ES EXECUTIVE SUMMARY

BACKGROUND

This Lawrence Station Area Plan (LSAP or "the Plan") has been prepared to guide future development of the area surrounding the Lawrence Caltrain Station in Sunnyvale, California. The focus of this Plan is limited to approximately ~~372~~ 319 acres of already urbanized lands within the City of Sunnyvale, adjacent to the Station. It is part of a larger 629-acre Study Area, which is generally defined by a one-half-mile radius circle centered on the Lawrence Station. Research indicates that this distance represents approximately a 10-minute walk for an average pedestrian, a threshold that pedestrians are generally willing to walk on a regular basis to access a transit station.

The larger Study Area includes portions of the City of Santa Clara, in order to ensure coordination of circulation systems and land uses between the two cities. But the plans, policies and guidelines of this Plan are limited to the jurisdictional area of the City of Sunnyvale.

Purpose of the Plan

Lawrence Station is surrounded by uses that do not support transit ridership, as well as a circulation framework that makes access through the area for pedestrians, bicyclists and motor vehicles a challenge. In 2010, the station ranked ~~17th~~ 18th out of 29 stations in the Caltrain system for average total boardings, causing the Peninsula Joint Powers Authority, the owner of the system, to seriously consider closing the station.

The purpose of this Plan is to promote greater use of this existing transit asset and guide the development of a diverse neighborhood of employment, residential, retail, other support services and open space. With a Plan horizon of 2035, the Plan includes goals, policies and guidelines to guide public and private investment in the area.

Planning Process and Community Outreach

The preparation of the LSAP took place in two distinct phases, beginning in December, 2010. The first phase included extensive research on existing conditions and the preparation of three conceptual alternative strategies for the future development of the area. The results of this first phase effort was summarized in the Lawrence Station Area Plan phase one report dated August 2011 and accepted by the Sunnyvale City Council on November 1, 2011. The three concept alternatives prepared during phase one of the process are also summarized in Appendix A of this document.

During the second phase of the planning process, a 19-member Citizens Advisory Group (CAG) was appointed by the City Council to re ne the goals and vision for the Plan area and recommend a preferred alternative. In February 2013, the Sunnyvale Planning Commission and City Council voted to accept the CAG's recommendation of a preferred plan for the area. The preferred plan accepted by the City Council provides the basis for the Lawrence Station Area Plan described in this document

Throughout the two-phase process, extensive input was received in community-wide workshops, business and property owner meetings, specific focus groups, the Sunnyvale Planning Commission, the Sunnyvale City Council, and, during Phase II, the CAG.

Important input was also provided in regular meetings of a Technical Advisory Group (TAG) comprised of representatives from the City of Sunnyvale, City of Santa Clara, County of Santa Clara, SamTrans, Valley Transportation Authority (VTA), Bay Area Air Quality Management District, Caltrain, and representatives from the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

PLAN VISION

The Plan is based on a set of seven guiding principles that establish the overall Vision for the Lawrence Station area and serve as the basis for all elements of the Plan and its implementing policies.

1 | Land Use Diversity: Promote a diversity of land uses and densities that will support transit usage and neighborhood services.

Mixed-Use

Twelve land use categories ~~have been established for~~will be used in the Plan area. Six of these are new Mixed-Use categories that allow a mix of office/research and development (R&D), residential and retail uses. These are new land use categories that do not currently exist within the Sunnyvale General Plan and Zoning Ordinance. Therefore, drafting of new land use designations in the General Plan and Zoning Ordinance as well as a change of Zoning for the applicable properties will be required.

~~Four of the planned land-use categories are exclusively residential uses in already built-out areas that will not change.~~

~~Two of the planned land use categories are exclusively employment uses. These designations are already available in the City of Sunnyvale General Plan and Zoning Ordinance, but not previously applied in the Plan area. These areas will require a change of zoning in order to be compliant with the Plan.~~

Protect Existing Neighborhoods and Businesses

~~All existing residential areas will be protected and their current zoning will not change. In addition,~~ Eexisting uses in the Plan area will be allowed to remain as legal, conforming uses with the ability to grow and expand. These uses, however, will be discouraged from using hazardous materials in their operation, especially when located adjacent to residential uses.

Minimum Required Development Densities

A key goal of the Plan is to ensure that future new development is of a type and at sufficient density to create a diverse area that can support a mix of employment and residential uses, support transit use, and can provide necessary amenities and support services, such as open space and neighborhood retail. Therefore, for portions of the Plan area in Sunnyvale where new development will be allowed (roughly 70 % of the Plan area), minimum development densities are established. New development will not be allowed at densities less than these minimums. In most cases these minimum densities exceed densities currently allowed.

Maximum Allowable Development Based on Incentives

The LSAP is an incentive-based plan. Development incentives (in the form of density bonuses) will allow property owners to develop their properties beyond the minimum required densities in exchange for providing mixed-use development, street rights-of-way and enhancements, access easements, public open space, additional affordable housing, and other features that advance the goals of the Plan. Developers will not be required to build with incentives. Rather they will have the option to choose which incentives best suit their business plans and economic goals.

Estimated Likely Development

Total development of the Plan Area at build-out was estimated for purposes of environmental impact analysis and determining infrastructure needs. Based on the assumption that 50% of the maximum allowable development (with incentives) will occur, plus 50% of the existing industrial/office/R&D space will remain, total build-out of the Plan area will result in approximately 3,500 residential units, 3.6 million square feet of office/R&D development, 220,000 square feet of retail space, and 26,500 square feet of industrial space. This includes all existing residential development that will remain and be protected.

Focusing only on net new development, estimated likely development will result in ~~approximately~~ 2,32300 new multifamily residential units, 1.2 million square feet of net new office/R&D development.~~, approximately 9,000 square feet of net new industrial space, and a net loss of 2,500 square feet of retail space~~. This is considered the development capacity for the Plan area.

Development Cap and Growth Monitoring Program
In order to ensure that long-term development does not exceed the carrying capacity of infrastructure systems and the environment, a growth monitoring program will be established.

A Development Cap for the entire Plan area will be established that is consistent with the findings of the Environmental Impact Report (EIR) that has been conducted as part of the planning process. Findings of the EIR will be used to help establish a maximum development threshold for the Plan area. Once this development threshold is reached (which is unlikely within the time horizon of this Plan), development cannot proceed until new long- range plans and environmental documents have been prepared.

2 | Dense Station Area Development: Locate highest intensity development closest to the Lawrence Station.
Because of the abundant transportation options that are available, close proximity to Lawrence Station is a key determinant of the pattern of allowable densities in the Plan area. The highest development intensities ~~of future development will be~~is allowed in ~~an~~ area ~~that is generally located~~ within 1/2~~1/4~~-mile of the Lawrence Station ~~in two areas~~, designated Mixed-use Transit Core and Mixed-Use Transit Core South.~~-~~ The minimum density requirement varies between ¼ and ½ miles from the station.~~Office, Research and Development (R&D), and residential at the highest densities are all allowed in these areas~~. Retail uses are also allowed and encouraged ~~in these areas~~as part of mixed-use projects in order to create a critical mass of successful local-serving retail activity, but auto-oriented retail is not considered a preferred use. Depending on location, uses may be confi-gured as vertical mixed-use, such as with retail under several floors or residential or office, or as single use buildings.

Station Area Density Assumptions
(Note: Retail street district removed)

	Office/R&D		Retail	Residential		Industrial
Land Use	**Minimum density**	**Maximum density with incentives**		**Minimum density**	**Maximum density with incentives**	
Mixed-use Transit Core (1/4 mile radius)	*~~0.7~~.35 FAR*	*1.5 FAR*		*36 Dus*	*68 Dus*	
Mixed-use Transit supporting North (1/2 mile radius)	*~~0.5~~.35 FAR*	*1.5 FAR*		*24 Dus*	*68 Dus*	
Mixed-use Transit supporting South	*0.35 FAR*	*1.0 FAR*		*24 Dus*	*54 Dus*	
Office/R&D single use	*0.35 FAR*	*N/A*				
High-density Residential- two parcels in the southwest				*24 Dus*	*54 Dus*	
Office/Retail (on Reed & Willow)	*0.5 FAR*	*1.00 FAR*	*0.25 FAR*			
M-S/LSAP (east of Calabazas Creek)	*N/A*	*0.60 FAR*				

3 | Connectivity: Improve connectivity for all modes of travel.

A New Framework of Streets and Blocks In order to provide improved access throughout the Plan area in general, and to Lawrence Station in particular, a framework of new streets and blocks will be established. In the residential areas south of the Caltrain tracks, the existing framework of streets and blocks will be retained. Minor improvements to provide safer street crossings and minor access improvements for pedestrians, bicycles and transit users will be provided.

In the area north of the Caltrain tracks, to the maximum extent feasible, a new grid of streets and blocks at a finer grain than currently exists will be established. To the extent feasible, the new street grid will have a pattern of blocks no longer than 400 feet on a side.

The new street network will emerge over time as individual properties are redeveloped by individual property owners. As these properties are recon figured, developer incentives to provide right-of-way and improvements for these new corridors will be available.

Improved North-South Connectivity through the Area
East-west connections throughout the Plan area are relatively good. However, north-south linkages are poor. This is particularly true north of the Caltrain tracks, due to the barrier presented by the tracks and the historical large-lot industrial development of the area. Therefore, a primary goal of the planned new street and block network is to provide improved north-south access throughout the Plan area.

The Plan includes three key features to achieve this goal: 1) A new collector street known as The Loop on the north side of the tracks, 2) Improvements to Willow Avenue on the south side of the tracks, and 3) two new pedestrian /bicycle undercrossings of the tracks.

Secondary Street Network
In order to create a finer grained street-and-block framework the Plan includes a secondary network of new streets, lanes, and alleys that will provide enhanced local access and shortened travel paths to the station and commercial areas both within the neighborhood and to and from nearby areas. Based on local conditions, it may not be feasible for all secondary streets to accommodate automobiles. In these situations, bicycle/pedestrian lanes will be provided.

Parking Management
Currently, there is an overabundance of on- and off-street parking in the Plan area, which is a costly, inefficient use of resources and contributes to high auto usage and low transit ridership. The Plan therefore outlines ~~a~~ strategies~~y~~ to manage the future parking supply so that it promotes and supports transit and more closely relates to the needs of employers and residents of the area.

A key feature of these~~is~~ strategies~~y~~ is using the zoning incentives to~~the~~ reduce~~tion~~ the~~of~~ parking requirements for future development~~ to more closely relate to actual demand in this location, combined with improved parking management such as shared parking, creation of a Parking District, establishment of a Transportation Management Association (TMS) and other programs~~.

Make Lawrence Expressway a Better Neighbor
The Lawrence Expressway is a key element of the circulation infrastructure of the City. It presents, however, a great challenge to the integration of the neighborhoods in the Plan area, and, despite its transportation function, actually presents an obstacle to the ultimate success of the Lawrence Station. In September of 2014, Santa Clara County released a study (partially funded by the cities of Sunnyvale and Santa Clara) titled the “Lawrence Expressway Grade

Separation Study", with the goals of a) reducing traffic congestion on local intersections, b) reducing the barrier to east-west movement created by the existing design of the Expressway, c) better balancing vehicle access to the Lawrence Station, while minimizing conflicts with pedestrians, d) providing direct vertical access to the Lawrence Station, and e) improving through-capacity of the Expressway itself. ~~On-going study and design engineering will be needed to realize these goals.~~

4 | Neighborhood Character: Ensure the area has a character that is unique to its location while being compatible with the overall character of Sunnyvale and sensitive to existing environmental assets.

The Plan area contains a variety of neighborhoods, districts and places with differences in scale and character and varying opportunities for conservation and development. In the area south of the Caltrain tracks, the overall scale of development will change very little, with policies to protect and enhance the character and quality of existing residential neighborhoods.

North of the Caltrain tracks, the Station Area Plan envisions a future that is a departure from the existing pattern of low scale, large footprint buildings and parking lots. Reflecting the overall trend toward higher density developments for office and R&D in Silicon Valley and increasing land values, this area will be allowed and encouraged to naturally transition to a more dense urban scale. Over time, the area north of the Caltrain tracks will thus become a defined and unique regional and local urban hub, job center, and new neighborhood for urban living, served by a diverse multi-modal circulation system.

The increased development of the northern area will have little impact on the existing residential neighborhoods ~~in the Plan area~~ to the south of the train tracks adjacent to the Plan area, due to the separation created by the Caltrain tracks and the lack of residential land use adjacencies. In addition, Design Guidelines that are a part of the LSAP will allow property owners to make their own design decisions while assuring that new development meets certain standards to ensure compatibility with the city and the environment.

5 | Community Identity: Create a strong sense of place and neighborhood identity with the development of a vibrant neighborhood center.

New Neighborhood Center

An identifiable sense of place and identity within the City and the region will be established with the development of a new neighborhood center focused around the Lawrence Station and it's approaching new streets.

R~~The primary focus of r~~etail activities will be found in various locations in the Plan area ~~will be along a new north-south retail street connecting Kifer Road, in the vicinity of San Ysidro Way, to Lawrence Station on the west side of the Lawrence Expresswa~~. Retail should be located along Kifer Road, along any street that leads towards the station, along Sonora Court, and on the south side of the tracks along Reed Avenue. T~~The new street, referred to here as San Ysidro Way Extension, will form the walkable heart of the new mixed-use Transit Core subarea and will provide a venue for a wide range of pedestrian-oriented commercial and social activities that can serve the nearby mix of uses north of the station as well as the residential neighborhoods to the south, thereby creating a destination and amenity for the entire area.~~

~~The character of the street is envisioned as a walkable, mixed-use neighborhood commercial street with a scale and character similar to Santana Row in San Jose, Castro Street in Mountain View or Murphy Avenue and its surrounding district in downtown Sunnyvale.~~
hese retail areas will support existing and new residents and employees of the area.

6 | Flexibility: Allow the area to redevelop over time through a flexible system that is responsive to the goals, schedule and needs of individual business and property owners, developers, and residents.

The Lawrence Station Area Plan is designed to accommodate development according to the timing and needs of property owners and the marketplace. All land use change in the Plan area will be undertaken at the initiative and schedule of private landowners. The City of Sunnyvale has no intent to purchase land for redevelopment or force private landowners and businesses to change land use in order to meet the objectives of the Plan. Existing uses will continue to be allowed and will not be adversely impacted by the implementation of the Plan. The Plan focuses primarily on guiding the future of new development.
Implementation of the Lawrence Station Area Plan will, however, require the coordinated e orts of both the public and private sector working cooperatively to achieve a common goal. This will be achieved through the coordinated application of four general types of public and private actions:

1. Public policy and regulatory actions, primarily through updates to the General Plan and the Zoning Ordinance
2. Impact fees and assessments
3. Direct public investment in infrastructure and public/private partnerships (P3)
4. Public administrative actions

Chapter 7: Plan Implementation lists the key improvements that will be needed to achieve the goals of the Plan and the range of implementation methods and potential responsibilities that can be used to complete these improvements.

1. INTRODUCTION

This Lawrence Station Area Plan (the Plan) has been prepared in order to guide future development of a 629-acre area surrounding the Lawrence Caltrain Station in Sunnyvale, California. The project was funded in large part by a station area planning grant from the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) as part of state and regional e orts to encourage planning for a sustainable future in the Bay Area region. The Plan is guided by the MTC's Resolution 3434 Transit-Oriented Development Policy (July 2005), which includes goals for transit ridership and related supporting land uses within a half-mile radius of rail transit stations throughout the Bay Area.

"The Policy aims to capitalize on investments in new transit corridors in the region by promoting the development of vibrant, mixed- use neighborhoods around new stations. It aims to stimulate the construction of at least 42,000 new housing units along the region's major new transit corridors, helping to ease the Bay Area's chronic housing shortage and preserve regional open space, while at the same time improving the cost-effectiveness of regional investments in new transit expansions."
- MTC's Resolution 3434 Policy (July 2005)

PURPOSE OF THE PLAN

There is a growing awareness of the important role that land use plays in the success of public transportation systems. Anecdotal and empirical data indicates that without a sufficient population living and working in close proximity and easy access of a transit station, the use of the station is limited, resulting in low ridership on the overall system. Without adequate ridership, the transit system cannot achieve adequate farebox revenue, placing an unsustainably heavy burden on public subsidies to support ongoing investments in capital improvements, operations and maintenance.

The Lawrence Station is a good example of this problem. Surrounded by uses that do not support transit ridership, as well as a circulation framework that makes access for pedestrians, bicyclists and motor vehicles a challenge, the station ranked 1~~87~~th out of 29 stations in the Caltrain system for average total boardings, comprising only 1.5 percent of the system-wide total, according to the Caltrain 2010 Ridership Report. ~~Indeed, in 2011 the Peninsula Joint Powers Authority, the multi-agency owner of the system, seriously considered closing several stations, including Lawrence Station, due to low patronage.~~

Conversely, economic studies in the Bay Area in recent years indicate that proximity to an active and viable public transit facility is good for land values, the local economy and the environment. A diversity of employment and housing uses at a range of densities not only supports transit, it also supports the provision of desired retail, open space and other support uses and can encourage a lively, 24-hour community that is less dependent on the use of the automobile for daily needs.

This, then, is the Purpose of the Lawrence Station Area Plan: To establish a framework for the future development of the area, facilitated by a partnership between local residents, businesses, property owners and the City, in order to improve the relationship between transit availability and land use for the long-term development of an economically, environmentally and socially vibrant mixed-use district in Sunnyvale.

LOCATIONAL CONTEXT

The Lawrence Station Area Plan study area is situated at the southeastern edge of the City of Sunnyvale, in the heart of Silicon Valley and Santa Clara County, approximately 42 miles south of San Francisco. It lies in relatively close proximity to major transportation hubs and corridors, including US Highway 101, Interstate 280, and State Route 82 (El Camino Real), San Jose International Airport (7 miles away), freight and commuter rail corridors, VTA bus routes and other

transportation corridors. Important nearby regional centers include Downtown Sunnyvale (~~3~~ approximately 2 miles), Downtown Santa Clara (4 miles), and downtown San Jose (9 miles).

The study area is generally defined by a one-half-mile radius circle centered on Lawrence Station. Research indicates that this distance represents approximately a 10-minute walk for an average pedestrian, a threshold that pedestrians are generally willing to walk on a regular basis to access a transit station. This distance is widely recognized as a typical unit of measurement for station area planning. The one-half-mile radius contains lands in both Sunnyvale and Santa Clara with city boundaries that interlock with one another. The boundary deviates from a symmetrical circle in order to correspond to the city boundaries north of the station and to encompass a remnant agricultural parcel (the Corn Palace) in the south.

While the overall study area includes portions of the City of Santa Clara in order to ensure coordination of circulation systems and land uses between the two cities, the area specifically addressed this Plan is referred to as the "Plan area," and is limited to lands within the City of Sunnyvale, or approximately 319~~372~~ acres.

Lawrence Station is about ~~1.9~~2.0 miles east of the downtown Sunnyvale Caltrain Station and about 3.6 miles west of the Santa Clara Caltrain and Altamont Commuter Express Station (serving downtown Santa Clara and Santa Clara University).

The Lawrence Station sits ~~directly~~ below an overpass of the Lawrence Expressway. The Lawrence Expressway bisects the Plan area north-south, while the Caltrain right-of-way bisects the area east-west. This results in major barriers to north-south and east-west circulation and divides the Plan area into four nearly equal quadrants. Much of the analysis that was conducted during the planning process, as well as this Plan document, references these four quadrants, referred to as northwest (NW), southwest (SW), northeast (NE), and southeast (SE).

PLAN AREA DEVELOPMENT HISTORY

The Caltrain railroad line that currently runs from San Francisco to San Jose was built by the San Francisco and San Jose Railroad in 1863. Known as the Peninsula Commute, it was a private, for-profit commuter railroad operated by the San Francisco and San Jose Railroad, which ran between the two cities. In 1870, the rails were purchased by Southern Pacific Railroad, which continued to operate the commuter train service. Due to operating losses, the Southern Pacific Railroad petitioned to discontinue the commuter rail service in 1977. In 1980, subsidies were provided by the California Department of Transportation (CalTrans) to continue the rail service, and it was renamed Caltrain. In 1987, the Peninsula Corridor Joint Powers Board (PCJPB) formed an authority comprising the three counties of Santa Clara, San Mateo and San Francisco and their transit agencies. In 1991, the PCJPB purchased the tracks from Southern Pacific and in 1992, the PCJPB signed a contract with Amtrak as the contract operator for the Caltrain rail service.

Exactly when the Lawrence Station was built as a station is unclear; however, maps dating from 1908 show Lawrence as a station on the Southern Pacific line. Lawrence Station was most recently renovated by Caltrain in 2004.

Sunnyvale was founded at the end of the 1800s as one of several new communities that developed along the Southern Pacific line. Along with other communities in the area, Sunnyvale was once dominated by orchards and farms. As technology businesses flourished in the last half of the 20th century, the orchards gave way to industrial and business parks and residential subdivisions. Until recently, these uses have been configured almost exclusively in large, single-use districts or neighborhoods.

As shown in Figure 1.4, the majority of development in and around the Lawrence Caltrain station occurred forty or more years ago. Most of the residential neighborhoods that lie to the south of the rail line date from
the 1970s or earlier. New residential development in the Plan area since the 1970s ~~has been limited to~~includes townhouses fronting Aster Avenue, ~~and~~ a multi-family rental project just southeast of the station in Santa Clara at the corner of French and Agate Streets, and a mixed use project on Monroe Street at Lawrence Expressway consisting of 825 apartment units and 43,849 square feet of commercial space.

EXISTING CONDITIONS

Today, the area north of the rail line is dominated by industrial and commercial uses on large parcels. Many of these date from the early years of Silicon Valley growth and consist of one-story structures. ~~East of Lawrence Expressway, more recent~~Recent development has occurred throughout the plan area, including new office and R&D uses and a large Costco store. Parking is typically in large surface lots. Roadways are wide and pedestrian and bicycle facilities are generally lacking.

South of the rail line, the Plan area consists primarily of low-density neighborhoods consisting of single-family detached homes and areas of multi-family apartments and condominiums.

The Plan area contains few distinguishing natural physical characteristics and is generally at, with elevation relief provided only by the overpass of Lawrence Expressway at the Caltrain tracks. Calabazas Creek, which flows south-to-north to the San Francisco Bay, runs in a concrete channel along the eastern edge of the Plan area. It has little to no vegetation within its approximately 65 foot right-of-way. The El Camino Storm Drain Channel runs through the residential neighborhoods south of the station and along the south edge of the rail tracks before draining into Calabazas Creek. This channel, though mostly concrete, has stretches of grass and earthen banks along its 40 to 45 foot right-of-way.

The entire Plan area has no public parks or open space and very little natural vegetation. However, the streets and gardens of ~~the existing residential areas and~~ some of the industrial areas contain an abundance of mature planted street trees and ornamental plantings, including a dramatic stand of Redwoods along Sonora Court one block north of the station.

RELATION TO OTHER REGULATORY AND POLICY DOCUMENTS

The vision and policy recommendations contained in this plan have been coordinated with preparation of other Sunnyvale planning e orts including an update of the Land Use and Transportation Element (LUTE) and the Sunnyvale General Plan, and revisions to other regulatory documents.

