behind the Kavanaugh neighborhood.

5.8 **Senior transit.** Support the expansion of affordable and reliable transportation options such as discounted transit passes for older adults and persons with disabilities, focusing on neighborhoods with high concentrations of elderly residents.

5.9 **Cut-through traffic.** Encourage and support efforts to improve regional transportation given that the majority of traffic congestion in the City is generated by regional circulation..

Goal T-6. **Develop strategies to provide efficient and adequate vehicle parking.**

Intent: To encourage the development of an efficient and adequate parking supply, reduce the negative effects of parking on the pedestrian environment and surrounding neighborhoods, and support community goals for complete streets, walkability, bikeability, and effective transit.

6.1 **Public parking management.** Improve the efficiency of the on- and off-street public parking system via parking management strategies that ensure adequate parking is available for nearby uses, including Residential Permit Parking (RPP) in residential areas that see significant parking spillover.

6.2 **Parking requirements.** Maintain efficient parking standards that consider the effect on demand due to various contextual conditions such as parking prices, transportation demand management strategies, transit accessibility, walkability, and bikeability. Study establishing a density bonus program for developments that utilize mechanized parking lifts.

6.3 **Off-street parking.** Ensure new off-street parking is properly designed and used efficiently.

6.4 **"Park Once."** Support the establishment of shared public parking, particularly in mixed-use and retail areas, and of Park-Once strategies that allow motorists to park just once and complete multiple daily tasks on foot before returning to their vehicle, helping to reduce vehicle trips and parking demand. Potential shared parking facilities include private and public facilities such as church and school parking lots.

Goal T-7. **Adopt transportation performance measures.**

Intent: To enable effective, informed transportation planning by using indicators, data and monitoring to evaluate the city's multi-modal transportation system.

7.1   Automobile Level of Service Standards. Improve the East Palo Alto circulation system roadways in concert with land development to maintain adequate levels of service for automobile travel. Automobile Level of Service (LOS) 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 6-4 Standards for Roadway Levels of Service. The performance criteria for evaluating volumes and capacities of the East Palo Alto roadway system is LOS D. At a signalized intersection, an impact is considered significant if it causes operations to degrade from LOS D or better to LOS E or F; or exacerbates LOS E or F conditions by increasing critical delay by >4 seconds and increasing volume to capacity ratio (V/C ratio) by 0.01; or increases the V/C ratio by > 0.01 at an intersection that exhibits unacceptable operations, even if the calculated LOS is acceptable. At an unsignalized intersection, an impact is considered significant if it: causes operations to degrade from LOS D or better to LOS E or F; or exacerbates LOS E or F conditions by increasing control delay; or causes volumes under project conditions to exceed the Caltrans Peak Hour Volume Warrant Criteria. 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.

7.2   Updating Transportation Performance Measures. Update the transportation performance measures in this Transportation Element, including Automobile Level of Service standards, once the State of California has amended the California Environmental Quality Act Guidelines to implement Senate Bill 743's requirement to provide an alternative to automobile Level of Service for evaluating transportation impacts (See California Public Resources Code Section 21099(b)(1).) Additionally, designate appropriate infill opportunity zones within East Palo Alto, within which the automobile Level of Service standards prescribed by California Government Code Section 65089 shall not apply. (See Government Code Sections 65088.1 and 65088.4.)

7.3   Multimodal transportation impact fee. Adopt a transportation impact fee for new development that raises funds for improving all modes of transportation.

Goal T-8. **Adopt transportation demand management and roadway system efficiency strategies.**

Intent: To increase transportation choices, improve public health, reduce pollution, make effective use of roadway capacity and decrease automobile traffic by improving management of existing roadways and implementing complementary policies promoting transit, walking, bicycling and complete streets.

8.1   Transportation Demand Management (TDM). Promote effective TDM programs to reduce travel demand from existing and new development, shifting trips to alternative modes. Regularly update the TDM ordinance to establish effective requirements that reduce travel demand from existing and new development. Require projects to implement TDM programs, as defined in the TDM ordinance.

8.2   Avoidance of street widening. When feasible, avoid widening streets to increase automobile capacity,

focusing instead on operational improvements such as signal timing optimization, modern roundabouts and other Transportation Systems Management (TSM) strategies that aim to improve traffic conditions and reduce cut-through traffic by maximizing the efficiency of existing vehicle infrastructure.

Table 6-4: 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% of free-flow speed. Vehicles can maneuver unimpeded within the traffic stream. Delay at signalized intersections is minimal.	0.00 - 0.60
B	Reasonably unimpeded operations at average travel speeds usually about 70% of free flow speed. Ability to maneuver is only slightly restricted and stopped delays are not bothersome. Drivers are not subjected to appreciable tension.	0.61 - 0.70
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% of free-flow speed. Drivers will experience some appreciable tension.	0.71 - 0.80
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% of free-flow speed.	0.81 - 0.90
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.	0.91 - 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 situation.	Above 1.00

Source: Highway Capacity Manual (HCM), 2000.