SUSTAINABILITY IN THE LAWRENCE STATION AREA PLAN

Sustainable Development is generally defined as that which meets the needs of the present without compromising the ability of future generations to meet their own needs. It has three major components: environmental (making the best use of our resources), social (improving the quality of life for residents), and economic (spurring economic growth).

The City currently has several policies and plans in place to address sustainability. A key document the City uses to address sustainability issues is the Climate Action Plan (CAP). The CAP contains hundreds of current and future policies related to City facilities and infrastructure, development policies, and operational goals.

The City of Sunnyvale Consolidated General Plan also contains numerous goals and policies that address sustainability. These include goals and policies related to land use and transportation, heritage preservation, housing, environmental management, air quality and solid waste.

In addition, the City adopted its rst Green Building Program for new development and alterations to existing buildings in 2009. The Green Building Program has been updated several times since its adoption, and continues Sunnyvale's commitment to being a leader in sustainable development.

The Lawrence Station Area Plan continues the City's commitment to sustainability. Environmental, social, and economic sustainability goals and policies are embedded throughout the Plan in all topical areas of this report: land use, circulation and parking, utilities and public services, and urban design. A particular focus has been placed on environmental sustainability; these goals and policies are indicated with the following symbol.

You will see this symbol throughout this document. Where it occurs indicates a goal or policy that exhibits the City's commitment to environmental sustainability.

PLANNING PROCESS AND COMMUNITY INVOLVEMENT

The preparation of the Lawrence Station Area Plan (LSAP) took place in two distinct phases. Throughout the two-phase process, extensive input was received from the overall Sunnyvale community, business and property owners, specific focus groups, the Sunnyvale Planning Commission, the Sunnyvale City Council, and, during Phase II, a Citizens Advisory Group (CAG). Important input was also provided in regular meetings of a Technical Advisory Group (TAG) comprised of representatives from the City of Sunnyvale, City of Santa Clara, County of Santa Clara, SamTrans, Valley Transportation Authority (VTA), and representatives from the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

LSAP PHASE I

The Sunnyvale City Council approved a feasibility study for the Lawrence Station Area Plan in May 2009, which subsequently led to receipt of the MTC/ABAG grant to prepare a Phase 1 study. This first phase of the Plan preparation process was initiated in December 2010. Early in the process, several community meetings were held to gain an understanding of the community's attitudes and ideas regarding the station area. The meetings included a sharing of information related to existing conditions, related plans and projects, and relevant regulatory considerations.

The first Community Workshop was held in February 2011 and included a hands-on visioning e ort to understand the needs and goals of residents and businesses in the area. Community meeting attendees met in small groups which allowed them to discuss issues in the area that were most relevant and meaningful to them and prepare illustrative plan maps for the Plan area.

Examples of work products from attendees at Community Workshop Number 1 are shown in Figures 1.5 and 1.6. Additional issues noted by attendees are summarized below:

Condition of Sidewalks and Pedestrian Crossings

- There is a pervasive lack of sidewalks or poor sidewalk conditions in virtually all parts of the study area including near the Lawrence Caltrain station, where good access is particularly important.
- It is difficult for the neighborhoods south of the station to reach the station by any mode (walking, bicycling, on transit or by car).
- The width and configuration of streets in the vicinity of the station results in high traffic speeds and unsafe pedestrian conditions.

Lack of Bicycle Facilities

- Better bicycle access to the station and additional bicycle parking is needed.
- Improved bicycle facilities are needed in the vicinity of the station that will connect to the regional system of lanes and trails. Adequate bicycle parking must be provided at the station and in conjunction with development of any kind.

Insufficient Open Space

- The study area has a significant lack of open space in the form of parks or recreation facilities.
- The residential neighborhoods to the south of the station have no convenient open space within a reasonable distance.

Lack of Neighborhood-serving Retail

- There are no retail services in the station area or nearby to meet daily resident needs.
- Grocery stores are located at a signi cant distance away.
- The retail in the area requires auto access; there is no retail suitable for walking (e.g., corner store).

Land Use

- Retain small businesses in area wherever possible.
- Additional residential uses north of the station would offer opportunities for a more active community and for a diverse population such as seniors.

Parking Concerns

- Transit riders park on neighborhood and business streets near the station.
- Provide adequate parking for future development.

The first Community Workshop was followed by an outreach meeting with business and property owners, held in February 2011 in order to understand the needs and concerns of business and property owners in the Plan area.

Following these beginning outreach meetings, initial concepts were prepared for the future of the Plan area in an iterative process that included input and review from the TAG, City sta and the Consultant Team.

These concepts included a preliminary circulation framework and three alternative conceptual land use plans, each of which emphasizes a di erent land use pattern:

Concept A: Residential Emphasis
This land use concept envisioned almost exclusively residential uses throughout the entire Plan area, with support services such as retail, restaurants, and small offices located to serve ~~the new and existing=~~ residential neighborhoods.

Concept B: Office/Research and Development (R&D) Emphasis
New development under this concept emphasized the creation of more intensive employment uses. Land uses north of the Caltrain tracks were almost exclusively office and R&D, with a limited amount of support services. ~~South of the tracks, all existing residential areas were retained and protected.~~

Concept C: Mixed-use Development
This land use concept combined the urban residential neighborhood qualities of Concept A with the job-creation qualities of Concept B in all new development areas. ~~Like the other concepts, all existing residential areas were retained and protected.~~

For a more complete description of the alternatives prepared under Phase One of the Lawrence Station Area Plan, see Appendix A of this document as well as the document from Phase One titled “Lawrence Station Area Plan,” dated August 2011.

COMMUNITY REVIEW OF ALTERNATIVE CONCEPTS
A second Community Workshop was held in May 2011 to discuss the preliminary circulation framework and the three alternative conceptual land use plans in an open house format. Of the three concepts, Concept C: Mixed- use Development, received the most favorable comments from members of the public who attended the Workshop although there was lesser support for the other two concepts as well.

This meeting was followed by a second business outreach meeting, held in June 2011, to discuss the concepts. During this meeting, business and property owners expressed support for the Mixed-use Development Plan, while also wanting to ensure that the changes in land use designations will not require changes to their business operations.

COUNCIL AND PLANNING COMMISSION FEEDBACK
Subsequently, on July 26, 2011, a joint study session and public hearing of the Planning Commission and the City Council was held to update City leadership on the research completed and share the findings of the community outreach process to date. During the meeting, a variety of issues and comments were raised. While there was strong support for enhancing residential opportunities and amenities and increasing accessibility to the station, there were mixed opinions as to whether one land use or another should predominate.

PHASE II
The second phase of the planning process refined the Preliminary Circulation Framework and Conceptual Land Use Alternatives and resulted in selection of a preferred plan, which is the basis of the plans, policies, and guidelines of this Plan document.

At the beginning of Phase II, in August, 2012 a Community Advisory Group (CAG) was established. The CAG, which was appointed by the City Council, included 19 members (and 3 alternates), and represented a broad spectrum of the Sunnyvale community, including neighborhood residents, business and property owners, and representatives from the Sustainability, Housing and Human Services, and Planning Commissions. Over the course of the Phase II planning process, the CAG met 10 times and devoted numerous hours to discuss options and review concepts, policies, guidelines and implementation strategies to shape the future of the area surrounding the station.

One of the first tasks the CAG undertook was to articulate four key goals which were intended to guide the selection of a preferred alternative and other details as the planning process moved forward:

Goal 1: Increase transit ridership by adding more jobs and residents in the area

Goal 2: Increase transit ridership by adding more jobs and residents in the area

Goal 3: Provide transit-oriented development

Goal 4: Ensure quality development

The CAG also articulated the following vision statement:

> ***"The Lawrence Station Area will achieve its full potential as a local residential and employment center where people can live, work, shop and play in a vibrant, walkable environment that takes advantage of its proximity to transit. Towards this end, the plan will establish land use and parking policies, access and circulation, pedestrian/ bicycle and streetscape improvements, urban design guidelines, and infrastructure improvements through an extensive and inclusive public outreach and stakeholder process."***

Subsequently, the CAG engaged in a process to select a preferred land use concept from the three alternatives prepared during Phase I. After reviewing the three alternatives, the CAG

selected Concept C: Mixed-use Development as the appropriate direction for the long-term evolution of the Plan area to meet their stated goals. The CAG further refined that concept by proposing a "flexible" mixed-use designation. The intent is to allow a mix of uses throughout the Plan area rather than in specifically assigned areas.

The CAG noted the benefits associated with having a mix of uses – jobs, residential, and retail and service – in proximity to one another, so that no single use would dominate and the mix of uses would help to ensure neighborhood vitality and a critical mass of activity. The CAG also noted the current lack of services and amenities and the opportunity for new land uses in the study area to mitigate this problem. With this direction, various draft elements of the Lawrence Station Area Plan, such as design guidelines, cost analysis and implementation strategies were prepared.

Two additional community meetings were held in the second phase of the planning process to gain further input from Sunnyvale residents, businesses and property owners. These meetings were supplemented with periodic updates with local property and business owners to solicit their direct input and reactions to the emerging concepts.

In February 2013, the Sunnyvale Planning Commission and City Council voted to accept the CAG's recommendation of a flexible mixed-use plan for the area. Subsequently, at its meeting of June 19, 2013, the CAG recommended that a strong incentive-based program be established in order to implement the Plan.

Key priorities should include the following:

- Mixed use. A mix of uses should not be required on any specific property or area, but it should be a high priority of the incentive program.
- The Loop Roadway. Prioritize the provision of incentives for property owners who provide right-of-way and improvements for this key roadway.
- Affordable Housing. Place a high priority on incentives for property owners who provide affordable housing beyond current minimum City and State requirements.

The Plan accepted by the City Council, together with the implementation recommendations of the CAG, provides the basis for the goals, policies and guidelines described in this document. In addition, this Plan is accompanied by a Program Environmental Impact report (EIR), prepared in accordance with the California Environmental Quality Act (CEQA), which evaluates potential environmental impacts of the plan and describes potential mitigations that may be needed.

2. VISION

"The Lawrence Station Area will achieve its full potential as a local residential and employment center where people can live, work, shop and play in a vibrant, walkable environment that takes advantage of its proximity to transit. Towards this end, the plan will establish land use and parking policies, access and circulation, pedestrian/ bicycle and streetscape improvements, urban design guidelines, and infrastructure improvements through an extensive and inclusive public outreach and stakeholder process."
- Lawrence Station Area Plan Citizens Advisory Group (CAG)

The Vision for the Lawrence Station Area Plan area was established based on the goals defined by the CAG and the TAG, as well as input from the public, City boards and commissions, and the City Council. The overall Vision serves as the basis for all elements of the Plan and its implementing policies. The seven major Vision goals follow.

V-1 LAND USE DIVERSITY

Promote a diversity of land uses and densities that will support transit usage and neighborhood services.

The Plan will guide the evolution of the area to become a new urban neighborhood in Sunnyvale with a mix of both employment and residential uses at a variety of densities. The mix of uses will allow people the opportunity to access their homes, jobs, recreational facilities and neighborhood goods and services within close proximity of one another, reducing their dependence on the automobile.

Densities will vary across the Plan area, with the ~~ranging from the existing residential neighborhoods, which will be protected, to~~ higher-density residential and employment uses near the Lawrence Station. The range of densities will allow a full range of housing options at all levels of affordability. It will also allow variety in business and job opportunities and provide a sufficient population base to support transit as well as provide critical mass to support neighborhood services and amenities such as retail, open space and recreational facilities.

V-2 DENSE STATION AREA DEVELOPMENT

Locate highest intensity development closest to Lawrence Station.

The higher employment and residential populations that will result from locating the highest intensities of development adjacent to Lawrence Station will support transit ridership and energize station area public spaces. This will further regional goals for housing and employment while also capitalizing on the Lawrence Station, an existing built asset that is currently underutilized. It will also lessen the need for increased expenditures on regional highways and associated increases in greenhouse gas emissions and other adverse environmental impacts related to heavy reliance on automobiles in the overall transportation system.

The higher populations will also support commercial establishments near the station, which will serve not only the needs of the new population, but will also help meet the needs of existing residents and workers in nearby neighborhoods.

V-3 CONNECTIVITY

Improve connectivity for all modes of travel.

Over time, a new framework of streets, blocks and paths will be created that allows access throughout the Plan area for pedestrians, bicyclists, transit vehicles, automobiles and service vehicles. This new framework will be generally in the form of an urban grid, derived from the existing developed grid of the area and scaled to allow efficient and economical development of a variety of land uses and densities. It will be designed to facilitate easy access to retail goods and

services, transit, and open space amenities for residents, workers and visitors with minimal need for use of the automobile.
A particularly important component of this improved connectivity is the provision of improved north-south connections. The new framework of streets and paths emphasizes improved north-south connectivity, both to provide access to Lawrence Station as well as to link the neighborhoods on both sides of the tracks together and to improve access to regional transportation facilities such as the Central Expressway.

V-4 NEIGHBORHOOD CHARACTER

Ensure the area has a character that is unique to its location while being compatible with the overall character of Sunnyvale and sensitive to existing environmental assets.

The new framework of streets and blocks, based on the existing orthogonal development pattern of the area, will help ensure that future development of the Plan area is consistent with the development patterns of the surrounding neighborhoods and Sunnyvale as a whole. Additionally, unique existing physical features of the Plan area, such as the Redwood street trees on Sonora Court and the Calabazas Creek channel will be protected and enhanced, thereby contributing to the unique character and fabric of this particular neighborhood.

New development will also be planned to make this area unique in the City by enhancing the quality and character of the neighborhood. While greater density and land use diversity is envisioned in new development areas, buffer zones, setbacks, building heights, sun, shade and wind patterns, landscape and open space and other physical design elements will be an essential ingredient of the design and review process, consistent with the guidelines established by this Plan.

V-5 COMMUNITY IDENTITY

Create a strong sense of place and community identity with the development of a vibrant neighborhood center.

With the development of a more intensive, mixed-use environment with added employment and households, there is a new opportunity to create a community with an identifiable sense of place and identity. The focus of this will be an active “main street” commercial area with a strong pedestrian orientation.

Somewhat like Murphy Avenue in downtown Sunnyvale, the area will be the center of the community, providing an active, mixed-use zone where offices or residential uses may be found over ground-level shops or dining. Wide sidewalks, low vehicular travel speeds, on-street parking and proximity to the Caltrain station will allow access to all modes of travel. Located in the center of the Plan area near Lawrence station, surrounded by walkable residential and employment uses, the new street will be active throughout the day and evening, providing much needed goods and services as well as a focal point for the neighborhoods around the station.

V-6 FLEXIBILITY

Allow the area to redevelop over time through a flexible system that is responsive to the goals, schedule and needs of individual business and property owners, developers, and residents.

The Plan is a long-range vision for change over time. It will be implemented through the coordinated e orts of the City of Sunnyvale working in partnership with businesses, property owners, developers and residents. Change will occur according to the timing and needs of property owners and the marketplace. This flexible, market-based approach will help ensure a diversity of land uses and densities are developed while also making certain that the process is

orderly and that appropriate uses are developed in appropriate locations and at densities that are appropriate to meet the goals of the City as a whole and the neighborhood in particular.

The key to the success of such a flexible planning and development approach will be the establishment of two new primary regulatory tools, which will encourage development according to the vision of the Plan: 1) establishment of minimum densities in specific areas, particularly near the Lawrence Station, and 2) a system of development incentives and bonuses that will reward property owners in specific target areas who choose to go beyond minimum development requirements and provide the mix of uses, amenities and infrastructure necessary to achieve the vision of the plan.

V-7 SUSTAINABILITY

Re-develop the area in a manner that is environmentally, economically, and socially sustainable.

The City currently has several policies and plans in place to address sustainability, including the Climate Action Plan (CAP), the City of Sunnyvale Consolidated General Plan, and the Green Building Program. The Lawrence Station Area Plan embraces a similar commitment to sustainability.
Diversity is the key to the long-term sustainable development of the Plan area. Diversity of land use will allow flexibility in response to varying market conditions over time as well as allowing access to a range of job and housing opportunities. Diversity of transportation options will reduce dependence on a single mode of transportation and provide feasible long- term alternatives in response to fuel shortages, climate change and other unforeseen challenges.

By its nature, the Lawrence Station Area Plan has its roots in sustainability, as its focus is to enhance utilization of an existing commuter rail line: the Lawrence Station Caltrain station. Heavy dependence upon the automobile will decrease as future development in the Plan area provides a mix of uses to allow people to live, work, shop and relax in the area without needing an automobile for access. Increasing walking and bicycling opportunities also furthers the sustainability goal by providing a diversity of transportation choices.

Environmental, social, and economic sustainability goals and policies are embedded throughout the plan in all topical areas of this report: land use, circulation and parking, utilities and public services, and urban design. A particular focus has been placed on environmental sustainability; these goals and policies are noted with the following symbol.

3. LAND USE

INTRODUCTION

The land use plan for the Lawrence Station area, illustrated in Figure 3.2, defines a land use pattern and allowable development densities that will result in a diverse neighborhood with an active daytime and nighttime environment that supports transit ridership both outbound and inbound of the Lawrence Station. It is a mixed-use plan, conceived to result in a new neighborhood with a variety of housing types as well as office/research and development (R&D) uses that will provide significant employment. And, it is a flexible plan, allowing business and property owners to play a central role in its implementation over time and according to their specific needs and circumstances.

Mixed-use refers to development that combines different types of land uses—usually homes, shops, offices and community facilities—within easy walking distance. Within that broad definition, mixed-use development can take many forms: it may be vertical (within the same building). For example, the traditional office over the store is vertical mixed-use. Mixed-use can also be horizontal, such as office and residential in different buildings but on the same block or adjoining blocks. It may be low-, medium- or high-density; it may combine just two uses or several; and it may be located near a transit station (in which case it is also known as transit-oriented development) or accessible primarily by other means.

Mixed-use development is an old concept that is being re-discovered and is gaining renewed popularity across the country. Through the early 20th century, before the widespread advent of zoning, most neighborhoods featured a diversity of land uses, and housing above stores was common. These development patterns can still be seen in older, traditional neighborhoods. Zoning developed as a response to rapid industrialization and urbanization, at a time when factories and many commercial activities were noisy, odorous or hazardous. In its early stages, zoning focused on separating and buffering housing from industrial and commercial uses, to protect residents from polluting, noxious and harmful activities.

While many industrial uses still need to be segregated, most commercial activity today is benign or easily controlled. Retail, restaurants and offices can be safely integrated with housing. Indeed, there are many advantages to doing so. Compared to isolated and sprawling suburban development, mixed-use makes for more vibrant, active and convenient neighborhoods, and gives people more opportunities to socialize and work near home. Equally important, when properly planned, mixed-use reduces dependence on driving and increases transit usage, thereby optimizing the return on transit investments, reducing the rise of greenhouse gas emissions and reducing the need to build ever-more highways and parking lots.

Flexibility in this land use plan means that properties north of the Caltrain Station and portions of the Calstone/Peninsula Building Materials site just south of the station have the option to develop office/R&D or residential uses. This provides enormous advantages to property owners and developers to respond to market conditions as they may evolve and to tailor uses and densities to particular locations within the Plan area. ~~This same flexibility is not the same in the existing residential neighborhoods, where the intent of the Plan is to protect and enhance these areas.~~

LAND USE CHALLENGES

Several existing land uses in the Plan area present challenges for a vibrant, transit-oriented neighborhood. Most existing land uses and densities do not support transit. Today there is a preponderance of low-density, light industrial, one- and two-story uses north of the railroad tracks. These low intensity employment uses are surrounded by surface parking lots. The area south of the tracks is dominated by single-family and some low-density multi-family residential neighborhoods, which have poor access to the station.

While the Plan area currently contains abundant square footage of retail uses, generally they are poorly located, inaccessible to pedestrians, and of a type that is inconsistent with the needs of the existing office/R&D uses, neighborhoods or transit users.

Although it is currently unknown how many properties in the area would redevelop as part of the plan, there will surely be properties and uses that will remain. A key aspect of the plan will be to allow existing properties in the Plan area to remain and thrive. Examples include Costco, Intuitive Surgical, and the industrial condominium complex on Kifer.

The Calstone/Peninsula Building Materials site is the only remaining manufacturing/heavy industrial use on the south side of the Plan area. Its location adjacent to residential uses results in noise and traffic impacts. It is also a poor use to be located directly adjacent to a commuter transit facility.

LAND USE

Land Use Goals
LU-G1 Protect existing residential areas south of the railroad tracks.

LU-G2 Allow existing uses in the Plan area to remain as legal, conforming uses with the ability to grow and expand. These uses, however, should be discouraged from using hazardous materials in their operation, especially when located adjacent to residential uses.

LU-G3 Promote a mix of employment and residential uses.

LU-G4 Although the plan allows for flexible use of property, a balance should be found to ensure the mix of uses remains diverse at all times.

LU-G5 Provide a mix of uses within the Plan area that encourages transit ridership, creates a neighborhood of 24-hour activity and supports the provision of amenities such as open space and support services such as retail.

LU-G6 Provide a flexible land use pattern that provides the desired balance of employment and residential uses in order to create an active daytime and nighttime environment.

LU-G7 Incorporate land use flexibility to respond to variable market conditions, while promoting a blend of employment, residential and retail uses.

LU-G8 Provide amenities and services for existing and new neighborhoods.

LU-G9 Provide sufficient development intensity to allow the feasible development of associated amenities (such as open space) and support services.

LU-G10 Maximize development intensities in order to support transit usage.

LU-G11 Respect the scale and character of the existing residential use

Land Use Policies
LU-P1 Buffer / transition new development located adjacent to existing residential neighborhoods through site planning, land use and design strategies.

LU-P2 Allow existing businesses to remain and prosper as legal conforming uses.

LU-P3 Allow transition to higher density transit-supportive uses as opportunities arise through turnover of businesses or property ownership.

LU-P4 Establish appropriate levels of development for employment and residential uses to ensure a balance exists in the plan area. The City Council should review the thresholds for each use type as redevelopment occurs to ensure a balance remains.

HOUSING

Housing in the area will be allowed in all areas of the plan, as stand-alone residential or a part of a mixed use project. The residential components of mixed-use projects should be planned to maximize privacy for the residents while taking advantage of new and existing employment centers in the area.

AFFORDABLE HOUSING

An Affordable Housing and Anti-Displacement Strategy was prepared to assess the potential need for affordable housing in the Plan area and recommend strategies to meet the City's affordable housing goals. The key findings and recommendations are listed here. For the full report, see Appendix C.

The City's existing affordable housing policies include a 12.5 percent affordability requirement on for-sale projects, current consideration of a nexus-based affordable housing fee for rental projects, and a plan to study the potential enhancement of the Housing Mitigation Fund program applied to higher density office/industrial development

The Regional Housing Needs Allocation (RHNA) is a program requirement established by the ABAG that sets goals for future housing in accordance with State law. Mandatory RHNA guidelines suggest that over 40 percent of new housing in Sunnyvale should be affordable at Low and Very-Low Income levels. Current Plan area demographics show similar income distribution and housing needs. However, requiring developers to provide affordable housing comparable to the RHNA targets is infeasible, as it creates an extreme cost burden that would eliminate the financial incentive to construct new housing.

In order to provide developers with a financial incentive to produce more affordable housing than is required under current City policy, benefits that maintain profitability through added value or reduced costs will be needed. Therefore, this Plan includes a variety of affordable housing strategies, including the following. For more detailed information, see Chapter 7: Plan Implementation.

- A local density bonus program that provides additional density (i.e., market-rate units) in exchange for additional affordable units for both for-sale and rental projects.
- Parking requirement reductions for all projects.
- Waiving certain City fees for new housing developments that pursue the added density, or simply deferring the payment of such fees until later in the development process.
- Provide financial support for the construction or renovation of units by nonprofit builders and apartment operators by prioritizing the use of local resources such as Housing Mitigation Fund fees in the Plan area.
- Procedurally support the construction or renovation of units by nonprofit builders and apartment operators. Facilitate providing affordable housing through the state density bonus law and assert that development projects reaching lower income levels through the use of tax credits and similar resources are expected and encouraged.

ANTI-DISPLACEMENT

To avoid displacement of existing lower-income residents, no upzoning or increases in allowable densities on sites currently occupied by housing will occur. Retaining existing density allowances will minimize the financial incentive to demolish and replace existing units to achieve higher property values, thus minimizing the concern that existing residents will be physically displaced by new development.

Housing Goals
H-G1 Provide sufficient housing in the Plan area to support an increase rail transit ridership.

H-G2 Provide a range of housing types in the station area to provide for all income groups and lifestyles.

H-G3 Encourage and support development of affordable housing in the Plan area.

Housing Policies
H-P1 Encourage a diverse mix of housing types, including ownership, rental, affordable and housing for seniors.

H-P2 Prioritize the provision of affordable housing in the Lawrence Station area.

H-P3 Provide City-based incentives to promote development of affordable housing.

RETAIL

Retail development is an important component of the plan area in order to serve employees and residents of the area. Retail components can include restaurants, stores and hotels. Sonora Court and the area near the station provide excellent opportunity locations for ground floor restaurants and retail uses in order to take advantage of the tree-lined street and proximity to the station.

Retail Goals
R-G1 Encourage a variety of retail uses.

R-G2 Provide retail that supports the needs of surrounding neighborhoods.

R-G3 Do not encourage regional-serving retail.

R-G4 Provide retail that is convenient and accessible to pedestrians and transit users.

R-G5 Do not encourage auto-oriented and auto serving retail.

Retail Policies
R-P1 Concentrate retail uses closest to the station in order to energize the station area.

R-P2 Encourage the development of restaurant uses on Sonora Court.

INDUSTRIAL

The industrial users that exist in the Plan~~plan~~ area are an important part of the city, and ~~should be~~are allowed to maintain the business and expand as necessary. Care should be taken, however, to ensure industrial materials, operations and work hours are compatible with the new uses as the area redevelops to more transit-oriented mix of uses

Industrial Goals
I-G1 Allow existing industrial uses to remain in the area, but ensure materials used, operations and work hours are compatible with nearby residential users.

OPEN SPACE AND RECREATION

Parks and open space are essential amenities for residents and workers that provide breathing room and recreational opportunities in a built urban environment. Its uses can include active and passive recreation, wildlife habitat, food production, and simple visual relief.

The Plan area contains no improved open space available for public use. Open space available for public use is only found outside the study area at Ponderosa Park and Elementary School and in Santa Clara at Santa Clara Christian School.

Visual open space and landscape improvements are found in various areas throughout the Plan area including the landscaped embankments of the Lawrence Expressway, within the Calabazas Creek and El Camino Drainage channels, the attractive mature Redwood plantings on Sonora Court, the mature street trees along Kifer Road and the mature landscape of the existing neighborhoods south of the Caltrain tracks. However, none of these landscape improvements provide usable open space that is available for public use.

Open Space Goals
OSG-1: Establish a system of parks and public spaces connected by green corridors and linear parks that serve and connect both new residential development and new non-residential development.
OSG-2: Provide open space within a ve- to ten minute walk of all residents and employees.

OSG-3: Connect open space areas to local and regional bikeways and trail networks to the greatest extent possible.

Open Space Policies
OSP-1: Strive to provide a total of 32.5-39.0 acres of new open spaces and plazas open to the public throughout the Plan area.

OSP-2: Utilize the El Camino Drainage Channel and Calabazas Creek corridors to create new linear open space connectors available to the public.

OSP-3: Improve the following public street corridors as Green Streets as linkages in the open space connector system.

- The Loop road
- Sonora Court
- Kifer Road
- San Ysidro Way Extension ~~(Retail Street)~~
- Willow Avenue

OSP-4: Provide pedestrian and bicycle amenities on all Green Streets, including abundant landscaping, Class I or Class II bicycle facilities, lighting and intersection amenity and safety improvements.

OSP-5: Locate all new dedicated open space to be adjacent to, and accessible from, the backbone open space system of linear parks and Green Streets.

OSP-6: Preserve and protect the existing mature street trees on Sonora Court (Redwoods) and Kifer Road.

OSP-7: Prepare a comprehensive maintenance program for all open spaces, plazas, and landscape areas with defined responsibilities for public and private stakeholders in the Plan area.

LAND USE CLASSIFICATIONS

The Land Use Plan (Figure 3.2) designates twelve land use categories for the Plan area, four of which are exclusively residential uses, two are exclusively employment uses and six are mixed-use designations. Several of these categories are existing land use designations already in use by the City of Sunnyvale in the existing neighborhoods within the Plan area. Others are existing land use designations available in the City of Sunnyvale General Plan and Zoning Ordinance, but not previously applied in the Plan area. These areas will require a change of zoning in order to be

compliant with the Plan. Still others are new land use categories that do not currently exist within the Sunnyvale General Plan and Zoning Ordinance. These will require the drafting of new land use designations in the General Plan and Zoning Ordinance as well as a change of Zoning for the applicable properties in order to conform to the Station Area Plan.

The land use classifications in this section represent City of Sunnyvale policy and are intended to be broad enough to allow flexibility in implementation, but specific enough to provide sufficient direction to carry out the Station Area Plan. In addition to the direction related to uses provided here, public uses, including parks, government offices, police and re station, and public schools, are permitted in all land use classifications, subject to environmental review and City approval. Table 3.1 describes the densities associated with these land use designations, including densities driven by incentives.

MIXED-USE TRANSIT CORE

Properties designated Mixed-use Transit Core are ~~generally~~ located north of the tracks within ¼-mile of the Lawrence Station, a walk of approximately 5 minutes or less. Because of this proximity to the station and commensurate abundant transportation access, the highest minimum density is required for ~~intensities of~~ future development in the entire Plan area ~~are allowed in this classification~~.

Office, research and development (R&D), and residential uses are ~~all~~ allowed in this classification. Retail uses are also allowed and encouraged in this area in order to create a critical mass of successful retail activity. Uses may be configured as vertical mixed-use, such as with retail under several floors of residential or office, or as single use buildings or parcels.

Residential
Minimum density: 36 dwelling units per acre
Maximum density: 68 dwelling units per acre with incentives

Office/R&D
Minimum density: ~~.5~~.35 FAR
Maximum density: 1.5 FAR with incentives

Retail
Allowed and encouraged. No minimum or maximum densities.

MIXED-USE TRANSIT SUPPORTING NORTH

Areas designated Mixed-use Transit Supporting North fall within approximately ¼- mile of the station, or within a walk of 10 minutes or less. Under this classification, required minimum densities for future development are slightly lower than in the Mixed-use Transit Core, but maximum allowable intensities are equal to the Transit Core. A mix of land uses, including office, research and development, and residential uses are allowed and encouraged in this land use classification. Retail uses are not allowed, in order to avoid dispersal of retail throughout the station area and thereby reducing the feasibility of a critical mass of retail activity in the Mixed-Use Transit Core area.

Residential
Minimum density: 24 dwelling units per acre
Maximum density: 68 dwelling units per acre with incentives

Office/R&D
Minimum density: ~~.5~~.35 FAR
Maximum density: 1.5 FAR with incentives

Retail
Allowed and encouraged. No minimum or maximum density.

MIXED-USE TRANSIT SUPPORTING SOUTH
The Mixed-use Transit Supporting South designation applies to the existing Calstone/Peninsula Building Materials site that lies directly south of Lawrence Station and the rail tracks. These parcels face the recently constructed Aster Avenue townhomes to the west and the existing multi-family apartments to the north. New development must therefore respect the scale and character of these existing residential uses. As a result, the allowable maximum densities are slightly lower than those found north of the station where there are no immediate residential neighbors. Retail development, as part of mixed-use, is allowed and encouraged along the Willow Avenue frontage.

Residential
Minimum density: 24 dwelling units per acre
Maximum density: 54 dwelling units per acre with incentives

Office/R&D
Minimum density: .35 FAR
Maximum density: 1.0 FAR with incentives

Retail
Allowed and encouraged. No minimum or maximum density.

OFFICE/R&D (SINGLE USE)
The Office/R&D designation applies to properties that lie beyond mile of the station ~~on the far eastern edge~~east of Calabazas Creek of the Plan area in Sunnyvale. Here it is not anticipated there will be demand for a mix of uses. The office/R&D designation will allow this zone to transition over time from the lower intensity industrial uses to somewhat higher intensities of the same use.

Office / R&D
Minimum density: ~~.35 FAR~~N/A
Maximum density: .5 FAR (no incentives available)

OFFICE/RETAIL
The office/retail land use designation is limited to one small area south of the station near the intersection of Lawrence Expressway and Reed and Willow Avenues. These parcels are separated from the nearby residential neighborhoods and are immediately adjacent to the expressway. This location is not optimal for residential development due to its close adjacency to the Lawrence Expressway and major arterial streets. In addition, with potential plans for the improvement of the Lawrence Expressway, the area is not an appropriate location for residential which may be subject to dislocation if improvements to the Expressway are undertaken. However, the area is a convenient location for local-serving retail services and office/ R&D uses.

Office/Retail
Minimum density: .5 FAR

Retail
Maximum density: .25 FAR

HIGH-DENSITY RESIDENTIAL (SINGLE USE)
The high-density residential land use designation is found only on two parcels on Willow Avenue, south of the Caltrain tracks. These parcels are surrounded by residential uses to the west and north, which consist of multi- unit residential areas. Therefore, only residential uses are allowed in this area.

Residential
Minimum density: 24 dwelling units per acre
Maximum density: 54 dwelling units per acre with incentives

~~**RETAIL MIXED-USE OVERLAY (STREET FRONTING RETAIL)**~~

~~This land use designation establishes a mandatory pedestrian-oriented retail category that requires retail development to be local-serving, oriented to pedestrians, and facing the street at ground-level. Retail uses may be in single use low-rise buildings or in vertical mixed-use buildings containing either office/R&D, residential or parking in the upper floors.~~

~~Properties with this land use designation are located only in close proximity to the Caltrain station west of Lawrence Expressway, both north and south of the tracks in the Mixed-use Transit Core and Mixed-use Transit Supporting South areas. The intent is to ensure a critical mass of retail activity that supports local neighborhood needs and is compatible with the pedestrian- oriented nature of the area surrounding the Caltrain station. This retail zone could resemble Murphy Avenue in downtown Sunnyvale, with its mix of local restaurants and businesses, while also differing in that ground floor retail uses will be located in buildings of considerably higher density.~~

~~This is a mandatory land use in the areas designated in the Land Use Plan. Therefore, there are no minimum or maximum density requirements. Square footage of required retail under this category shall be determined according to form-based design criteria. See Chapter 6: Urban Design for further discussion.~~

	Office/R&D		Retail	Residential		Industrial
Land Use	**Minimum density**	**Maximum density with incentives**		**Minimum density**	**Maximum density with incentives**	
Mixed-use Transit Core (1/4 mile radius)	*0.7 FAR*	*1.5 FAR*		*36 Dus*	*68 Dus*	
Mixed-use Transit supporting North (1/2 mile radius)	*0.5 FAR*	*1.5 FAR*		*24 Dus*	*68 Dus*	
Mixed-use Transit supporting South	*0.35 FAR*	*1.0 FAR*		*24 Dus*	*54 Dus*	
Office/R&D single use	*0.35 FAR*	*~~N/A~~ 0.50 FAR*				
High-density Residential- two parcels in the southwest				*24 Dus*	*54 Dus*	
Office/Retail (on Reed & Willow)	*0.5 FAR*		*0.25 FAR*			
M-S/LSAP (east of Calabazas Creek)	*N/A*	*0.60 FAR*				

LOW DENSITY RESIDENTIAL (EXISTING) - NO CHANGE
This land use designation is comprised of low density, single-family detached residential neighborhoods with densities that range from 0 to 7 dwelling units per acre. This designation corresponds to the existing R-O and R-1 designations in the Sunnyvale Zoning Code. It is essentially a single-~~-~~use designation, meaning that only low density residential and associated land uses such as churches are allowed in the areas so designated. All of the areas in the Plan area with this designation are already existing and built- out according to this land use category. Generally, they are located in the southwest quadrant of the Plan area and exist as attractive, mature low- density neighborhoods with wide, shaded streets. As noted throughout this document, no land use changes are contemplated in these areas and they will remain as currently planned and zoned. Minor improvements in these areas, discussed in the Circulation and Parking chapter of this report, will primarily be oriented to improving pedestrian and bicycle access and safety.

LOW MEDIUM DENSITY RESIDENTIAL (EXISTING) -NO CHANGE
This land use designation is also comprised of low density residential areas, but with slightly higher densities that allow the development of duplex homes with densities from 7 to 14 dwelling units per acre. This designation corresponds to the existing R-1.5 and R-2 designations in the Sunnyvale Zoning Code. It is essentially a single-use designation, meaning that only low density residential and associated land uses such as churches are allowed in the areas so designated. All of the areas in the Plan area with this designation are already existing and built-out according to this land use category. They are only located in the southwest quadrant of the Plan area along East Evelyn Street and Reed Avenue and exist as attractive, mature low density neighborhoods with wide, shaded streets. As noted throughout this document, no land use changes are contemplated in these areas and they will remain as currently planned and zoned. Minor improvements in these areas, discussed in the Circulation and Parking chapter of this report, will primarily be oriented to improving pedestrian and bicycle access and safety.

MEDIUM DENSITY RESIDENTIAL (EXISTING) - NO CHANGE
This land use designation corresponds to the R-3 category of the Sunnyvale Zoning Code with residential densities from 14 to 24~~7~~ dwelling units per acre. It too, is essentially a single-use designation, meaning that only medium- density residential and associated land uses, such as churches, are allowed in the areas so designated. With the exception of the existing facility at 1122-1134 Aster Avenue, all of the areas in the Plan with this designation are already built-out according to this land use category. They are generally located in the southwest quadrant of the Plan area and comprise attractive, mature, multi-family residential complexes. No land use changes are needed in these areas and they will remain as previously planned and zoned. The 1122-1134 Aster Avenue property will be allowed to remain in its current operation. If redevelopment of this site occurs, it will conform to the medium density residential classification. Minor improvements in these areas, discussed in the Circulation and Parking chapter of this report, will be focused primarily on improving pedestrian and bicycle access and safety.

~~**INDUSTRIAL**~~
~~The Industrial land use designation is limited to a portion of one parcel on the NW boundary of the Plan area along Kifer Road. It is a single-use designation, allowing only industrial types of uses. This area is currently designated as Industrial and Service in the City of Sunnyvale General Plan and Zoning Ordinance, which allows development densities of up to .35 FAR. The area will remain in that land use designation because it is part of a larger parcel that is predominantly outside the boundary of the Plan area.~~
~~Furthermore, it does not meet the station-related distance and accessibility criteria of the Plan and therefore does not merit revision to a new land use designation. However, the Plan does modify the density requirements for the area. Allowable development density is increased to a maximum of .5 FAR, with a minimum required development density of .35 FAR.~~

~~**Industrial**~~
~~Minimum density: .35 FAR~~
~~Maximum density (per existing zoning): .5 FAR~~

PUBLIC FACILITIES
Public facilities include government, civic, educational and public services, such as open space and recreation facilities, schools and community centers. The Plan area currently contains no public facilities. However, it is envisioned that a variety of public facilities will be needed to serve the area as development proceeds. Some of these will be provided through mandatory fees and assessments consistent with existing City of Sunnyvale policy. Others will be provided through development incentives and bonuses for new development. Therefore, the precise location and programmatic content of these facilities is unknown and is not illustrated on the land use plan.

PARKS AND OPEN SPACE
A key feature of the Plan is to ensure that a system of parks, recreational facilities and open space are developed. Current City of Sunnyvale policy relating to the provision of parks and

recreation facilities sets a target standard of 5 acres of open space be provided per 1000 persons residing within each neighborhood planning area. In simple terms, based on an estimated existing population of 4292 residents (2011 estimate), the current need would be for 21.5 acres. With population growth estimated in the Plan of between 2,200 and 3,500 residents, the new demand will be for 11.0-17.5 acres, making a total need within the Plan area of 32.5-39.0 acres to serve both the existing population and future population growth.
Because of the urban nature of the planned new development and because there is very little public land available in the Plan area, the Plan envisions that parks, recreation and open space facilities will be provided through four measures:

1. Ponderosa Park. Some of the need can be met for those residents that are within access of Ponderosa Park. This generally applies to existing residents in the southwestern quadrant of the Plan area.
2. Capitalize on underutilized opportunities. These include the El Camino Drainage Channel and Calabazas Creek channels, both of which can provide linear park connections between neighborhoods, parks and open spaces.
3. Establishment of a system of designated Green Streets that serve not only for vehicular circulation, but also provide high landscape amenity value and add linkages between other elements of the park and open space system.
4. Land dedication and/or in-lieu fees consistent with established City policy noted above and applicable to population increases resulting from new development in the Plan area in the future. For design standards related to the provision of open space in new development areas and properties, see Chapter 6: Urban Design.

Figure 3.1: Open Space Framework, illustrates the key elements of the planned parks and open space system for the Plan area. Publicly-owned creeks and drainage corridors, combined with Green Street linkages will provide the backbone of the system. Land dedications resulting from the development process will provide the major public open spaces that are needed and will be strategically located to be accessible from the backbone system.

DEVELOPMENT POTENTIAL

The Lawrence Station Area Plan is a flexible mixed-use plan that will result in a blend of office/R&D, retail, industrial and residential development. In many areas, the Plan allows for the long-term development of significantly higher densities than are currently allowed in the area by the City of Sunnyvale. In other areas~~, notably existing residential neighborhoods~~, build-out of the Plan will result in no change to current uses and densities.

FLEXIBLE MIXED-USE

The Lawrence Station Area Plan is designed to accommodate development according to the timing and needs of property owners and the marketplace. Unlike traditional zoning, which typically establishes single-use districts with fixed densities, the LSAP allows a flexible mix of uses at a range of densities. Several new mixed-use land use classifications have been established to allow for this flexibility.

INCENTIVE-BASED PLAN

The LSAP is an incentive-based plan. Because very little land in the Plan area is publicly-owned, implementation of the LSAP will be heavily driven by private property owners. Development incentives (in the form of density bonuses) will be a primary tool of ensuring financial feasibly for new development as well as achieving many of the goals of the LSAP, such as the provision of mixed-use development, street rights-of-way and improvements, access easements, public open space, additional affordable housing, and other features. Developers will not be required to build with incentives, rather they will have the option to choose which incentives best suit their business plans and economic goals. A table of incentives will be prepared separately, and will be updated periodically. For additional information see Chapter 7: Plan Implementation.

DEVELOPMENT CAP
In order to ensure that long-term development does not exceed the carrying capacity of infrastructure systems and the environment, a growth- monitoring program will be established.

A Development Cap for the entire Plan area will be established that is consistent with the findings of the Environmental Impact Report (EIR) that has been conducted as part of the planning process. Findings of the EIR will be used to help establish a maximum development threshold for the Plan area. Once this development threshold is reached (which is unlikely within the time horizon of this Plan), development cannot proceed, until new long-range plans and environmental documents have been prepared. For further discussion of the Development Cap monitoring program and other growth management matters related to the Plan area, see Chapter 7: Plan Implementation.

DEVELOPMENT SCENARIOS
Development potential for the Plan Area was estimated under a variety of assumptions and scenarios. These scenarios include:
1. Minimum Density
2. Maximum Density with Incentives
3. Estimated Likely Development

All three of the above development scenarios include estimates for ~~existing residential,~~ industrial/R&D, and retail uses in areas of the Plan that will not change. ~~All of the existing residential development in the Plan area is proposed to remain, as is the retail space currently occupied by Costco.~~

Existing Conditions
As a starting point, total existing development of the Plan area was estimated, for both the entire Plan area (including Sunnyvale and Santa Clara) and for Sunnyvale only. Existing development in Sunnyvale is summarized in Table 3.2: Existing Land Uses.

Minimum Density
A key goal of the Plan is to ensure that future new development is of a type and at sufficient density to create a diverse area that can support a mix of employment and residential uses, supports transit use, and can provide necessary amenities and support services, such as open space and neighborhood retail. Therefore, for portions of the Plan area in Sunnyvale where new development will be allowed (roughly 70% of the Sunnyvale portion of the Plan area), minimum development densities are established. New development will not be allowed at densities less than these minimums. In most cases these minimum densities exceed densities currently allowed in the Plan area. This scenario is known as the Minimum Density scenario.

As illustrated in Table 3.3: Station Area Development, build-out of all Sunnyvale parcels under the Minimum Density scenario, including existing development to remain and new development will result in a total of approximately 3,200 residential units, 2.2 million square feet of office/R&D development, 300,000 square feet of retail space, and nearly 18,500 square feet of industrial space. This translates to a total residential population in the Plan area of 7,730 and a total of 5,960 jobs. (This assumes a residential ratio of 2.42 people per unit, and 400 square feet per employee for retail, and 420 square feet per employee for office/R&D/light industrial.)

Focusing just on new development (excluding existing development to remain), the Minimum Density scenario would result in new development of approximately 2,000 new multifamily residential units, a net loss of 250,000 square feet of office/R&D development, a net gain of 78,000 square feet of retail space, and approximately 700 square feet of net new industrial space.

Maximum Density with Incentives
Density incentives that allow increased development rights (density bonuses) beyond the minimum required densities will be available to developers who provide elements that will further

the plan goals, such as street rights-of-way, public open space, additional affordable housing, and other features. This scenario is known as the Maximum Density with Incentives scenario. See Table 7.1 in Chapter 7: Plan Implementation for a listing of potential development incentives.

If developers were to avail themselves of the offered incentives in Sunnyvale, the Maximum Density with Incentives scenario would result in a total development (including existing development to remain and new development) of approximately 5,850 residential units, 4.85 million square feet of office/R&D development, 300,000 square feet of retail space, and 26,500 square feet of industrial space. This translates to a total residential population in the Plan area of 14,155 and a total of 12,360 jobs. (This assumes a residential ratio of 2.42 people per unit, and 400 square feet per employee for retail, and 420 square feet per employee for office/R&D/light industrial.)

Focusing just on new development, the Maximum Density with Incentives scenario would result in approximately 4,650 new multifamily residential units, 2.4 million square feet of net new office/R&D development, a net gain of 78,000 square feet of retail space, and approximately 9,000 square feet of net new industrial space. See Table 4.2: Station Area Development.

Estimated Likely Development

For planning purposes, it is important to determine a scenario of Estimated Likely Development that is based on reasonable development goals and assumptions for the Plan area. Actual development of the Plan area is likely to exceed the Minimum Density scenario, but unlikely to reach the maximums allowable under the Maximum Density with Incentives scenario. Some property owners may choose not to change their current land use during the horizon year of the Plan. Others may choose not to fully utilize the development incentive opportunities for increased development. The Estimated Likely Development scenario can thus be used to estimate reasonable future transportation and infrastructure needs of the Plan without planning for excessive development (and associated excessive infrastructure costs) of a plan that likely will not be built out within the Plan horizon. Such a scenario can also be used for purposes of environmental analysis and preparation of an environmental Impact Report (EIR) under the requirements of the California Environmental Quality Act (CEQA).

Estimated Likely Development potential varies, depending on the mix of uses and densities assumed for new development within the recommended range of allowable densities. For the Lawrence Station Area Plan, Estimated Likely Development yields were calculated based on the assumption that an average of 50 percent of the total development potential under the Maximum Density with Incentives scenario will be built within the horizon of this Plan (approximately 20 to 25 years, through 2035). It is also assumed that 50 percent of the existing of the existing industrial/office/R&D space will remain as is (at least through 2035).

	Existing Condition
Office/R&D	*2.4 million sf*
Retail	*200,000 sf*
Industrial	*Incl. in Office/R&D*
Residential	*1,200 units*
Civic/Religious	*50,000 sf*

	OFFICE/R&D (sf)	**RETAIL (sf)**	**INDUSTRIAL (sf)**	**RESIDENTIAL (units) total net new**	
MINIMUM	2,171,801	296,868	18,552	3,194	1,994
MAXIMUM (WITH INCENTIVES)	4,853,713	296,868	26,503	5,849	4,649
ESTIMATED LIKELY	3,636,202	216,653	26,503	3,523	2,323

Table 3.3 describes total development of the Plan Area at build-out based on the assumption that 50% of the maximum allowable development will occur during the horizon year of the Plan (2035) plus 50% of the existing industrial/office/R&D space will remain. Under this scenario, build-out of the Plan area will result in a total of approximately 3,500 residential units, 3.6 million square feet of office/R&D development, 220,000 square feet of retail space, and 26,500 square feet of industrial space. This translates to a total residential population in the Plan area of 8,525 and a total of 9,260 jobs. (This assumes a residential ratio of 2.42 people per unit, 400 square feet per employee for retail, and 420 square feet per employee for office/R&D/light industrial.)

Just focusing on new development, the Estimated Likely Development scenario would also result in approximately 2,300 new multifamily residential units, 1.2 million square feet of net new office/R&D development, approximately 9,000 square feet of net new industrial space, and a net loss of 2,500 square feet of retail space.

Development Goals

D-G1 Develop the Plan area with a diverse mix of uses at intensities sufficient to support and take advantage of the significant existing public investment in transit.

D-G2 Target minimum development of at least 2,000 new housing units and 5,960 jobs within the Sunnyvale portion of the Plan by the horizon year of 2035 in order to support a critical mass of retail services in the area and support existing and improved transit infrastructure.

D-G3 Encourage a range of development intensities in order to achieve neighborhood diversity and allow flexibility for businesses, property owners, workers and residents.

D-G4 Implement the development of the Plan, including the provision of amenities and support services through development incentives rather than relying exclusively on regulatory actions or direct public investment.

D-G5 Ensure that new development and construction activities improve, rather than adversely impact, the natural environment.

Development Policies

D-P1 Within the Plan area actively work with the City of Santa Clara to ensure consistency between the Station Area Plan and the City of Santa Clara General Plan and Zoning ordinance.

D-P2 Establish a program of development incentives.

D-P3 Encourage development at the maximum intensities allowable with incentives in order to maximize the provision of neighborhood- serving amenities, support services and infrastructure improvements.

D-P4 Maintain the character of established neighborhoods through programs that encourage existing property owners to maintain their properties, rather than through development incentives.

5. CIRCULATION AND PARKING

CIRCULATION AND PARKING

The circulation system within the Lawrence Station Plan area will play an important role in supporting future development by expanding mobility choices and providing a safe, convenient way to travel within the area, and to other areas, regardless of one's travel mode. The Lawrence Station Area Plan incorporates a "complete streets" approach for circulation planning that accommodates all travel modes so that driving is an option, but not a necessity. Complete streets are designed and operated to enable safe and convenient access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. This Plan strives to meet both the mobility and parking needs of existing businesses, visitors, and employees while also accommodating future development planned for the area. Effective planning for future land uses requires creation of a truly multi- modal transportation system.

THE CIRCULATION FRAMEWORK

The Circulation Framework is the system of streets and blocks that are the primary determinants of structure in an urban area. The Framework determines where circulation for motor vehicles, pedestrians, bicycles and transit will occur, and where land uses and buildings will be arranged and located.

Today, the Circulation Framework in the Plan area is extremely limited. North of the Caltrain tracks, due to the industrial nature of existing uses, the area is designed almost exclusively for the use of motor vehicles, particularly automobiles and trucks. The area is dominated by parking lots and a pattern of large industrial parcels with very few streets. Due to the constraints imposed by the configuration of Lawrence Expressway, access to the station from the north is via San Zeno Way and Lawrence Station Road, both of which are narrow streets, located close to the expressway that provide only partial access that is di cult to understand and navigate. These streets are also not well-located to optimize access to property along both sides of their street frontage.

South of the Caltrain tracks, ~~the~~ existing residential neighborhoods borderin the Plan area. This residential area ha~~ve~~s a more ne-grained pattern of streets and blocks that, with a few exceptions, are well-scaled to pedestrians and bicycles and provide good access for motor vehicles. Access to Lawrence Station is constrained from this direction by the barrier presented by the large Peninsula Building Materials parcel, and indirect street access on Willow and French Streets. Although Willow Street provides two-way access to the station, it is di cult to and, does not occur at a full four-way intersection and does not have adequate pedestrian facilities. French Street is in the City of Santa Clara and is one-way in the southern direction, thus not allowing access to the station for most users.

Figure 4.1 illustrates the major new circulation elements of the LSAP Circulation Framework. The Circulation Framework Plan includes existing streets as well as new major and minor streets that are strategically located to allow multi-modal mobility throughout the Plan area. The new street alignments illustrated are conceptual in nature and do not represent specific alignments. In certain areas, new street alignments are shown in the Santa Clara portion of the Plan area. They are also conceptual and are shown for recommendation purposes, since they are outside the control of the City of Sunnyvale. They are shown only to assist in future coordination with the City of Santa Clara and property owners in that city.

Following is a discussion of the key major segments of the future circulation framework for the Plan area. The circulation framework contains two parts: new street improvements and existing street improvements.

NEW STREET IMPROVEMENTS

In order to provide improved access throughout the Plan area in general, and to Lawrence Station in particular, a conceptual framework of future streets and blocks has been established. While east-west connections throughout the Plan area are relatively good, north-south linkages at the local level,
particularly north of the tracks, are poor, due to the barrier presented by the Caltrain tracks and the historical large-lot industrial development of the area. Therefore, a primary goal of the planned street network is to provide improved north-south access throughout the Plan area. This will require the development of new streets, particularly in the industrial areas north of the Caltrain tracks.

The new street network will emerge over time and specific alignments may vary as individual properties are redeveloped by individual property owners. As these properties are reconfigured, developer incentives to provide right- of-way and improvements for these new corridors will be available. For a more complete discussion of implementation strategies related to the Circulation Framework, see Chapter 7: Plan Implementation.

Primary Loop Road (The Loop)

The Primary Loop Road (The Loop) will be a Collector boulevard that will provide direct north-south access throughout the northern portion of the Plan area. On the west, it is planned to connect with the Central Expressway at the city boundary with Santa Clara, extending south across Kifer Road to Sonora Court where it will run eastward, parallel to the tracks near the station. East of the Lawrence Expressway, it will extend north of the tracks to intersect with the existing Corvin Drive, connecting with Central Expressway at the existing signalized Corvin Drive-Oakmead Parkway/Central Expressway intersection in Santa Clara. The Loop will thus allow vehicles travelling east-west on Central Expressway and Kifer Road to readily access the north-bound platform of the Lawrence Station, as well as significantly improve visibility and access to properties along its length.

The Loop will be a richly-landscaped multi-modal boulevard, designed according to complete streets concepts, with a wide pedestrian zone containing sidewalks and street trees, bike lanes, bus transit stops, two travel lanes with turn pockets and on-street parking lanes wherever feasible. The Loop will be designed in such a manner that it can accommodate bus transit, serving the new neighborhood and providing an important bus transit link to Lawrence Station. Coordination with VTA will be required to identify timing, transit stop locations and amenities.

San Ysidro Way Extension ~~Retail Street~~

The primary focus of retail activities in the Plan area will be along a new north-south ~~retail~~ street connecting Kifer Road, in the vicinity of San Ysidro Way, to Lawrence Station on the west side of the Lawrence Expressway. The street, referred to here as San Ysidro Way Extension, is centrally located in the dense Mixed-Use Transit Core land-use area and will provide a venue for a wide range of pedestrian-oriented commercial retail activities that can serve the nearby mix of uses north of the station as well as the residential neighborhoods to the south, creating a destination and a entire area.

The new ~~retail~~ street will be a pedestrian-friendly place, with two travel lanes, parallel parking and a wide pedestrian zone containing sidewalks, street trees and street furnishings. San Ysidro Way Extension will be designed so that traffic speeds will be low. Therefore, designated bicycle lanes will not be needed, although bicycles will be welcome. It is not envisioned that this street will be a bus transit street.

The construction of San Ysidro Way Extension provides the opportunity to close San Zeno Way, allowing for a clearer and less circuitous connection to Lawrence Station and the possibility of reallocating the San Zeno Way right-of-way lands to adjacent parcels for development purposes. Like other new streets in the Plan area, the exact alignment of this vital connection will be determined as properties in the vicinity become candidates for new development and change.

Secondary Streets
The secondary street network for the Lawrence Station Area Plan includes new streets, lanes, and alleys that will complete the multi-modal circulation system and allow a balance between autos and trucks, transit, bicycle, and pedestrian activity. Based on the goal of providing a ne-grained street and block network of approximately 400 feet on center, it includes several new street alignments and connections, which will improve station access for automobiles, as well as pedestrians and bicyclists. This network will provide enhanced local access and will provide more opportunities for walking and bicycling through shortened travel paths to the station and commercial areas both within the neighborhood and to and from nearby areas. In certain circumstances, based on local conditions, it may not be feasible for these secondary streets to accommodate automobiles. In these situations, a bicycle/pedestrian pathway should be provided. The locations of the secondary streets shown in Figure 4.2 are conceptual. The exact alignment and design of these vital linkages will be determined as properties in the vicinity become candidates for new development and change.

EXISTING STREET IMPROVEMENTS
In addition to providing new streets in the Plan area, improvements to existing streets will be needed to ensure safety and improved mobility for all street users.

Kifer Road
From an engineering design perspective, Kifer Road as it traverses the Plan area has pavement widths that exceed the needs of existing or projected traffic volumes. The wide roadway thus often encourages motorists to travel at excessive speeds, beyond posted speed limits, and is incompatible with the goal of creating a pedestrian and bicycle friendly mixed-use neighborhood.

It is therefore an ideal candidate for a roadway narrowing, or "road diet." Road diets are the re-design of existing streets which have been built wider than necessary for the volumes of traffic they are intended to carry. Narrowing an excessively-wide street has the benefit of allowing adequate motor vehicle mobility while improving access and mobility for pedestrians, bicyclists, and transit users.

Not all streets are suitable for road diets. Roadways should have moderate traffic volumes (up to 15,000 daily vehicles), though road diets can be successful on roadways with up to 20,000 vehicles per day. Kifer Road, which is ve lanes wide for much of its length in the Plan area, carries approximately 12,000 vehicles per day. Based on initial traffic analysis conducted between 2010-13, traffic volumes on Kifer Road are projected to increase 15-20%, well within the initial traffic guidelines for consideration of a road diet.

Redesign of Kifer Road needs to balance providing access to the neighborhood with the need to move vehicles efficiently through the corridor. The road diet planned for the street will include the removal of one travel lane in each direction giving Kifer Road a three-lane cross-section (one travel lane in each direction and a center turn lane). This road diet will provide an additional 11 to 12 feet of right of way in each direction which can be used for other street users, including a wider sidewalk zone for pedestrians and continuous Class II (on-street) bicycle lanes for bicyclists.

One example of a potential Kifer Street re-design includes expanding the pedestrian zone from the existing narrow six feet to fifteen feet in width and also expanding the existing bicycle lane from five to six feet, which is consistent with City of Sunnyvale and Caltrans standards. Alternatively, the sidewalk can remain at six feet and the travel lane can be re-designed into a shared parking and bicycle lane or a buffered bicycle lane.

The majority of Kifer Road through the study area is shared with the City of Santa Clara, and coordination of roadway redesign must be done in concert with that jurisdiction. A detailed Kifer Road diet design is an important next step in the implementation of this Plan.

Lawrence Expressway
In 2003, the Santa Clara County Expressway Study recommended the grade separation of Lawrence Expressway at the Reed/Monroe, Kifer Road, and Arques Street intersections. In the summer of 2013, in a follow-up study jointly-funded by the County and the cities of Sunnyvale and Santa Clara, the Lawrence Expressway Grade Separation (LEGS) Concept Study was initiated to consider a range of alternatives for design of the grade separation at the three intersections. Three alternative concepts were studied. In the recommended concept, Lawrence Expressway would be depressed under the three study intersections as well as Central Expressway and the Caltrain tracks. Grade separated interchanges at each of the three intersections would include median ramps from the expressway up to the cross-streets with signalized intersections.

Bicycle and pedestrian movements along Lawrence Expressway would be provided in a corridor running adjacent to and slightly elevated above the vehicular roadway. Bicycle and pedestrian movements between the Lawrence Expressway corridor and the cross-streets would occur via two--directional shared ramps on either side of the cross-street. An optional feature of the recommended concept is the provision of bus pullouts along the expressway directly beneath the Lawrence Caltrain Station. Such pullouts, combined with vertical circulation elements such as stairs and elevators, would provide direct access between the station and bus service along the expressway. Pedestrian and bicycle crossing distances would be significantly shorter compared to existing conditions in the proposed concept plan. Additionally, vehicle conflicts with pedestrians and bicyclists would be reduced by eliminating a number of right turn movements that currently exist.

Upon receiving support for the concept study, these findings will be included in the Expressway Plan 2040 Study currently being prepared by the County.

In the long term, if designed well, initial studies indicate that grade separation of the Lawrence Expressway across the Plan area will provide opportunities to a) reduce traffic congestion on local intersections, b) reduce the barrier to east-west movement created by the existing design of the Expressway, c) better balance vehicle access to the Caltrain station while minimizing conflicts with pedestrians, and d) improve through capacity of the Expressway itself. Therefore, grade-separation improvements to the Expressway as it crosses the Plan area are a high priority of this Plan.

If the Lawrence Expressway is placed below grade, multiple east-west pedestrian and bicycle connections across the expressway should be provided. In addition, pedestrian and bicycle access to the Caltrain station from both north and south should be prioritized.

Willow and French Streets
Willow Street, with improved pedestrian and bicycle facilities, will provide adequate access on the west side of the Lawrence Expressway. French Street, which is in the City of Santa Clara, will remain only a partial and very limited means of access for vehicles. At a minimum, French Street should also receive pedestrian and bicycle improvements.

New Signalized Intersections
Additional signalized intersections are to be studied in the Plan area in order to create controlled crossings for all modes of travel and to facilitate the safe circulation of vehicles and buses. Signalized intersection improvements may be warranted at the following locations:

- The Loop at Central Expressway
- The Loop at Kifer Road

The Loop intersection at Central Expressway will likely require signalization but will require additional analysis as well as coordination with Santa Clara County to confirm its feasibility. Signalizing the intersection of The Loop at Kifer Road will provide controlled ingress and egress for vehicles to access the Plan area while enhancing Kifer Road as a bicycle, pedestrian, and transit street.

New signal and/or improved crossing markings at the intersection of the San Ysidro Way Extension with Kifer Road are also recommended. The intersection could potentially align with and operate in conjunction with the existing intersection and signal at San Ysidro Way Extension / Kifer Road or a new signal might be constructed for San Ysidro Way Extension at Kifer Road if the two roadways are o set. In such case, signal function will require coordination so that they operate as a single intersection.

Circulation Framework Goals
CF-G1 Create a complete, multi-modal transportation network the supports a mixed-use neighborhood throughout the Plan area.

CF-G2 Create a balanced circulation system that is accessible to all modes of travel and does not favor one mode over another.

CF-G3 Create a street and block framework that provides a variety of vehicular access options and is scaled to pedestrians.

CF-G4 Provide improved north-south access throughout the Plan area.

CF-G5 Improve access to bus and rail transit by all modes of travel.

CF-G6 Create streets (both new and improved) that are comfortable and convenient for pedestrians, so walking is a pleasure and accessing residences and businesses is easy.

CF-G7 Make the area in and around the station bicycle-friendly, so residents and employees of all ages and abilities can feel comfortable and secure biking to work, services, and for recreation.

CF-G8 Minimize the impacts of the Lawrence Expressway on the Plan area.

Circulation Framework Policies
CF-P1 In the residential areas south of the Caltrain tracks, retain the existing framework of streets and blocks. Improve ~~existing~~ street~~s~~ connections to the residential areas south of the Caltrain tracks to provide safer street crossings and minor access improvements for pedestrians, bicycles and transit users.

CF-P2 Prioritize the provision of improved north-south access for all modes of travel between the northern and the southern portions of the Plan area.

CF-P3 In the area north of the Caltrain tracks, establish a secondary network of north/south and east/west streets, lanes, alleys and other dedicated public rights-of-way configured generally as a functional grid.

CF-P4 In the area north of the Caltrain tracks, to the maximum extent feasible, establish the grid of streets and blocks at a finer grain than currently exists, with a pattern of blocks no longer than 400 feet on a side.

CF-P5 In the area north of the Caltrain tracks, develop a Primary Loop Road (The Loop) that will provide direct north-south access to Lawrence Station from Kifer Road and the Central Expressway on both the east and west sides of the Lawrence Expressway.

CF-P6 Locate The Loop to align with Corvin Road in the east and to intersect with Kifer Road approximately 1⁄4 to mile west of the Lawrence Expressway.

CF-P7 To the extent feasible, incorporate Sonora Court in the alignment of The Loop.

CF-P8 Provide direct frontage access to the Lawrence Caltrain Station along The Loop.

CF-P9 In the area north of the Caltrain tracks, establish a pedestrian-friendly north-south commercial Main Street located west of the Lawrence Expressway and connecting directly between Kifer Road in the vicinity of San Ysidro Way and the existing Lawrence Station pedestrian underpass.

CF-P10 To the extent possible, locate all new streets along property lines between parcels in order to minimize impacts on individual properties and building operations and to share benefits between property owners. This will also allow phased development on a parcel-by-parcel basis at the discretion and timing of property owners as they seek to redevelop their land. (See also Chapter 7: Plan Implementation).

CF-P11 Redesign Kifer Road from a five-lane vehicular cross-section to a three-lane vehicular cross-section (one travel lane in each direction and a center turn lane).

CF-P12 Provide a wide, landscaped pedestrian sidewalk zone, continuous Class II bicycle lanes, on-street parking and transit stops continuously along Kifer Road in the Plan area.

CF-P13 Support efforts to grade-separate the Lawrence Expressway across the Plan area in order to a) reduce traffic congestion on local intersections, b) reduce the barrier to east-west movement created by the existing design of the Expressway, c) better balance vehicle access to the Lawrence Station, while minimizing conflicts with pedestrians, and d) provide direct vertical access to the Lawrence Station, and e) improve through-capacity of the Expressway itself.

CF-P14 Ensure the existing mature street trees along Kifer Road and Sonora Court will not be adversely impacted by street improvement projects. Incorporate the mature trees into the landscape improvements of the street.

PEDESTRIAN IMPROVEMENTS

Today, pedestrian activity in the Plan area is constrained, due to the barriers presented by the Lawrence Expressway, Caltrain tracks, large busy intersections, and the industrial nature of large portions of the Plan area. Providing safe and attractive facilities for pedestrians throughout the area is an important goal of the LSAP, with strong emphasis on providing linkages to Lawrence Station and other destinations such as neighborhood parks, schools and shopping areas.

As shown in Figure 4.3, pedestrian activity around the Lawrence Caltrain station will likely increase as the Lawrence Station Area Plan lays the foundation for walkable streets throughout the Plan area. For example, the planned street network north of the Caltrain tracks will provide a walkable network of streets, providing access to all areas of the neighborhood as well as convenient connections to the station from areas both north and south of Kifer Road. South of the tracks, the existing street network in the single-family neighborhoods will be retained. Pedestrian improvements to the existing streets will be provided to enhance their role as important pedestrian corridors.

In addition, north-south connectivity for pedestrians and bicyclists will be vastly improved by two new Caltrain track crossings. Today, the underpass at the Caltrain station and the Lawrence Expressway overpass provide the only north-south track crossing opportunities in the area. Figure 4.3 illustrates the location of two additional grade-separated crossings of the Caltrain tracks that will serve to increase connectivity to the station as well as to local and regional destinations from the neighborhoods on either side of the Caltrain corridor. The crossing east of Lawrence Expressway is being evaluated as part of the Calabazas Creek Trail study by the City of Santa Clara and will likely include a pedestrian / bicycle under-crossing of the tracks. The crossing to the west of Lawrence Expressway will align with, and connect to, The Loop near the western end of Sonora Court, thereby providing north-south access between Aster Avenue and

Kifer Road. Due to potential land use conflicts, traffic considerations and other physical constraints, it is unlikely that it is feasible to develop these two additional track crossings as vehicular streets.

Improved pedestrian access in the Plan area will also be facilitated through enhancements to the pedestrian environment including crosswalk enhancements, sidewalk extensions (bulbouts), and wider sidewalks along all major pedestrian corridors. For urban design guidelines related to these pedestrian improvements in the Plan area, see Chapter 6: Urban Design.

CROSSWALK ENHANCEMENTS
Improvements at major intersections throughout the Plan area, particularly along key pedestrian corridors, will enhance mobility for people of all ages and physical condition. Crosswalk enhancements can include improvements at both signal-controlled and uncontrolled intersections.

Pedestrian enhancements are particularly important at uncontrolled intersections to ensure the visibility of pedestrians to drivers. Improvements to enhance visibility in these situations may include:
- Enhanced crosswalk markings and striping
- Removal of free-right-turns and "pork chop" islands
- High visibility signs and markings
- Advance yield or stop lines
- Sidewalk extensions or bulbouts
- Rectangular rapid flashing beacons (RRFBs)
- Pedestrian crossing devices, including overhead flashing beacons and pedestrian hybrid beacons (PHB).

Crosswalk markings will be improved at all existing and proposed signalized intersections, as well as at all marked crossings at unsignalized locations, potentially including Aster Avenue/Willow Avenue, Willow Avenue/Reed Avenue, San Ysidro Way/Kifer Road, and the new intersections of The Loop and the San Ysidro Way Extension.

SIDEWALK EXTENSIONS (BULBOUTS)
A bulbout is an expansion of the width of a sidewalk, typically achieved by expanding into the parking zone. Bulbouts at intersection corners (corner bulbouts) greatly improve the pedestrian environment by providing increased pedestrian waiting area, reducing pedestrian/vehicle con ict points and reducing street crossing distances and associated crossing times, with no impact on vehicular travel lanes. They are particularly appropriate at intersections with wide crossing distances and high vehicle speeds which create a barrier to safe and easy pedestrian crossings.

Throughout the Plan area, wherever feasible, bulbouts will be provided at the intersection of all new streets and at locations where major pedestrian paths and trails intersect streets, where feasible. Bulbouts are not feasible on all existing streets, since only streets with on-street parking can be designed to include these improvements. Bulbouts will be considered along all primary pedestrian corridors where local conditions permit.

In the long term, if the Lawrence Expressway Grade Separation (LEGS) project moves forward, the need for bulbout improvements at Reed / Monroe and Kifer Road may diminish, depending on how access ramps for the Expressway are designed. If access ramps from the Lawrence Expressway to any streets in the Plan area are provided, then bulbout improvements will be needed wherever feasible. Recommendations for long-term improvements for pedestrian connectivity within the Plan area should be provided as part of the LEGS study.

SIDEWALK IMPROVEMENTS
Sidewalks are a critical element in the creation of good pedestrian environments. Wide sidewalks in good condition encourage walking and provide space for seating and socializing as well as for lighting and landscape amenities such as street trees.

Throughout the Plan area the recommended minimum sidewalk dimension, where right of way permits, is ten feet, including a minimum pedestrian travel zone width of six feet and a four-foot minimum landscaped buffer zone. These dimensions provide a comfortable travel path width and buffer between the pedestrian and vehicle traffic, but are considered minimums.

On streets and corridors where higher pedestrian volumes are anticipated, a wider 15-foot sidewalk is needed. See the Streetscape section of Chapter 6: Urban Design for additional sidewalk design considerations.

Remediation of sidewalk gaps and other unsafe conditions in the existing pedestrian network is also needed. These improvements include upgraded sidewalks to a minimum six foot-wide path of travel, and street tree planting behind the curb. Since many of these locations are along planned primary pedestrian access corridors, improvements will be to the higher 15-foot standard wherever feasible. In particular, sidewalk upgrades are needed in the following locations:

- Both sides of Willow Avenue
- North side of Aster Avenue
- Multiple locations along Kifer Road in the Plan area.

ADA ACCESSIBILITY
A network of accessible routes is a critical component of any transit-served environment. This is particularly true for disabled or older residents who may desire to walk to destinations but need safe and easy-to-use sidewalks, intersections and pathways.
One of the biggest challenges to accessibility is slopes or grades in excess of 5% grade. Fortunately, the Lawrence Station area is essentially at, providing few such barriers to accessibility.

The most troublesome barriers in the area today are the missing or inadequate sidewalks and intersection corner ramps. These conditions can be found throughout the area, much of which was developed as much as 50 years ago. Public and private investments in new sidewalks and interior pathways will resolve these issues in all areas of the Plan over time.

All new pedestrian facilities and improvements to existing facilities will be designed to be fully accessible, with appropriate widths, grades, transitions, warning strips, and audio or other crossing indicators, in compliance with the accessibility standards established by the Americans with Disabilities Act (ADA).

Pedestrian Goals
P-G1 Provide safe, inviting, and attractive pedestrian connections for residents, workers and visitors to Lawrence Station and other key destinations in the Plan area.

Pedestrian Policies
P-P1 Promote walking access through new street connections.

P-P2 Provide two new Caltrain track crossings for pedestrians and bicyclists: one at the Calabazas Creek Trail (per study by the City of Santa Clara); the other west of Lawrence Expressway aligning with and connecting to The Loop near the western end of Sonora Court.

P-P3 Facilitate pedestrian access and safety along key pedestrian corridors through pedestrian enhancements, including crosswalk enhancements, sidewalk extensions (bulbouts), and wider sidewalks.

P-P4 Provide enhanced crosswalks on all legs of signalized intersections and at key pedestrian crossing locations.

P-P5 Provide new pedestrian crossings, including potential mid-block crosswalks, on Reed Avenue, Kifer Road, and The Loop.

P-P6 Provide sidewalk extensions (bulbouts) on all new streets, where feasible, and on select existing streets along primary pedestrian corridors.

P-P7 Continue to promote the inclusion of pedestrian improvements along and across the Lawrence Expressway as the Lawrence Expressway Grade Separation (LEGS) study is implemented.

P-P8 If the Lawrence Expressway is elevated or placed below grade, encourage the provision of multiple east-west connections between Sunnyvale and Santa Clara neighborhoods on each side of the expressway.

P-P9 Where right of way permits, for all new sidewalks in the Plan area, provide a minimum pedestrian zone width of nine feet inclusive of a minimum paved pedestrian travel zone width of six feet and a landscaped three-foot street buffer zone.

P-P10 For new sidewalks in areas of increased pedestrian activity and along all primary pedestrian corridors, provide a minimum sidewalk width of 15 feet inclusive of a minimum paved pedestrian travel zone of six feet.

P-P11 Improve sidewalk gaps on Willow Avenue and Kifer Road in the Plan area.

P-P12 Ensure that all new and improved pedestrian facilities are designed to comply with ADA standards.

BICYCLE IMPROVEMENTS

Encouraging the use of bicycles for local and inter-neighborhood access is a key goal of the Station Area Plan. Achieving this can help increase transit ridership, and reduce automobile usage, particularly for local trips. To achieve this goal, an essential requirement is a network of continuous, interconnected, and safe bicycle facilities that can be used by residents, workers and visitors.

In the Plan area, there are few existing bike lanes or other facilities designated for bicycle transportation. Providing safe and direct designated facilities for bicycles within the Plan area is essential in order to improve connections to Lawrence Station, parks, schools, and other local destinations, as well as to adjacent neighborhoods and citywide routes.

Bicycle facilities are designated according to three levels of service or "Classes."

A Class I bicycle facility is a path that is located entirely o -street and separated from motor vehicle traffic. Typically Class I bicycle paths are designed as multi-use facilities, available for use by pedestrians, joggers, baby carriages, and skaters as well as bicycles. To accommodate all users, typical design standards for Class I multi-use paths include an overall width of 12-14 feet, including a hard surface of 8-10 feet wide and a two-foot-wide walking / jogging surface on each side. City of Sunnyvale standard for Class I bicycle facilities is 12 feet. Currently, there are no Class I multi-use trails in the Plan area.

Class II bicycle facilities are striped bicycle lanes, typically on primary arterials and collector streets, designated for the exclusive use of bicyclists. The City of Sunnyvale standard for Class II bicycle lanes is 6 feet. However, Class II bicycle lanes may be wider, depending upon feasibility and local conditions.

Class III bicycle facilities are typically referred to as Bicycle Routes, where bicyclists share the street with vehicular traffic. While they do not have striped lanes, they often have bicycle route marking signs to guide bicyclists through the area, as well as street markings warning motorists of the increased presence of bicyclists and the need to "share the road." Class III Bicycle Routes are typically located on secondary streets with low traffic volumes and design speeds.

The Bicycle Framework Plan, Figure 4.~~5~~4, illustrates the bicycle network planned for the Lawrence Station Plan area. When complete, the planned bicycle network will provide a continuous system of Class I and Class II facilities that will allow safe connections throughout the Plan area.

The Bicycle Framework Plan has three key elements:

- Existing bicycle facilities. Facilities that already exist in and adjacent to the Plan area.
- Planned bicycle facilities. Facilities that are currently in the planning stages or already part of adopted plans by the City of Sunnyvale, the City of Santa Clara or Santa Clara County, but are not yet built.
- Proposed bicycle facilities. New facilities proposed by this Station Area Plan.

EXISTING BICYCLE FACILITIES

Lawrence Expressway and Central Expressway (Class III)

Both of these major arterial roadways allow bicyclists and currently contain Class III bicycle lanes with wide shoulders. While these two facilities do provide long-distance bicycle access, because of the high vehicular speeds and traffic conditions, they are designated by the City of Sunnyvale as "Advanced Bicycle Routes," considered suitable only for the most experienced of bicyclists. Additionally, because the Lawrence Expressway is grade-separated at the railroad tracks, access to the Lawrence Station by bicycles is inconvenient and indirect.

Kifer Road West (Class II)

West of the Lawrence Expressway, Kifer Road contains bicycle lanes. Continuity of safe bicycle conditions along Kifer is broken, however, as the lanes do not exist east of the Expressway.

Reed Avenue (Class II)

In Sunnyvale, Reed Avenue currently contains on-street bicycle lanes, which extend to the city limits at the Lawrence Expressway. Bicycle lanes do not extend beyond that point into Santa Clara.

East Evelyn Avenue (Class II)

Although it does not connect to the core of the Plan area, the bicycle lanes along East Evelyn Avenue provide safe access for neighborhoods in the southwest quadrant of the Plan area to Reed Avenue and to Ponderosa Park via the pedestrian path that connects between Reed Avenue and Cassia Way.

PLANNED BICYCLE FACILITIES

Calabazas Creek Trail (Class I Multi-use)

The City of Santa Clara is in the planning stages to improve the Calabazas Creek corridor as a linear park that will include a Class I multi-use pedestrian- bicycle trail. Although the trail is mostly in Santa Clara, a portion of it will traverse Sunnyvale in the northeastern quadrant of the Plan Area.

The Calabazas Creek Trail preliminary alignment is located along the west side of Calabazas Creek north of the tracks and on the east side of the creek south of the tracks. This trail will form the backbone of a key north / south bicycle connection and alternative to riding on the Lawrence Expressway. The trail will provide linkages to many regional destinations, including the San Tomas Aquino on-street trail east of the Plan area. Therefore, future bicycle facilities that connect to the Lawrence Caltrain Station and neighborhoods of the Plan area will connect to this trail.

Monroe Street (Class II)
This bicycle lane is currently in the approved bicycle improvement plans for the City of Santa Clara. When completed, it will connect with the existing Class II bicycle lanes on Reed Avenue, providing through bicycle connections to Santa Clara Christian School and Wilcox High School.

PROPOSED BICYCLE FACILITIES
The Bicycle Framework Plan illustrated in Figure 4.5, is intended to close the gaps in the existing and planned bicycle network through the development of an interconnected system of Class I and Class II facilities.

Class I Bicycle Improvements
Capitalizing on the planned Calabazas Creek Trail, the Class I multi-use trail network will be expanded in the Lawrence Station Plan area. This will include three important legs:

- South of the Caltrain tracks, a new Class I facility and linear park will follow the alignment of the El Camino Drainage Channel, linking to the Calabazas Creek Trail. This will include segments running in an east-west direction north of and parallel to Agate Drive, and south of and parallel to Aster Avenue (behind the Aster Avenue Townhomes), extending southward through the Ponderosa Park neighborhood. At Reed Avenue, this trail will have an enhanced pedestrian / bicycle street crossing, either at a mid-block location or at the Reed Avenue/Evelyn Avenue intersection, allowing access to the pedestrian path that connects between Reed Avenue and Cassia Way. This new Class I trail will thus allow safe bicycle connections between Ponderosa Park and the new neighborhoods north of the Caltrain Tracks.
- A new north-south Class I trail will link to the El Camino Storm Drain Channel trail, cross Aster Avenue and the rail line, and connect to The Loop on the north side of the tracks. It will be aligned approximately along the western property line of the existing Peninsula Building Materials property.
- As new development occurs on lands between the eastern leg of The Loop and Calabazas Creek, a direct linkage will be provided to allow connections from the neighborhoods in the northeast quadrant of the Plan area to the Calabazas Creek Trail. These linkages will be provided at a spacing of 300-400 feet along The Loop as indicated conceptually on the Bicycle Framework Plan.

Class II Bicycle Improvements
On-street Class II bicycle lanes will be provided to close gaps between existing bicycle lanes on existing streets as well as providing bike lanes along new primary street corridors, including the following:

- Kifer Road east of Lawrence Expressway. As discussed previously under the discussion of the Kifer Road road diet, this can be achieved without requiring the acquisition of additional right-of-way.
- The Loop. In addition to providing direct vehicular connections between Lawrence Station and the Central Expressway, Class II bicycle lanes along The Loop will allow bicyclists to access all of the neighborhoods between the Caltrain tracks and the Central Expressway.
- Aster Avenue. This street is currently designed with a pavement width that exceeds its traffic-carrying requirements. Like Kifer Road, it is a prime candidate for a road diet that can include the provision of Class II bicycle lanes. A 350-foot segment of Willow Avenue between Lawrence Station and Aster Avenue will complete this improvement, thereby providing improved access all the way to the Lawrence Station.
- Other Class II Facilities. Outside of the Plan area, the provision of Class II bicycle lanes will improve inter-neighborhood connectivity particularly for those seeking to access nearby parks and schools, including Ponderosa Park and School, and Wilcox High School. These streets include:

- Machado Avenue between Briarwood Drive and Calabazas Boulevard
- Briarwood Drive south of Machado Avenue
- Lily Avenue between Henderson Avenue and the Lawrence Expressway
- White Oaks lane south of Lily Avenue
- Commercial Street between Kifer Road and Central Expressway

Class III Bicycle Facilities
It is not envisioned that any street or circulation corridors will be designated as a Bicycle Route at this time. However, all new secondary streets will be designed to be friendly for bicycle travel with low vehicle speeds.

Track Crossings
As described in the Pedestrian Improvements section of this chapter, two additional grade-separated pedestrian/bicycle crossings of the Caltrain tracks will serve to increase north-south connectivity for bicyclists.

Open Space Connections
The Bicycle Framework Plan indicates, in a conceptual way, the location of new neighborhood open spaces in the future development areas of the Plan and the public linkages for pedestrian and bicycles to these open spaces. These open space locations and connections are conceptual and do not represent final specific locations. However, ensuring that all new open spaces are connected to publicly accessible streets, bicycle facilities and pedestrian linkages is an essential ingredient of the Plan and will be a required feature of future development proposals.

Intersection Improvements
On streets with Class II bicycle lanes, bicycle detection loops will be installed at signalized intersections to allow bicyclists to activate traffic signals without the need to dismount to use pedestrian push buttons and crosswalks. Detection of bicyclists at signalized intersections will also improve efficiency, decrease delay to bicyclists, and discourage red light running by bicyclists without causing inordinate delays to motorists.

Signage and Wayfinding
All Class I and Class II bicycle facilities will have directional signage and bicycle route marking signs directing bicyclists to Lawrence Station, parks, schools and other local and inter-neighborhood destinations.

Bicycle Parking and Storage
Together with perceived lack of safety riding on the streets, lack of secure bicycle parking is often cited in surveys as one of the top deterrents to bicycling. The provision of secure bicycle parking is, therefore, as essential to increasing bicycle ridership as the provision of safe bicycle lanes and routes. Bicycle parking and storage infrastructure is typically installed as part of a development project approved for property redevelopment.

The City of Sunnyvale has bicycle parking standards that are appropriate for the Plan area. Additionally, the Santa Clara Valley Transit Authority (VTA) has published bicycle parking guidelines that include elements appropriate for the Plan area. Based on the City of Sunnyvale and VTA guidelines, the bicycle parking supply requirements for the Station Area Plan include the following:

Long-term storage (>2 hours): Provide Class I bicycle parking, consisting of lockers, rooms with key access, or attended/unattended bike stations. This type of storage is appropriate at Lawrence station, multi-family residential developments, and places of work.

Short-term storage (up to 2 hours): Provide Class II bicycle parking, consisting of racks with two points of contact that allow for locking at least one wheel as well as the bicycle frame. Bicycle racks are most appropriate to serve visitors to retail establishments, libraries, medical offices,

office buildings, and residential buildings. Locate bicycle racks such that pedestrian circulation is not adversely impacted, security is maximized (i.e., in well-lit, visible areas with high volumes of foot traffic), and with a layout that maximizes parking capacity.

Minimum quantities of bicycle parking shall be comparable to those shown in Table 4.1. Additional bicycle parking can be added relatively easily as demand warrants.

~~***Lawrence Station***~~	~~*2% of daily home-based boardings (75% - Class I, 25% Class II)*~~
Residential *General, multi-dwelling* *Low-income housing, multi-dwelling Senior housing, multi- dwelling*	*1 Class I per 4 units + 1 Class II per 15 units* *1 Class I per 3 units + 1 Class II per 15 units. 1 Class I per 20 units + 1 Class II per 15 units.* *(Minimum total 4 spaces for all residential developments)*
Retail	*1 Class I per 30 employees + Class II per 6,000 sq. ft.*
Office/Industrial/R&D	*1 Class I per 75% of 6,000 sq. ft. + 1 Class II per 25% of 6,000 sq. ft.*

Note: The minimum number of Class II bike racks in any location should be 2 (4-bicycle capacity).

BICYCLE SHARING

Over time, as the Lawrence Station area becomes a more important destination in Sunnyvale, a bicycle sharing program could be initiated. A bicycle sharing system consists of a fleet of specially-designed, heavy- duty, durable bicycles that are locked into a network of docking stations located throughout a region. Bicycles can be rented from, and returned to, any station in the system, creating an efficient network with many possible combinations of start and end points.

In the Bay Area, the program is sponsored by Bay Area Bike Share, a partnership among several local government agencies including the Bay Area Air Quality Management District (BAAQMD), San Francisco Municipal Transportation Agency (SFMTA), Sam-Trans, Caltrain, the County of San Mateo, the San Mateo County Transportation Authority, the City of Redwood City and VTA. The Bay Area Bike Share system was initiated in 2013 and currently has 700 bikes and 70 docking stations across the region, with locations in San Francisco, Redwood City, Mountain View, Palo Alto, and San Jose.

Bicycle Goals

B-G1 Encourage the use of bicycles for local and inter-neighborhood access by residents, workers, and visitors of all ages and abilities.

Bicycle Policies

B-P1 Require property development to provide Class I and Class II bicycle facilities to ll in the gaps in the existing and planned bicycle network.

B-P2 Provide direct Class I and Class II bicycle connections to the future Calabazas Creek Trail from The Loop.

B-P3 Provide direct Class I multi-use public linkages between The Loop in the northeast quadrant of the Plan area to the Calabazas Creek Trail at spacings not to exceed 400 feet.

B-P4 Connect new neighborhood open spaces with publicly-accessible streets, bicycle facilities and pedestrian linkages.

B-P5 Install bicycle detection loops at signalized intersections.

B-P6 Provide Class I or Class II bicycle parking per Lawrence Station Area Plan bicycle parking requirements.

B-P7 Implement a bicycle sharing program.

PUBLIC TRANSIT

Commuter heavy rail (Caltrain), local bus, and scheduled private shuttles currently serve the Plan area. See Figure 4.5 for the existing transit network.

COMMUTER HEAVY RAIL (CALTRAIN): LAWRENCE STATION

Data from 2014 indicates the Lawrence Caltrain Station currently serves about 1,580 weekday riders. Historical ridership data indicates that the average weekday ridership at the station reached over 2,500 in 2001, indicating the station has the capacity to serve higher numbers of passengers than current ridership.

Diversifying land uses and increasing densities will support the long-term viability of the Caltrain station. Depending on the specific characteristics of land uses ultimately developed near the station, if developed to the levels anticipated under the Estimated Likely Development Scenario of this Plan, daily transit ridership is estimated to increase to levels comparable to those at the California Avenue Caltrain station in Palo Alto, a station that supports a range of users, including visitors and employees of the California Avenue retail district. There is potential for the Lawrence Caltrain Station area to similarly become activated as the station and its surrounding mix of land uses generates a range of users and activities.

The Lawrence Caltrain Station was reconstructed in recent years and already has many station amenities, including covered benches, adequate signage, schedule information, ticket vending machines, a public pay phone, real- time message boards, shuttle access, and bicycle and vehicle parking. As the Plan area develops and access to the station is improved, increased ridership will likely warrant the provision of additional amenities, such as more bicycle parking.

LOCAL BUS SERVICE

In the Plan area, bus service along three routes is provided by the Santa Clara Valley Transportation Authority (VTA). However, none of these routes currently serves Lawrence Station directly. The bus stop nearest to the station is on the local-serving Community Route #32, with a stop approximately ¼-mile from the station at the corner of Reed and Willow Avenues, in the southwest quadrant of the Plan area. North of the Caltrain tracks, the nearest bus stop to the station is on the Limited Stop Route #328 which stops at the corner of the Lawrence Expressway and Kifer Road, also approximately ¼-mile away.

COMMUTER SHUTTLES

While no VTA bus routes directly access the station, there are three public Caltrain shuttles that provide service, including:

- Duane Avenue: Between Mountain View and Lawrence Caltrain Station as well as Duane Avenue office buildings during commute hours.
- Bowers-Walsh: Between Lawrence Caltrain Station and Bowers/ Walsh area office building during commute periods.
- Mission: Between Lawrence Caltrain Station and Mission College and Intel areas during commute hours.

The project area is also served by VTA’s Altamont Commuter Express (ACE) Gray Line South Sunnyvale Shuttle (VTA 822) that provides directional shuttle service (eastbound in AM and westbound in PM) along Kifer Road and connects the project area to the Great America ACE station in Santa Clara.

In addition to the four public shuttles, several private shuttles provide service between the Lawrence Caltrain Station and major employers within the Cities of Sunnyvale and Santa Clara.

ACCOMMODATING FUTURE TRANSIT

The limited bus transit connections within the Lawrence Station area are a result of low levels of demand and disconnected roadway access from nearby major roadway corridors. While the VTA

does not currently plan to add bus transit service within the Plan area, the agency will re-evaluate the need for new service as access to the station improves, new development proceeds and demand increases. The higher intensity commercial, retail, and residential land uses established in this Plan will create an increase in transit demand compared with the existing low intensity office and research and development (R&D) land uses. Therefore, the Lawrence Station Area Plan includes planning and design measures that will allow both bus and rail transit service to be expanded in the future as demand warrants.

The increased roadway connectivity and mixed land uses will have a positive effect on the potential for direct bus access to the area. Potential transit connections south of the Plan area include re-routing VTA Route #32 on Reed Avenue/Monroe Street to the southbound platform.

North of the tracks, The Loop greatly increases the potential for transit connectivity to the northside of the station. Opportunities to signalize intersections, as summarized earlier in this chapter, should be evaluated in coordination with potential transit route accessibility. For example, a signal at the intersection of Central Expressway and The Loop will enable transit vehicles to directly access Lawrence Station. Additionally, the roadway design concept for The Loop adjacent to the northbound Caltrain platform, illustrated in the Streetscape Design section of Chapter 6: Urban Design, includes bus pull-outs for passenger loading and unloading.

Bus Transit Stop Improvements
In addition to potential bus route modifications, new and improved bus transit amenities will enhance the experience for transit patrons. Most existing bus stops along Kifer Road, Reed Avenue-Monroe Street, and Lawrence Expressway have minimal stop amenities and frequently only include a bus stop sign, without furnishings or shelters. Therefore, bus pull-outs, and added stop amenities such as shelters, furnishings, lighting and signage will be provided along The Loop and are needed along Kifer Road, Reed Avenue-Monroe Street, and Lawrence Expressway and all other potential future bus routes wherever local conditions allow. The road diet on Kifer Road, in particular, will provide space for new bus pull-outs on the south side between Lawrence Expressway and Commercial Street (the north side of Kifer Road has existing bus pull-outs) and on both sides of Kifer Road east of Lawrence Expressway.

Public Transit Goals
PT-G1 Support public transit in the Plan area, including both commuter rail and bus service.

Public Transit Policies
PT-P1 Reevaluate adequacy of amenities, such as bicycle parking, seating, and shelters, at Lawrence Station as ridership numbers increase.

PT-P2 Evaluate the requirements for new bus service as access improves, development proceeds and demand increases.

PT-P3 Assess the potential re-routing of existing bus service to directly reach Lawrence Station.

PT-P4 Provide bus stops with bus pull-outs, shelters, furnishings, lighting and signage along the Primary Loop Road and all other bus transit streets in the Plan area.

PT-P5 Locate bus stops on the Primary Loop Road approximately every 1⁄4-mile (1,300 feet).

PARKING

The provision and management of the parking supply in the Lawrence Station Plan area is closely associated with how people travel to and from the area. Parking should be considered not in isolation, but in conjunction with pedestrian and bicycle access, transit availability, and land use decisions. In addition, while the implementation of individual parking strategies can contribute to

the overall success of the transportation element for the project, the use of complementary and coordinated strategies will compound benefits.

Table 4.2 describes parking strategies that will be implemented as the Plan area is developed over time.
Parking strategies are organized into the following three sections:

- Parking Supply
- Parking Management Strategies
- Transportation Demand Management (TDM) Programs.

It is critical that parking supply in the Plan area be effectively managed and not overbuilt in the future. The provision and management of parking should be such that it:

- Does not create an overabundance of parking, which may end up as an invitation to driving.
- Discourages auto trips for those who have an option to travel by other modes, including walking, bicycling and transit.
- Serves those who must drive and might not make the trip if they perceive that parking will not be available when they arrive.

Existing Parking Supply
Currently, there is an overabundance of on- and o -street parking in the Plan area. The 122-space Lawrence Station parking lot, which charges a fee for parking, is typically only 10-20 percent occupied. In order to avoid paying the parking fee, additional station-related park-and-ride demand is met on- street, particularly on Sonora Court. Despite the use of on-street parking by Caltrain riders, on-site observations indicate there is sufficient on-street parking for other drivers.

Comparing Sunnyvale's current parking requirement standards for new development with similar nearby communities, the parking provision in the existing residential and commercial uses in the Plan area are overabundant and contributes to the high auto usage observed in the Plan area (approximately 85 percent for Sunnyvale and approximately 68 percent for Lawrence Station).

The existing overabundant parking supply in the Plan area provides an opportunity to manage future supply so that it promotes and supports transit and more closely relates to the needs of employers and residents of the area.

Table 4.2: Parking Strategies

Priority	Parking Strategy
Short-Term	*All land uses: Reduce the requirements for off-street parking. All land uses: Provide bicycle parking.* *All land uses: Unbundle parking costs from property costs.* *Lawrence Station: Work with Caltrain to find the appropriate price to attract drivers to the station parking lot and improve its utilization.* *Retail, Office/R&D, Industrial: Allow credits for TDM Program demonstrating high alternative mode share and corresponding to lower parking requirements on a case-by-case basis.*
Mid- and Long- Term	*Residential, Office/R&D, Industrial: ~~Require~~ Encourage shared parking. Residential: ~~Provide~~ Encourage car sharing.*

Parking Supply Requirements
Future parking requirements for development within the Lawrence Station Plan area are described in Table 4.3. Additional reductions in parking requirements will be allowed based the specific characteristics of the supply in question (e.g., senior housing, affordable housing) and on the incorporation of parking management strategies.

Based on the parking requirements described in Table 4.3, it is estimated that up to 52,000 parking spaces would be required under the Estimated Likely Development Scenario under the City's current parking standards. Applying the reduced LSAP Parking Requirement described in Table 4.3 will potentially reduce parking needed by up to 50%. This could amount to a potential savings of land or structured parking floors of approximately 208 acres that could be used for other purposes and also reduce development costs.

~~In order to allow flexibility for development, it is not envisioned that a cap be placed on the provision of parking at a specific site. However, to discourage parking from being provided at higher than necessary rates, a Parking Impact Fee or Parking Exceedance Fee (or through an increased contribution to the Sense of Place Fee) can be assessed for projects that elect to provide more parking than the base requirement, unless such additional parking is made available for non-exclusive use by other developments and/or the public.~~

Table 4.3: Plan Area Parking Requirements

Land Use Category	Current City Requirements1	LSAP Parking Requirement
Residential	*1.5-2.4 per unit (depending on unit size and type of parking)*	*1.0-2.0~~1.7~~ per unit2,3*
General Retail	*2.0- 5.5 per 1,000sf*	*~~2.5~~2.0-4.0 per 1,000 sf3,4*
Office, Industrial, and R&D	*2.0 - 4.0 per 1,000 sf*	*2.0-~~2.75~~4.0 per 1,000 sf3,4*

Notes:
1. City of Sunnyvale Municipal Code
2. Apply the following further adjustments for senior and affordable housing as appropriate:
** Senior housing: multiply by 0.5.*
** Affordable housing: multiply proportion of housing units that is deed-restricted by 0.5-0.75 depending on population car ownership characteristics.*
3. Allow for further reductions where parking demand management strategies are added to the supply on a case-by-case basis, as described in the Parking Management Section and as listed below:

- *Allow additional parking requirement reductions if parking is unbundled from property costs.*
- *Allow shared parking credit for utilizing ULI methodology.*
- ~~*Require parking exceedence fee if building above recommended parking ratio.*~~
- *Allow for on-street parking supply to count towards requirements.*

4. Allow for further reductions in parking requirements for employers who commit to implementing Transportation Demand Management (TDM) programs. Reduction rates should be based on calculated % alternative mode share to single occupancy vehicles (walking, biking, shuttle, transit, carpools/vanpools).

PARKING MANAGEMENT STRATEGIES

Shared Parking

Restricting the availability of any parking pool to a single use (i.e. only residential or only office), results in poor utilization of the parking supply. The Lawrence Station Area Plan provides a great opportunity for the implementation of a shared parking scheme that can greatly reduce parking requirements on an individual basis. For example, office/industrial/R&D parking lots and garages see peak parking demand during the daytime whereas residential parking is most needed in the evening, nights and weekends. Rather than providing distinct parking supplies to meet these complementary uses, the same parking supply can be used by employees during the day and residents in the evenings and at night, significantly reducing parking requirements for both land uses and making their development more economically feasible.

Shared parking will be phased into the Plan area as development takes place. Initial developments will need to provide parking at the higher end of the rates as outlined in Table 4.3, since they will have less opportunity for shared parking in the initial development phases. Later developments can provide less parking and use available shared parking supply.

Shared parking requirements should be in place ahead of development and be implemented as nearby complementary land uses come online. If possible, it would be beneficial to phase

development so that complementary projects are completed around the same time, so that shared parking can be implemented as soon as new projects are occupied.

Structured Parking
Where feasible, parking should be provided in structures rather than surface lots to avoid surrounding developments with parking lots. Although structures are more expensive (approximately $25,000 per space), there are potential cost efficiencies associated with constructing consolidated, shared parking structures, or constructing parking structures concurrent with a new development.

Planning for a parking structure should be considered when a shared parking analysis for proposed customer-serving uses (retail, restaurant) indicates that there are insufficient parking spaces (either surface or structured) located within a ¼-mile radius of the development to serve the estimated parking demand. The most logical space for a parking garage within the Plan area is near Sonora Court and Lawrence Expressway. This would be near the Caltrain station and the proposed San Ysidro Way Extension Retail Street.

Parking structures can also be integrated into housing as well as retail and office/industrial/R&D uses. However, the implementation of shared parking garages should only occur when there is substantial densification of the Plan area and a focus of uses (such as retail) that triggers the need for an adjacent high-capacity parking facility. Based on the parking supply requirements outlined in Table 4.3, the development of 100,000 sf of retail uses would have a parking demand of 300 spaces (assuming a rate of 3 spaces per 1,000 sf). Similarly, the development of 120,000 sf of office uses (assuming a rate of 2.5 spaces per 1,000 sf) or the development of 180 dwelling units (assuming a rate of 1.7 spaces per 1,000 sf) would have a 300 space parking demand.

Unbundling
There is frequently a mismatch between the fixed number of parking spaces provided with a unit of housing and the household’s needs. Furthermore, a fixed parking provision raises the cost of housing and hides the true parking cost.

“Unbundling” parking is a strategy that sells or rents parking separately from the price of a residence or commercial lease. Unbundling parking from property costs provides transparency to the cost of parking so that people can make better informed decisions about housing and car ownership costs. It also makes better use of the parking supply by allowing parking spaces that would have been allocated to carless households to be used by households with additional cars. Lastly, unbundling is complementary to shared parking since any excess supply of spaces can be leased or rented to outside entities.

In the case of commercial tenants, commercial leases can unbundle parking (parking spaces are leased separately rather than automatically included with building space), and list parking as a separate line item (parking rents are listed separately from building rents).

Car Sharing
Car sharing is a complementary strategy to the reduction of the parking supply because it meets the needs of people who typically drive a car very infrequently and leave it parked the rest of the time. Empirical research has found that the availability of shared cars can significantly reduce car ownership, which has a direct impact on the need to provide parking. Thus, encouraging car sharing among employees and residents is an important strategy in the Lawrence Station Area Plan.

The Lawrence Caltrain station is an excellent initial opportunity site for a small number of car sharing spaces. For comparison, car sharing is currently provided at the Redwood City station (three spaces), the downtown Palo Alto station (2 spaces), and the San Jose Diridon station (2 spaces). Initially, one car sharing spot for the Lawrence Caltrain station would be appropriate. As

development occurs and ridership increases, the number of car sharing spaces can increase to two or even three spaces, depending upon demand.

Parking Pricing
Parking pricing is the most effective mechanism for managing parking demand for a fixed parking supply and can be implemented at any time. It can be used to optimize the use of parking resources by preventing auto storage and commuter parking while promoting turnover that benefits businesses, and provides flexibility for adjustment as parking demand changes over time. It is equitable because only those who use the parking pay for parking, and the resulting revenues can be used to improve streets and other aspects of the transportation system. Finally, although its most obvious application is at on-street parking locations typically adjacent to retail, it can be used effectively in connection with all land uses, and is most effective when the on-street pricing is coordinated with the on -street pricing based on the demand for each type of supply. Parking pricing schemes should make paying for parking easy and convenient so that the only deterrent to parking is the parking rate in areas where demand warrants. Parking pricing works most effectively when parking demand is high; thus parking pricing should only be implemented as the Lawrence Station area develops and demand for parking increases.

Parking pricing is already in place at the Caltrain Station. However, due to the abundance of unrestricted free on-street parking nearby, Caltrain’ s current parking supply is underutilized as riders look for free opportunities to park around the station. Thus in the near-term, time restrictions on the streets immediately surrounding the station would help alleviate on-street parking by Caltrain riders and increase utilization of the Caltrain parking lot.

Residential Permit Parking (RPP)
RPP programs should be used as a mechanism to regulate on-street parking only if really needed. Such programs are counter to optimized utilization of the fixed parking supply, because they restrict who can park and at what times. In addition, since such programs typically place restrictions on how long non-residents can park, their enforcement tends to be inefficient because Parking Control Officers must establish that a car has been parked for a certain period of time before a citation can be issued. Sunnyvale should charge non-residents for parking in RPP zones rather than restricting their stay. An unpaid parking meter is much easier to enforce than a time limit.

The program should also be designed carefully to prevent underutilization of one type of parking and oversubscription elsewhere. For example, the residential parking permits should not be given to residents of developments where there are parking spaces available for rent or purchase. This will ensure that the on-street parking remains available for short-term visitors rather than being used for long-term auto storage.
RPP restrictions and the provision of additional parking at Lawrence Station should be implemented only if and when empirical data demonstrates an unambiguous need for such measures.

Parking Goals
PK-G1 Manage future parking supply so that it promotes and supports transit ridership as well as the needs of local retail, employment and residential uses.

Parking Policies
PK-P1 Adopt specific parking requirements for all new development in the Plan area.

PK-P2 Consider forming a Parking Management District for the Plan area.

PK-P3 Establish a shared parking program in advance of development, with the following features:

a. Require developers to submit a shared parking analysis.

b. Allow new development to either provide sufficient o -street parking supply to meet the incremental increase in parking demand associated with the proposed project, and/or lease parking spaces from earlier parcel owners who have available parking located adjacent to the development parcel (within 1⁄4 mile radius or closer).
c. Require new residential development to provide no more than 1.7 parking spaces per residential unit for exclusive use by residents. Additional parking supply that may be needed for the development shall be provided in shared facilities that will be required to be open to all users, including transit station patrons.
d. Price shared parking facilities according to market conditions, and encourage management by either the parcel owner, or the Plan area Parking Management District.
e. Consider allowing on-street parking spaces to be added as part of the development of a parcel to count towards a project's required shared parking supply, but do not allow it to be used as reserved spaces for residential uses.
f. Verify the accuracy of the parking demand estimates of the shared parking model based on interim parking demand counts over the course of the build-out of the Plan area. Conduct parking counts during the peak parking demand period as identified in the shared parking analysis: weekday afternoons in December. Parking ratios in the shared parking model shall be calibrated to the parking demand counts if there is a significant discrepancy.

PMP-4: Plan for structured parking as demand increases. This can be in the form of a stand-alone parking structure for nearby users, or shared parking integrated with residential or office/R&D uses.

PMP-5: Unbundle parking costs from property or lease costs.

PMP-6: Provide parking spaces at the Lawrence Caltrain Station for the exclusive use of car sharing vehicles.

PMP-7: Implement a parking pricing system as demand for parking in the area increases.

PMP-8: Establish a residential parking permit (RPP) program in the Plan area in the future if / when analysis demonstrates a need for such measures.

TRANSPORTATION DEMAND MANAGEMENT

Jurisdictions in the Bay Area increasingly require Transportation Demand Management (TDM) strategies designed to reduce the number of people driving alone to and from their place of business (and in some cases residence) in favor of walking, bicycling, taking transit or shuttles, carpooling or vanpooling. Common TDM strategies include providing shuttle service, providing bicycle parking and "end-of-trip" facilities (showers, lockers), marketing campaigns to discourage auto trips, offering transit passes to employees, providing dedicated carpool/vanpool parking spaces, offering cash in place of a free parking space (parking cash-out), and charging for parking.

Currently, Sunnyvale has a codified TDM requirement for the Moffett Park Specific Plan area and for higher intensity office/industrial development. As a condition of project approval other sites have been required to implement a TDM program. Many large employers have had experience with TDM and understand the benefits of implementing such a program. Given the high proportion of auto usage in Sunnyvale, there is a great opportunity to realize benefits from TDM programs.

As part of the development incentive program in the Lawrence Station Area Plan, new development in the Plan area will be required to implement a TDM program with robust monitoring measures. For example, office/R&D developments will be required to meet a daily trip reduction target of at least 20 percent and a peak hour trip reduction target of at least 35 percent.

TDM trip reduction for residential and retail uses is more difficult to achieve than for office uses. However, residential and retail projects will also be required to develop TDM programs and meet specific targets. ~~Initially, trip reduction targets for residential~~Residential ~~and retail~~ uses will be ~~approximately five percent for trips during the peak hours~~required to meet the adopted Residential TDM program goals.

Transportation Demand Management (TDM) Goals

TDM-G1 Reduce vehicle trips in the Lawrence Station Plan area through TDM programs

Transportation Demand Management Policies

TDM-P1 Encourage businesses and property owners to collaborate on area-wide TDM strategies for their sites in the Lawrence Station Plan area.

TDM-P2 Achieve a daily trip reduction target of 20 percent and a peak hour trip reduction target of 30 percent for new Office/R&D development.

TDM-P3 Achieve a peak hour trip reduction of 5% for new retail and residential development.

TDM-P4 Include incentives for the provision of the following features as part of a TDM program for the Plan area:

1. Provide shuttle service
2. Provide bicycle parking and end-of-trip facilities (e.g., lockers, showers)
3. Create marketing campaigns to discourage auto trips
4. Offer low-cost or free transit passes to employees
5. Dedicate carpool/vanpool parking spaces
6. Offer cash in place of a free parking space (parking cash-out)
7. Charge for parking
8. GreenTrip registration.

5. UTILITIES AND PUBLIC SERVICES

Public utilities and public services such as schools and emergency services are an important part of the long-term success of a neighborhood, district or city. These facilities must not only be carefully planned for but they must also be provided in a timely manner in anticipation of growth. This section outlines the basic components of public infrastructure and public services that will be needed in the Plan area.

UTILITY INFRASTRUCTURE

The capacity of existing city-owned utilities to accommodate planned growth was assessed for the Plan area in early 2015. Estimated improvements that may be required are discussed in the sections that follow. Analysis of proposed conditions is limited to storm drainage, potable water supply and wastewater management within the incorporated boundary of Sunnyvale. Other utilities, including telephone, cable, gas and electric infrastructure are supplied by their respective private franchise operators and are not a part of this discussion.

STORM DRAINAGE

Local storm drainage facilities in the Lawrence Station Area are owned and maintained by the City of Sunnyvale. These local systems discharge into a regional system, under the jurisdiction of the Santa Clara Valley Water District (SCVWD), which conveys storm run-off to the San Francisco Bay.

In the Plan area, SCVWD facilities include the El Camino Storm Drain Channel (ECSDC), and Calabazas Creek. From the residential neighborhood located in the Plan area's southwest quadrant, the ECSDC flows northward and then eastward, running along the railroad's southern edge before connecting to Calabazas Creek, approximately one-half-mile east of the Lawrence Station. Calabazas Creek flows from south to north connecting into the San Tomas Aquino Creek which empties into Guadalupe Slough approximately 3-miles north of the El Camino Storm Drain Channel confluence.

The northeast quadrant of the Plan area is currently characterized by industrial and R&D uses with interconnected parking areas and no internal public streets. As such, there is very little existing public storm drainage infrastructure in this area.

Planned Drainage Improvements

Drainage improvements within the Plan area will be required to conform to the parameters set forth by the Cities of Sunnyvale and Santa Clara, and the Santa Clara Valley Water District (SCVWD). The City's development policies address storm drainpipe design for capacity and quality. Storm drains are to be sized per the current Santa Clara County Drainage Manual approved in 2007. Storm drains are required to accommodate a 10-year design storm and post-development flow rates cannot exceed pre-development flow-rates, on a project-by-project basis.

New developments that create or replace more than 10,000 square feet of impervious surface must comply with Provision C.3 of the Municipal Regional Permit (MRP) and with California State Water Board requirements. The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) has published a "C.3 Stormwater Handbook" that assists developers in meeting local municipal and State regulations through the use of Low Impact Design (LID) strategies.

The Plan area is underlain by soils with low percolation rates. Therefore, in filtration is generally not practical. In such situations, commonly-accepted LID strategies include treatment methods such as bio-retention basins and flow-through planters, as well as green roofs, media filtration devices and utilization of pervious surfaces.

While it is typical for individual, private projects to incorporate treatment systems within their individual sites on a project-by-project basis, provisions for treatment of run-o from either new or newly widened public facilities, such as streets, sidewalks and bicycle trails/paths will also be required. As site planning within the Plan area progresses, a comprehensive, area-wide approach to storm water treatment should be considered. An area-wide approach could include developing standards for public streets that allow storm water to be treated "at the source" before being captured in drainage inlets, and/or large, regional facilities that treat run-off from multiple parcels and/or public rights-of-way. In either case, adequate space for these facilities must be programmed into any land planning effort.

The Plan area currently consists of parcels with a diverse mix of uses from residential to commercial and industrial, but the majority of the Plan area is developed land with high percentages of impervious surfaces that direct storm water runoff directly into the public storm drain infrastructure with little to no retention or treatment. As projects are implemented that comply with the MRP requirements, it is anticipated that the overall percentage of impervious surface within the Plan area will decrease, so additional mitigations for storm water peak flow conveyance, either incorporation of detention facilities to attenuate peak flows, or upsizing of existing conveyance facilities to accommodate increased peak flows, is not anticipated.

Local storm drainage infrastructure that collects and conveys runoff to major storm drain systems will need to be reconfigured to accommodate redevelopment. New streets serving new development will contain new storm drainage systems that will comply with City of Sunnyvale design standards and specifications.

Flood Plain Management
Areas along the southern portion of Lawrence Expressway and near the railroad right-of-way are currently identified by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) to be within Zone AO, as is shown in Figure 5.1. These properties have a 1% or greater chance of flooding each year (often referred to as "the 100-year event"), with an average inundation depth of 1-to-3-feet.

Projects proposed within Zone AO will require the raising of grades, most likely by importing ll material, by an average of 1.5 feet to elevate the building floor and mechanical features above the Base Flood Elevation per city policy on construction within Flood Zones. A regional study and Conditional Letter of Map Revision by Fill (CLOMR-F) will likely be required to ensure that fall within the existing flood plain does not adversely affect other properties.

POTABLE WATER
Water Supply and Demand
The City of Sunnyvale has adequate water supply commitments, through its local wells and its contracts with the Santa Clara Valley Water District and the San Francisco Public Utilities Commission, to reliably meet the projected water needs of its residents and businesses for the foreseeable future. It is not anticipated that increased densities in the Plan area will cause overall projected demands in the city to exceed supply.

Notwithstanding the above, in order to comply with the provisions of Senate Bills 610 and 221, which both passed the California State Senate in 2001, the City of Sunnyvale should consider preparing a Water Supply Assessment that defines the Plan area as a single project, and verifies that adequate water can be supplied to the area, consistent with the assumptions of the Lawrence Station Area Plan. The increased demands within the Plan area can then be incorporated into the baseline assumptions for any subsequent water supply analysis within the city.

Water Distribution
The water distribution system is owned and operated by the City of Sunnyvale Department of Public Works and consists of a pipe network which lies predominantly beneath the traveled

roadways in the public street rights of-way, and a system of reservoirs that store water and regulate pressures. Over 80% of the distribution and trunk lines in the City were installed in the 1960's and are nearing the end of their estimated 50-year service life, so rehabilitation and/or replacement is needed to minimize the need for emergency repairs.

Many of the distribution lines to and within the Plan area are 8-10 inches in diameter and pressures are between approximately 75 pounds per square inch (psi) and 90 psi. Like the City as a whole, these lines are mostly located within public street rights-of-way. Areas characterized by commercial uses with interconnected parking areas and no internal public streets have very little public water distribution infrastructure. Therefore, as new projects are developed and new public streets are installed, new public distribution mains will be needed to serve fire and domestic water needs.

Overall, the densities of development projected for the Plan area will represent an increase over existing conditions, which will, in turn, increase domestic and re water demand in the area. It is estimated that the existing network of distribution mains in the area are adequate to meet increased re flow demands.

It is estimated that new distribution mains will be located in The Loop street and will be 10-12 inches in diameter. Distribution mains will also be located in local streets and will be 8-10-inches in diameter. Hydraulic analysis will be required based on final land plans, building types, water demand estimates, fire flow requirements and phasing, in order to establish final, actual line sizes in each street, as well as confirm that the existing mains are adequate.

Recycled Water
Recycled water can be appropriate for developments with large non-potable water demands. Although it has not been adopted as policy, the City of Sunnyvale Recycled Water Feasibility Study provides guidance on how the City intends to develop its recycled water delivery network.

Currently, there is a storage tank and pump station north of the rail lines. A new recycled water main line, referred to as "Kifer East," is to be constructed along Kifer Road, from the existing main in Wolfe Road across the Plan area.

Service within the Plan area is included as an optional project in Phase 3 out of 4 phases of the recycled water development program. Completion dates are not set but late phasing indicates that this region has comparatively high costs to benefits. Development contemplated in the Lawrence Station Area Plan, as well as less expensive construction in new streets could move this area to a higher priority rank when the recycled water plan is updated in the future.

When recycled water arrives in the Plan area, landscape improvements along new streets and pedestrian ways will provide an opportunity for recycled water irrigation. Additional opportunities for the use of recycled water include site landscape improvements for mixed-use residential, office/ R&D and industrial uses, as well as for public open space.

At some point, the City's sewage flows will simply not support additional reuse. The Recycled Water Feasibility Study indicates a desire to convert the entire 15 MGD waste flow to recycled water. The Study's scope is for 6.5 MGD peak day use. This seems to indicate significant theoretical capacity for expansion beyond those areas identified.

The Feasibility Study for Recycled Water Expansion explains that the city intends to fund expansion of the recycled water system through grants, low- interest loans, partnerships with neighboring agencies, and user rates.

WASTEWATER MANAGEMENT

Wastewater from the portions of the Plan Area that are southwest and north of the Lawrence Station is conveyed through the City's wastewater collection system to the Donald M. Somers Water Pollution Control Plant (WPCP), which is approximately four miles north of the Lawrence Station. The WPCP was last upgraded in 1984 and has an existing capacity to treat 29.5 million gallons of wastewater per day (MGD) before discharging to the San Francisco Bay. It is currently operating at approximately 50% of its capacity, as projections made in 1983 anticipated higher levels of industrial land uses and wastewater flow levels than have been realized. Flows are not expected to increase to levels that would approach the plant's design capacity in the foreseeable future.

Most wastewater from the Plan area is conveyed to the WPCP through a trunk main that flows from south to north in Lawrence Expressway. That trunk main is fed by a series of smaller public mains and private laterals. The conveyance facilities consist of gravity pipe lines made predominantly of vitrified clay, but mains are also constructed of various other materials including polyvinyl chloride (PVC), high density polyethylene (HDPE), reinforced concrete (RCP), ductile iron (DIP), and cast iron (CI).

The northeast quadrant of the study area is characterized by commercial uses with interconnected parking areas with no internal public streets. As such, there is very little public wastewater collection infrastructure in this area.

In order to determine what the wastewater infrastructure needs for the Plan area may be, baseline sewage generation for the existing conditions was estimated, based on rates published in the Sunnyvale Sewer Master Plan. No adjustment was made for future conservation measures which may reduce expected demands by customers.

Assigning the water consumption rates (see Appendix E) to the existing land uses, the resulting existing daily rates of wastewater generation are estimated and shown in Table 5.2. In total, baseline sewer generation for the Plan area is estimated to amount to approximately 0.90 Million Gallons per Day (MGD).

Wastewater generation for the Plan area will increase in the future due to the uses and densities envisioned in the LSAP. The likely increase was estimated, based on the Estimated Likely Development scenario described in Chapter 3: Land Use. As shown in Table 5.3, it is estimated that total wastewater generation in the Plan area will be approximately 1.78 MGD, which is nearly twice the estimated baseline.

In order to accommodate the anticipated increase in wastewater generation, local and trunk conveyance lines may require upgrades as well as the trunk line that conveys flows to the treatment plant. The City has prepared the decennial update to their Wastewater Collection System Master Plan. The estimated demands resulting from build-out of the Lawrence Station Area Plan should be incorporated into the update in order to determine the potential need for system upgrades.

I

n the future, as plans progress for the area, and the concentration of particular densities in specific locations are better understood, an area-wide study on the requirements of the trunk mains should be considered so that potential required improvements and associated costs can be better understood and funding strategies can be established.

Utilities Goals

U-G1 Ensure that storm water management programs in the Plan area achieve overall storm water quality compliance at both the individual project level as well as the area-wide level.

U-G2 Provide each development area with a water conveyance system that is capable of delivering adequate flow and pressure to meet Uniform Fire Code requirements for all proposed buildings.

U-G3 Provide each development area with an available public sewer main that is capable of conveying wastewater to the City's Water Pollution Control Plant.

U-G4 Provide each development area with the highest bandwidth connectivity available.

U-G5 Avoid flooding of new development by requiring flood prevention measures for those developments located in the flood zone.

Utilities Policies

U-P1 Promote the use of bio-retention basins and ow-through planters, as well as green roofs, in filtration trenches, media filtration devices, and pervious surface treatments as a part of stormwater management strategies for new development.

U-P2 Prepare standards for public streets that allow storm water to be treated "at the source."

U-P3 Prepare a comprehensive, area-wide plan for storm water management and treatment.

U-P4 Ensure adequate land area is allocated for area-wide storm water management and treatment facilities.

U-P5 Require all proposed habitable structures' finished floors to have at least 0.5-feet freeboard to the 1% Flood Elevation.

U-P6 Prepare a Water Supply Assessment that defines the Plan area as a single project, and verifies that adequate water can be supplied to the area.

U-P7 Minimize the use of irrigation-dependent landscape improvements for public streets, rights-of-way, and open space.

U-P8 In areas where large irrigation demand is anticipated, construct improvements such that they can be efficiently switched to recycled water when it is available.

U-P9 Establish a program to encourage the use of recycled water for landscape improvements on private development projects.

U-P10 Require developers to coordinate with telecommunication providers and have the necessary infrastructure installed.

U-P11 A regional study and Conditional Letter of Map Revision by Fill (CLOMR-F) shall be submitted and approved by FEMA for each development.

U-P12 Prepare a regional sewer system master plan that identities an overall plan and incremental public improvements that will be required for area build-out based on capacity or rehabilitation to reduce in flow and in filtration.

U-P13 Prepare a regional master domestic and re water delivery plan, including hydraulic model, based on assumed building densities, height and construction types, that delineates infrastructure needs for area build-out.

PUBLIC SERVICES

The Lawrence Station Area Plan study area is served by multiple school districts.

Elementary and Middle School:

- Sunnyvale School District
- Santa Clara United School District.

High School:

- Fremont United High School District
- Santa Clara United School District.

6. **URBAN DESIGN**

Urban design focuses on the design of the physical environment, with particular emphasis on the character and design of the public realm, neighborhood identity, livability and sense of place. This chapter describes goals, standards and guidelines that focus on the future character and built form of the Plan area.

The Plan area and its surroundings have a relatively short history as a built urban environment. Much of what is seen today in the Plan area was built after World War II in the 1960s and 1970s. Prior to this time, the area was known for vast acreages of agricultural land, particularly orchards. The layout and development pattern in the area is a result of this development history, with an orthogonal pattern based on the original agricultural grid, in lled with post-war suburban development of large parcel development, discontinuous street patterns, curvilinear streets (especially in residential neighborhoods), and low scale buildings.

In 1962, the system of County expressways, including the Lawrence Expressway and the Central Expressway, was established, with subsequent widening and grade separations in intervening years. These expressways were also aligned with the north/south orthogonal grid, further strengthening the underlying urban framework of the Plan area. This underlying grid pattern has been used as the basis for the physical framework of new streets and blocks of the Lawrence Station Area Plan.

DEVELOPMENT VISION

The Plan area contains a variety of neighborhoods, districts and places with differences in scale and character and varying opportunities for conservation and development. The character and scale of development in the Plan area, as well as the surrounding areas, is noticeably different north and south of the Caltrain rail tracks.

South of the Caltrain tracks, land uses are almost entirely residential and development is typical of suburban neighborhoods developed as large tracts after World War II. These neighborhoods are stable and attractive places to live, with attractive tree-lined streets and single and multi-family buildings three stories or less in height. Since these areas were developed for vehicular access, pedestrian and bicycle access is often missing or incomplete, and walking to the Caltrain station is circuitous and challenging.

In the area south of the Caltrain tracks, the overall scale of development will change very little, with policies to protect and enhance the character and quality of existing residential neighborhoods. This will include ensuring adequate scale transitions between existing neighborhoods and new development areas. In select locations, such as the Calstone/Peninsula Building Materials property, and the corner property at Reed Avenue and Lawrence Expressway, new, higher intensity development is envisioned. These guidelines will help ensure that the development is compatible in scale and character with the surrounding residential neighborhoods.

The area north of the tracks is generally characterized by very large parcels, currently occupied by primarily one story industrial, research-and- development (R&D) and warehousing uses, as well as a large format retail (big box) establishment and free-standing restaurants along Kifer Road. Building coverage and overall intensities are low. Parking is typically in surface lots surrounding buildings.

North of the Caltrain tracks, the Station Area Plan envisions a future that is a departure from the existing pattern of low scale, large footprint buildings and parking lots. Reflecting the overall trend toward higher-density developments for office and R&D in Silicon Valley and increasing land values, this area will be allowed and encouraged to naturally transition to a more dense urban scale, consistent with this Plan and the design guidelines of this chapter. Over time, the area

north of the Caltrain tracks will become a regional and local urban hub, job center, and new neighborhood for urban living, served by a diverse multi-modal circulation system.

The design guidelines in this chapter will help shape this physical development process. Although portions of the overall study area are in the City of Santa Clara, the design guidelines apply only to the Lawrence Station Area Plan, which deals with lands only within the City of Sunnyvale.

The design guidelines that follow have two general categories:

1. Area-wide guidelines that apply to the Plan area (in Sunnyvale) as a whole.
2. Specific Area Guidelines which apply to subareas within the Plan area.

These guidelines apply to the development of specific parcels, private and public, within the Plan area.
In addition, this chapter provides guidelines for the design of public streets and rights of way (Streetscape Guidelines).

AREA-WIDE GUIDELINES

Several design guidelines apply to all areas throughout the Plan area. These include Sustainability, Block Size and Street Pattern, Site Planning, Building Design, Open Space and Landscape, and Parking.

SUSTAINABILITY

Sustainability is a key value of these urban design guidelines. The Plan's overarching concepts and goals are inherently sustainable, as they encourage transit use, promote bicycling and walking instead of driving, and encourage land use diversity and flexibility. The urban design guidelines, however, focus on the individual design aspects that will make the Plan area a livable a desirable place. Many of the guidelines have been included to ensure that the LSAP upholds the City's commitment to sustainability. Those that have strong environmental sustainability content have been noted with the following symbol.

BLOCK SIZE AND STREET PATTERN

A primary goal of the Lawrence Station Area Plan is to improve circulation and connectivity for all modes of travel, particularly pedestrians, bicyclists and other forms of transit, such as buses. One of the most important considerations in achieving this goal is block size and the pattern of streets. In general, block sizes of approximately 300 - 400 feet on a side are ideal as they allow multiple circulation routes in walkable increments in all directions. At an average walking pace, this means that each block length can be traversed in a few minutes, thereby allowing pedestrians to circulate through an area without lengthy and discouraging diversions. Such block sizes also provide multiple opportunities for vehicular traffic circulation and access to land and buildings.

There is no portion of the Plan area that has been currently developed with such an idealized street and block pattern. The single-family residential neighborhoods south of Reed Avenue have reasonable block depths but block lengths are typically very long, making access to any point – including parks, schools and the Caltrain station - circuitous and indirect. Between Reed Avenue and the Caltrain tracks, the multifamily developments include internal walkways and open spaces that provide circulation routes for local residents but not the public at large and there is not a complete public street network serving the area. The industrial development pattern of the area north of the Caltrain tracks evolved with only one connection across the rail corridor and very large block sizes suited to truck and automobile access to serve the low scale industrial uses.

Block Size and Pattern Goal

BSP-G1 As properties redevelop incrementally, establish a publicly- accessible framework of streets and blocks scaled to pedestrian and bicycle users and accessible to all modes of travel.

Block Size and Pattern Guidelines
BSP-UDG1 To the extent feasible, establish a public street/walkway grid and block pattern with block sizes of approximately 300 feet on a side.

~~**BSP-UDG2** Limit street block lengths between public streets to a maximum of 600 feet.~~

BSP-UDG2~~3~~ Where block sizes exceed approximately 300 feet, provide mid- block pedestrian connections. Mid-block connections may take the form of a pedestrian access way or a shared pedestrian/ emergency/services path.

BPS-UDG3~~4~~ To the extent feasible, add publicly-accessible pathways in existing development areas where street connectivity is limited.

BPS-UDG~~5~~4 Avoid security gates on publicly-accessible routes at all times of day.

BPS-UDG5~~6~~ Maintain an open, walkable environment throughout the Plan area.

BPS-UDG6~~7~~ In instances where creating a new public street is not immediately feasible, reserve space for future implementation and provide an initial pedestrian/bicycle path.

SITE PLANNING

Site Planning Goal
SP-G1 Site and design new development to have a more urban and visually interesting character, adjoining the public environment of streets and walkways, rather than being set back behind surface parking and large planted setbacks.

Site Planning Guidelines
SP-UDG1 Site buildings to reinforce the street edge or corner by maximizing building frontage along the street. Building setbacks will vary by street type, as detailed in Table 6.1: Development Setbacks.

SP-UDG2 For the San Ysidro Way Extension (retail street) and the retail area on Willow Street (south of the station), locate the primary building façade at the street right-of-way/property line (0 feet setback). As shown in Figure 6.1, exceptions to this rule are allowed and encouraged to emphasize the retail zone and widen the sidewalk as follows:

- Up to 10 feet maximum setback from the property line.
- Contiguous with the sidewalk grade and accessible to the public.
- Upper levels of the building may extend over the setback area to create arcades and overhangs.

SP-UDG3 On non-retail streets, allow for greater setbacks where the ground- oor use is residential.

SP-UDG4 Up to 15 percent of the horizontal length of the building façade may be stepped back beyond the setback. This allows entry courts, public plazas, and building articulation at the ground level, which must be publicly accessible.

SP-UDG5 Maintain neighborhood and street character by locating residential uses across the street from one another where possible.

SP-UDG6 Limit curb cuts to minimize pedestrian-vehicular con icts.

SP-UDG7 Accommodate re and emergency access per state and local codes and away from pedestrian and bicycle conflicts.

Street	Minimum Setback	Maximum Setback
The Loop	*10'*	*15'*
The Loop & Lawrence Station	*10'*	*15'*
Sonora Court	*35' **	*45' **
Kifer Road	*15'*	*25'*
New North/South Retail Street	*0'*	*10'*
Internal Circulation Street	*10'*	*15'*
Lawrence Expressway	*~~per City~~45'*	*~~per City~~45'*
Aster	*10'*	*15'*
Willow Street	*10'*	*15'*
French Street	*per S.C.*	*per S.C.*
Calabazas Creek	*10'*	*20'*

** Dependent upon location of existing redwood trees*

BUILDING DESIGN
Several components of building design are particularly important in creating a comfortable and attractive pedestrian and transit-oriented development pattern.

Building Height
Figure 6.2 identifies maximum allowable building heights throughout the Plan area. These heights are consistent with current zoning. Building heights will vary considerably throughout the Plan area. In the areas south of the tracks, heights will be lower to be compatible with nearby low scale (generally one-to-three story) residential uses. North of the tracks, heights can be higher. The tracks themselves provide an ample physical separation from residential uses south of the tracks. Rising land values, changing spatial requirements, and construction codes are resulting in taller buildings for office, R&D and residential uses.

Building Height Goal
BH-G1
Encourage the greatest concentration of taller buildings in the Plan area north of the tracks in the vicinity of Lawrence Station in order to ensure a high concentration of jobs and residents in close proximity to the station and emphasize the area's function as a transit hub.
Plan area north of the tracks in the vicinity of Lawrence Station in order to ensure a high concentration of jobs and residents in

Building Height Guidelines
BH-UDG1 Restrict building heights as indicated in Figure 6.2 and/or in the following situations:

- Around parks and public open spaces to maintain a pedestrian scale and maximize daylight/sky exposure. ▪ Along pedestrian walkways and sidewalks to provide a comfortable pedestrian scale.
- Adjacent to existing residential neighborhoods, stepping down to two or three stories to provide a transition in scale.

BH-UDG2 Place taller buildings or building elements at corner intersections to achieve greater visibility, scale relationships, and architectural massing and interest.

BH-UDG3 Ensure that building height, massing, and spacing allow views to the Lawrence Station from major arterials wherever possible.

BH-UDG4 Vary building heights within blocks and parcels in order to provide visual interest and variety and to avoid a blocky, uniform appearance.

~~**BH-UDG5** On the San Ysidro Way Extension (retail street) and adjacent to public open space, buildings that exceed four stories in height shall step back by a minimum of 10 feet for oors 5 and above.~~

~~**BH-UDG6** Residential buildings over three stories in height, located on residential streets or adjacent to public open space, shall step back a minimum of ve feet for stories above three oors.~~

BH-UDG~~7~~5 Provide optimal solar access for residents and workers in the design and location of buildings.

BH-UDG~~6~~8 Ensure new development does not shade existing development and open space. Conform to guidelines of the City of Sunnyvale Shade Ordinance.

Building Massing and Articulation
Building massing refers to the apparent bulk and dimensions of various parts of a building. Articulation refers to potential variations in the planes of the building such as roofs and façades.

Building Massing and Articulation Goal
BMA-G1 Modulate and articulate the massing on large buildings in order to reduce their apparent scale, ensure their compatibility with the surrounding development, and help create a pedestrian-scaled environment.

Building Massing and Articulation Guidelines
~~**BMA-UDG1** Reduce the apparent bulk of large buildings by breaking lager walls and volumes into smaller masses.~~

BMA-UDG1~~2~~ Articulate building facades, walls and massing to reduce the impacts of shade and wind on important open spaces, pedestrian corridors and retail streets.

BMA-UDG~~3~~2 The taller portion of a building (i.e., the tower) shall not occupy more than 25 percent of the length of a lot.

BMA-UDG~~4~~3 Accentuate major gateways in the Plan area with architectural modulation.

BMA-UDG~~5~~4 Reinforce street corners with changes in architectural massing and height.

BMA-UDG~~6~~5 Screen mechanical and other equipment from sight per the Zoning Code.

Building Orientation, Entries, and Façades
Building design, particularly at the ground level, is important to creating pedestrian environment that is interesting, attractive and feels secure, particularly on retail streets and in areas surrounding the transit station.

Building Orientation, Entries and Façades Goal
BO-G1 Activate the street and sidewalk by providing active ground floor uses, locating building entries and windows in appropriate locations, and providing pedestrian-scaled elements.

Building Orientation, Entries and Façades Guidelines
BO-UDG1 Orient buildings to ensure that the primary façades and entrance areas of all buildings face the street, open space areas, or other pedestrian-oriented circulation areas.

BO-UDG2 Place windows and storefronts at the street level and ground floor.

BO-UDG3 Use clear, non-reflective glazing on all windows at street level.

BO-UDG4 Emphasize building entries with small entry plazas, vertical massing, and architectural elements such as awnings, arcades, or porticos.

BO-UDG5 Design entries so that they are clearly identifiable from the street.

BO-UDG6 Provide a walkway leading from the street to the building entrance if the building is not located directly on a public sidewalk.

BO-UDG7 Enhance building entries and the adjoining pedestrian realm with plazas and landscaping.

BO-UDG8 For retail development with multiple store entries, orient all entries to the street or public plaza. Utilize the outdoor space for cafés or other outdoor retail uses.

BO-UDG9 On pedestrian retail streets and other designated retail areas, design the floor-to-ceiling height of the first floor to be greater than that of upper floors to accommodate ground- floor retail space. Generally, the height should be a minimum of 14 feet.

BO-UDG10 Include features that add depth, shadow and architectural interest, such as balconies, recesses, cornices, bay windows, and step-backs at upper floors, consistent with the building's style and scaled for pedestrians.

BO-UDG11 Limit blank walls along pedestrian-oriented streets and pathways to no greater than 30 linear feet without being interrupted by a window or entry. For large-format retail buildings, see additional guidelines related to Mixed-Use/Retail Buildings along Pedestrian Retail Streets.

Building Design Guidelines for Specific Building Types
In addition to the general building design guidelines that apply for all buildings, additional guidelines apply to specific building types.

Residential Buildings

Residential Building Goal
RB-G1 Ensure that residential buildings contribute activity to public streets and open spaces.

RB-G2 Ensure that residential buildings provide privacy for residents.

Residential Building Guidelines
RB-UDG1 Provide entries to residential buildings that are accessed directly from the street or public open spaces.

RB-UDG2 For residential development, design ground- floor units to have a direct relationship with the street and pedestrian realm.

~~**RB-UDG3** On non-retail streets, maintain a minimum setback of 10 feet from the sidewalk or a raised ground floor height of three to five feet to ensure residential privacy.~~

RB-UDG~~4~~5 Use balconies, stoops, windows, and courtyards to provide architectural interest.

RB-UDG~~5~~6 Employ variation in scale and form for residential development, allowing for both pedestrian-scaled and larger-scaled massing.

RB-UDG~~6~~7 For residential development facing onto local residential streets or public open space, use lower-scale residential forms such as townhomes up to three stories in height at the street. Buildings should step back to add an additional story.

Mixed-Use/Retail Buildings along Pedestrian Retail Streets
Also refer to the Toolkit for Mixed-use Development in Sunnyvale for mixed- use goals and policies.

Mixed-use/Retail Buildings Goal
MU-G1 Ensure that buildings contribute to the character of public pedestrian areas and support a successful retail environment.

Mixed-use/Retail Buildings Guidelines
MU-UDG1 Orient building entrances to the street and space no more than 50 feet apart.

MU-UDG2 Clearly address the public realm by providing glazing on at least 70 percent of the ground floor retail façade facing the street or public space.

MU-UDG3 Utilize architectural elements such as recesses, awnings, colonnades, and pronounced entrances.

MU-UDG4 Where entries orient to parking areas, provide continuous sidewalks from the street directly to the doorway.

MU-UDG5 If large-format, or "big-box," retail (over 25,000 square feet in gross building area) is developed along pedestrian retail streets, design buildings to support the pedestrian environment as follows:

- Locate and orient building along primary street edges and provide fenestration (windows, glass storefronts, and openings), signage, and entries.
- Fenestration and/or entries shall occupy a minimum of 30 percent of the façade with 50% fenestration being the goal.
- Place smaller retail spaces along the street side of large format retail buildings, thereby breaking down the massing of the building and creating a more pedestrian-friendly environment

BUILDING MATERIALS

Building Materials Goal:
BM-G1 Encourage variety in building materials to create a visually interesting environment.

BM-G2 Use building materials to de ne the functional levels of a building and its relationship to the public realm (particularly at the street level).

BM-G3 Ensure that materials avoid excessive monumentality or a monolithic character.

BM-G4 Ensure that materials t with the character and context of the existing development.

BM-G5 Prioritize sustainability as a key consideration.

Building Materials Guidelines
BM-UDG1 Use high-quality, durable architectural materials and finishes that provide a sense of permanence.

BM-UDG2 Use materials that express their true properties; faux reproductions of stone, for example, are discouraged.

BM-UDG3 Give preference to sustainable materials, buildings systems, and technologies.

BM-UDG4 Use materials that improve building envelope performance through insulation values and thermal mass.

BM-UDG5 Avoid highly reflective surfaces and materials that can cause heat or glare for pedestrians.

BM-UDG6 Avoid dark materials that absorb heat and reduce solar reflectivity.

BM-UDG7 Use glazing that is as clear and non-reflective as possible in order to provide transparency and visibility while meeting energy and daylighting performance requirements.

BM-UDG9 Employ accent materials such as tile insets or natural stone at the ground level to add texture, color, and visual interest at the pedestrian level along all pedestrian corridors.

BM-UDG10 Employ color to differentiate between building elements and to moderate the scale of buildings.

OPEN SPACE AND LANDSCAPE
Well-landscaped, publicly-accessible open space is an essential ingredient of any urban environment for both passive and active recreation purposes. Appropriate landscaping also provides visual interest and beautification, helps mitigate heat island effects, and provides a means to satisfy storm water management mandates.

Today the Plan area has no publicly-accessible open space and few areas of attractive landscape that are consistent with current sustainability goals. Therefore, new development on parcels throughout the area will be required to provide landscaped open space for public use.

Open Space and Landscape Goal
OS-G1 Ensure that open space provided by new development is publicly accessible and attractive.

OS-G2 Design open spaces to prioritize sustainability, including incorporation of stormwater Best Management Practices (BMPs).

Open Space and Landscape Improvement Guidelines
~~**OS-UDG1** For all blocks in redeveloped areas, provide a minimum of 20 percent of the land area for usable public open space, 10 percent of which shall be visible and accessible from the street or other public way.~~

OS-UDG1~~2~~ Open space acreages may vary by block as block sizes vary. Open space from one block may be combined with open space required for an adjacent block in order to create a larger single open space area.

OS-UDG2~~3~~ A portion of the open space may be utilized for outdoor dining and building entrances.

OS-UDG3~~4~~ Up to 25 percent of required open space may be covered by the building above. For sites smaller than 15,000 square feet, if the overhead height of the building is 18 feet or higher, 100 percent of open space may be covered by the building.

OS-UDG4~~5~~ Pedestrian rights-of-way can contribute to the public open space provisions.

OS-UDG~~6~~5 The cross-section dimension of a plaza, courtyard, or mid-block pedestrian connection should be a minimum of 20 feet.

OS-UDG~~7~~6 Do not exceed a grade differential greater than four feet between an open space or plaza area and the adjacent sidewalk grade.

OS-UDG~~8~~7 Include public art as part of open space improvements, per the requirements of relevant Sunnyvale public art ordinances.

OS-UDG~~9~~8 For residential uses, provide private and semi-private open space in accordance with the Sunnyvale Zoning Code.

OS-UDG~~10~~9 Use water pervious surface materials for parking areas, driveways and pathways to the extent that they do not cause damage to public streets or other infrastructure.

OS-UDG1~~1~~0 Use sustainable surface materials for paving, such as reclaimed pavers, locally produced materials, or concrete and asphalt with y ash content.

OS-UDG1~~2~~1 Include sustainable landscape design strategies, materials and finishes.

OS-UDG1~~3~~2 If recycled water is available in the Lawrence Station Plan area, use salt tolerant planting to maximize use of this water resource. Avoid its use on salt-sensitive plantings to remain, such as the Redwood trees on Sonora Court.

PARKING

As the Plan area evolves over time, densities will increase and it will become feasible to provide parking in structures or underground rather than at ground level in surface lots. This will have the benefit of minimizing the footprint of surface parking, which currently dominates existing development north of the Caltrain tracks. It will also free up additional land for new building development, open space and landscape improvements.

General Parking Goal

PK-G1 Minimize the footprint of parking in the Plan area and ensure that parking facilities, whether in structures, underground, or in surface lots, are well-designed, functional, attractive, and t well into their surrounding context.

General Parking Guidelines

PK-UDG1 In order to minimize pedestrian/vehicle con icts and optimize street operation, minimize curb cuts as follflflows:

- Share access drives and access easements to parking facilities.
- Share parking among uses, such as residential and office, as well as between developments, and within entire subareas.
- In particular, minimize the number of vehicular access points (curb cuts) from the following streets: The Loop, Willow Avenue (South of Aster), Aster Avenue, and Sonora Court.

PK-UDG2 No curb cuts shall be allowed along the following pedestrian priority streets, unless no other access is feasible:

- San Ysidro Way Extension (Retail Street)
- Willow Avenue (north of Aster)

PK-UDG3 Arrange development in a configuration such that parking is internally-focused with the minimum number of access lanes necessary.

PK-UDG4 Provide bicycle parking stalls per the Zoning Code.

PK-UDG5 Ensure that bicycle parking is secure and weather-protected.

PK-UDG6 Provide car-sharing spaces, electric vehicle charging stations, ~~compact parking spaces~~ and disabled parking spaces per the Sunnyvale Zoning Code.

Surface Parking Lot Guidelines

PK-UDG7 Locate surface parking lots away from street edges behind buildings and provide decorative, landscaped, or other screening.

~~**PK-UDG8** No surface parking lots shall be allowed along the following pedestrian priority streets:~~
- ~~San Ysidro Way Extension (Retail Street)~~
- ~~Willow Avenue (north of Aster)~~

PK-UDG~~9~~8 Landscape perimeter setback areas around parking lots with a mix of trees, shrubs and ground cover.

PK-UDG~~910~~ Provide a ratio of one tree per three (3) parking spaces on the perimeter of the lot and one tree per six (6) parking spaces on the interior of the lot. Ensure trees are equally spaced to maximize shade cover over the entire parking lot.

PK-UDG1~~1~~0 Accommodate pedestrians and bicycle traffic with pedestrian- only pathways and bicycle facilities through parking areas. Shade these areas with trees and architectural elements such as trellises and awnings.

Parking Structure Guidelines

PK-UDG1~~2~~1 Design parking structure access lanes to have the character of an attractive, well-landscaped small urban street.

PK-UDG12~~3~~ Locate parking structures away from primary pedestrian corridors.

~~**PK-UDG14** Active ground floor uses (retail, restaurants) are required along the street frontage for all parking structures that are located along the following pedestrian priority streets:~~
- ~~San Ysidro Way Extension~~
- ~~Willow Avenue (north of Aster)~~

~~**PK-UDG15** Direct vehicular access lanes to parking structures (driveways and curb cuts) are not allowed along the following pedestrian priority streets:~~
- ~~San Ysidro Way Extension~~
- ~~Willow Avenue (north of Aster)~~

PK-UDG1~~6~~3 Design parking structures that face the street so that façades are attractive, cars are screened, and sloped floors are not exposed.

PK-UDG1~~7~~4 Create visual interest and reduce the mass of parking structures through the use of:
- Variation in the dimension and proportion of openings of the façade.
- Decorative screens, railings, and trellis elements of durable, high-quality materials.
- Materials and designs that are similar to surrounding buildings on site.
- Awnings, arcades, trellises, or porticos along street-facing façades and pedestrian connections.
- Provide parking access lanes and driveways at spacing along the street of not less than 100 feet.
- Where parking lanes or courts are visible from the street, planter beds with trees or potted plants should be located between garage doors.
- Create shared, unallocated parking spaces, such as carports, in order to maximize site area for new building development and open space.

PK-UDG1~~8~~5 Locate and design pedestrian entries and stairwells for parking structures:
- As identifying architectural elements.
- Adjacent to public streets and along major pedestrian connections.
- To ensure that they are visually open and free of visual obstruction to promote a feeling of security and comfort.

- To minimize conflicts between pedestrians, bicycles, and vehicles.

PK-UDG1~~9~~6 For lower density residential development, such as row houses or townhouses:

- Multiple at-grade garage doors, aligned in a row, shall not directly face the street.
- Arrange at-grade garages around well-landscaped parking lanes and/or parking courts leading to individual garages.

SPECIFIC GUIDELINES FOR URBAN DESIGN SUBAREAS

Within the overall Plan area in Sunnyvale, eight subareas have been identified that generally correspond to the Land Use Plan described in Chapter 3 and illustrated in Figure 3.2. Because of their locational and site characteristics, it is envisioned that each of these subareas will have a somewhat different physical character. Therefore, in addition to the general guidelines described above, which apply to site planning, building design, open space and parking throughout the entire Plan area, specific design guidelines for the development of each of these subareas are needed. For purposes of these guidelines, these specific subareas are illustrated in Figure 6.4 . The eight subareas include the following:

- Transit Core
- Peninsula
- West
- East
- Calabazas Creek
- Office/R&D East
- Southern Residential
- Lawrence/Reed/Willow

The Lawrence Station Area Plan is structured such that change will not occur uniformly throughout the overall Plan area. Some areas will be encouraged to redevelop with a diversity of uses and at higher densities than exist today. These are referred to as High Change Subareas. Other areas will experience varying degrees of change over time horizon of this Plan. These are referred to as Moderate Change Subareas and Low Change Subareas.

HIGH CHANGE SUBAREAS

The two subareas in closest proximity to the station are where the greatest degree of change will likely occur. The two include:

- Transit Core. The Transit Core subarea is defined as the area north of and immediately adjoining the station, west of Lawrence Expressway. This area includes Sonora Court. Its location near the Caltrain station offers opportunities for increased development to more transit supportive uses.
- Peninsula. Located immediately south of the station, this property is an industrial site that is not well-suited to its location adjoining a commuter rail transit facility. Over time, this site offers opportunities to be converted to higher intensity residential uses with local serving retail services.

MODERATE CHANGE SUBAREAS

Four subareas north of the tracks o er strong opportunities for change in land use and intensity, but such change will likely be more moderate due to their distance from Lawrence Station and some of the current businesses that operate in the area:

- West. This subarea lies between Kifer Road and the Caltrain tracks to the west of the Transit Core. The West Subarea currently includes several properties owned by Intuitive Surgical, which is likely to continue these uses indefinitely.
- East. This large subarea lies between Kifer Road and the Caltrain tracks to the east of the Lawrence Expressway. The East Subarea includes the Costco site, Intuitive Surgical properties and other office/R&D uses. Major land use change is not expected in this subarea in the short term, but, like the West subarea, there may be opportunities for

transitions to more transit-supportive uses and densities in selected areas as well as selected circulation and access improvements.

- Calabazas Creek. The Calabazas Creek Subarea is located between Kifer Road on the north, the Caltrain tracks on the south, the rail spur on the east and a new segment of The Loop on the west. Linear park improvements to the Calabazas Creek drainage channel as well as completion of The Loop roadway will help stimulate development in this subarea.
- Office/R&D East. The Office/R&D East Subarea is located at the extreme eastern end of the Plan area, between Kifer Road on the north, the Caltrain tracks on the south, the rail spur on the west and the City of Santa Clara boundary on the east. It is surrounded on three sides by the City of Santa Clara, and therefore integration with the land use patterns and circulation systems in that city is appropriate. The Office/R&D East Subarea includes a city-owned property and other industrial uses.

LOW CHANGE SUBAREAS

Areas south of the tracks, which include, or are in proximity to, existing residential neighborhoods, will experience very little change:

- Southern Residential. The Southern Residential Subarea includes all of the existing built residential areas south of the Caltrain tracks. This subarea will not experience any change in land use or density under the policies and guidelines of this Plan.
- Lawrence/Reed/Willow. This small southerly set of parcels, located at the northwest corner of Reed Avenue and the Lawrence Expressway, bounded by Willow Avenue on the west and north, is currently a mix of retail and service uses. The Plan allows increases in density in this small area, but it does not allow a significant change in use.

Following is a discussion of urban design guidelines related to each of the Urban Design Subareas.

TRANSIT CORE

With its location directly adjacent the station, this Transit Core Subarea will be one of the most active and diverse subareas in the Plan area (see Figure 6.5). The focus of the subarea will be the southern extension of San Ysidro Way, which will be the primary retail street in the entire Plan area, terminating in a transit plaza at Lawrence Station. Vertical mixed-use development is encouraged along San Ysidro Way Extension. Active ground floor uses (preferably retail, restaurant and entertainment uses), will be required along a large percentage of the ground floor frontage along the street in order to ensure it promotes a walkable, pedestrian-friendly street that provides goods and services to surrounding neighborhoods and pleasant access to Lawrence Station.

The form of future development of this area will be crucial to improving connectivity to the station for all modes, particularly pedestrians and bicyclists. The Transit Core also has the landmark Redwood trees which line Sonora Court, making improvements to this area an opportunity to create a unique, character-defining environment while also protecting this unique resource.

The accompanying illustrative development diagram (Figure 6.6) shows a potential framework for development of the Transit Core subarea. Figure 6.7 is a conceptual plan of potential future development.

Transit Core Subarea Guidelines

~~**TC-UDG1** On blocks facing the new retail street (San Ysidro Way Extension), devote a minimum of 70% of the ground level uses to retail.~~

TC-UDG1~~2~~ Locate primary building entries to upper oors (residential and office/R&D) facing the street.

TC-UDG2~~3~~ Design Sonora Court to be a special street with a strong open space/landscaped character incorporating the existing mature Redwood trees. See also Streetscape Guidelines.

TC-UDG34 For development directly adjoining the Lawrence Station and Caltrain tracks on the south side of Sonora Court, incorporate landscape and building design measures to mitigate the negative e ects of noise and vibration.

TC-UDG45 Design the major transit plaza at the Caltrain station as a visual focus for the area.

TC-UDG56 Develop a major public open space in the Transit Core subarea to serve as a focal point for the neighborhood. Orient adjoining development toward this open space (unless they are oriented to San Ysidro Way Extension) and provide entries and other uses that will provide pedestrian activity.

PENINSULA
The Peninsula Subarea shown in Figure 6.9, is currently devoted entirely to the Peninsula Building Materials and Calstone operations. It is envisioned that most of this urban design subarea will be devoted primarily to residential uses with open space and a small amount of support retail and office/R&D uses.

Like the Transit Core Subarea, with its location directly adjacent to Lawrence Station, the Peninsula Subarea will be one of the most important development subareas in the Plan area. However, since the subarea is directly adjacent to existing low/medium density, low-scale residential uses on the south and west, care in placement of land uses as well as the design of site and building improvements will be important considerations. Figure 6.10 shows a site diagram of development considerations.

Peninsula Subarea Goal
PS-G1 Ensure new development is compatible with the existing surrounding neighborhood.

Peninsula Subarea Guidelines
PS-UDG1 Incorporate pedestrian access lanes, on a spacing similar to the townhouses across Aster, in order to provide convenient pedestrian movement through the subarea.

PS-UDG2 Locate tallest buildings and highest densities along the train tracks, transitioning to lower scale buildings to the south and west, where they adjoin or face nearby apartments and townhouses.

PS-UDG3 For buildings adjacent to the tracks, incorporate landscape and building design measures to mitigate the negative effects of noise and vibration from train operations.

PS-UDG4 Expand the existing drop-o area adjoining Lawrence Station into a larger public plaza.

PS-UDG5 Concentrate small-scale retail uses, providing coffee, sandwiches or other services, at the eastern end of the subarea along Willow Avenue and around the expanded station plaza in order to serve residents as well as train passengers.

PS-UDG6 Locate public open space to be directly visible and accessible from Aster Avenue as well as from the west boundary pedestrian/ bicycle linkage.

WEST
West is envisioned as a Flexible Mixed Use area, suitable for both employment and residential uses. It is not envisioned as a retail location. A critical new segment of The Loop will traverse the subarea.

West Subarea Goal
WS-G1 TBD

West Subarea Guidelines
WS-UDG1 Provide a new pedestrian/bicycle linkage connecting between The Loop and the new pedestrian/ bicycle undercrossing of the tracks.

WS-UDG2 Provide multiple bike/pedestrian opportunities to tie Kifer Road to Sonora Court and accessibility to the station.

WS-UDG3 For buildings adjacent to the tracks, incorporate landscape and building design measures to mitigate the negative effects of noise and vibration from train operations.

EAST
The East Subarea has no residential adjacency constraints. Therefore, in the long term, this subarea is envisioned as a Flexible Mixed Use area, suitable for both employment and residential uses at relatively high densities. It is not envisioned as a long-term retail location although it is likely that Costco will remain in this location for many years.

The lack of north/south connectivity through this subarea is a significant impediment to improving access to the station. Improvements to provide pedestrian, bicycle and motor vehicle routes are needed. A critical new segment of The Loop will traverse the subarea paralleling the Caltrain tracks.

East Subarea Goal
ES-G1 TBD

East Subarea Guidelines
ES-UDG1 For buildings adjacent to the tracks, incorporate landscape and building design measures to mitigate the negative effects of noise and vibration from train operations.

ES-UDG2 Incorporate bike/pedestrian opportunities to tie properties north of Kifer Road to the station.

CALABAZAS CREEK
The Calabazas Creek subarea is located at the outside limit of the -mile distance to the Lawrence Station, the distance that is normally considered an appropriate walking distance to a rail passenger station.
Calabazas Creek flows north through the center of the subarea. The Creek is currently fenced, engineered with a trapezoidal concrete channel and serves as a drainage facility for the Santa Clara Valley Water District. It is currently inaccessible to the general public. However, long-standing plans envision Calabazas as an attractive linear park and multi-use trail facility in the future. Therefore, the Creek has strong potential to become a form- giving design amenity for all development in this subarea. The design of future site and building improvements in this subarea will therefore need to further enhance the linear park improvements.

As Figure 3.2: Land Use Plan illustrates, land uses in the Calabazas Creek Subarea differ from one side of the Creek to another. West of Calabazas Creek is envisioned as a Flexible Mixed Use area, suitable for both employment and residential uses at relatively high densities. East of Calabazas Creek, land uses are planned to be Office/R&D with no residential uses. The entire subarea is not envisioned as a long-term retail location.

Calabazas Creek Subarea Goal
CCS-G1 Capitalize on Calabazas Creek and the future linear park as a primary form-giving feature of development. Ensure new development enhances the Creek corridor and provides public access routes, activity, amenities, and an increased sense of security.

Calabazas Creek Subarea Guidelines

CCS-UDG1 Ensure new development along Calabazas Creek is compatible with future public access and park environment goals.

CCS-UDG2 Do not locate building service and parking areas facing the Creek or the Loop Road.

CCS-UDG3 Locate private open space in new development along the creekside property line to increase the perceived scale of the linear park.

~~**CCS-UDG4** Set back new building development a minimum of 15 feet from the linear park property line~~.

~~**CCS-UDG5** Limit building heights along the linear park setback to a maximum of three stories in order to be compatible with the pedestrian scale of the park and avoid shadows on usable public open spaces.~~

CCS-UDG~~6~~4 Ensure that new development promotes a public feeling for the linear park.

CCS-UDG~~5~~7 Provide visual indicators of the delineation between private parcel development and the public space of the linear park without the use of fences.

OFFICE/R&D EAST

The Office/R&D East Subarea is furthest from the station and outside the customary -mile walk radius.

Due to its distance from the Caltrain Station and its adjacency to similar uses to the north and east, this long-standing industrial area is envisioned to remain as an exclusively employment area with no residential or retail uses. Nonetheless its long-term development can support transit ridership through improved bicycle and pedestrian circulation facilities and increased development intensities that are compatible with the adjacent land uses in Santa Clara. The subarea will, therefore, be allowed to transition over time to higher intensity Office/R&D uses.

Office/R&D East Subarea Goal

ORD-G1 Retain this subarea as an exclusively employment area with no residential or retail uses, while integrating it better with the land use patterns and circulation systems of the surrounding area. In particular, improve bicycle and pedestrian circulation facilities to allow easy connection to the Lawrence Station and other destinations.

SOUTHERN RESIDENTIAL

The Southern Residential Subarea currently comprises a large part of the Plan area south of the Caltrain tracks and west of the Lawrence Expressway. Uses in the area include single-family-detached and multi-family residential areas that are stable and attractive. Therefore, the Station Area Plan envisions very little change in this subarea. Emphasis will be on protecting and enhancing the character and quality of existing residential neighborhoods through pedestrian and bicycle enhancements in order to improve access throughout the neighborhood, across major streets, and to the Lawrence Station.

There are two primary development sites in the subarea: Corn Palace and the industrial operations at 1122-1134 Aster Avenue. Half of the Corn Palace site has a pending development plan for low-medium density residential development, while the other half is designated low-medium density residential. A publicly accessible open space should be provided with future development of this parcel. Should the industrial site south of Aster Avenue be redeveloped, it would be limited to medium-density residential, per the land use plan. Redevelopment is optional (not required) on this or any other parcel in the Plan area.

Southern Residential Subarea Goal
SR-G1 Protect and enhance the character and quality of the existing residential neighborhoods with an emphasis on pedestrian and bicycle enhancements and the provision of a new neighborhood- serving local park or open space.

LAWRENCE/REED/WILLOW
The Lawrence/Reed/Willow Subarea is currently devoted to a mix of small- scale retail and auto-oriented uses. As described in the Chapter 4 of this report, Santa Clara County is currently studying options for grade-separating the Lawrence Expressway adjacent to this subarea, either by elevating the roadway above grade or depressing the roadway below grade. Grade-separation of the Expressway will likely change the configuration at this intersection and may alter access patterns to this subarea.

This subarea is envisioned to remain as a mixed office/retail area catering mostly to local needs. No residential uses will be allowed in order to avoid potential future impacts on homes if grade-separation construction on the Lawrence Expressway is undertaken. Since this subarea is centrally-located among residential neighborhoods south of the Caltrain tracks and it is surrounded by important pedestrian corridors on three sides, new uses will be developed to enhance the pedestrian environment.

Lawrence/Reed/Willow Subarea Goal
LRW-G1 Redevelop this subarea with neighborhood-serving non- residential uses that are designed for easy access by pedestrians, bicyclists and transit.

Lawrence/Reed/Willow Subarea Guidelines
LRW-UDG1 Ensure that future development on the south side of Willow Avenue is scaled to be compatible with residential uses across the street.

~~**LRW-UDG2** Place new buildings at the right-of-way line along Reed and Willow Avenues (no setback).~~

LRW-UDG~~3~~2 Locate primary building entries to upper floors facing the street.

LRW-UDG~~3~~4 Locate retail uses along Willow and Reed Avenues in conformance with General Site Planning Guidelines earlier in this chapter.

~~**LRW-UDG5** Locate parking in this subarea as follows:~~
- ~~Adjacent to the Lawrence Expressway~~
- ~~Internal to the development and not visible from the street~~
- ~~Below grade~~
- ~~Allow on-street parking credit as described in Chapter 4: Circulation and Parking.~~

STREETSCAPE DESIGN GUIDELINES
INTRODUCTION
The street system in Sunnyvale provides the majority of the city's public space. It is the conduit through which most circulation passes, the place where a large amount of personal interaction and commerce occurs, a place of recreation, and the backdrop on which a memorable image of the city is created. While many people experience public parks and other open spaces occasionally, almost everyone experiences public streets daily. Creating a high quality street environment is, therefore, of benefit to the vast majority of Sunnyvale citizens and visitors.

These guidelines emphasize the quality of the street environment by focusing detail on the design of the streetscape – the area framed by building walls. The quality of public streets is thus dependent upon two things:
- Improvements within the public right-of-way.

- The character of improvements to properties that abut the public right- of-way, particularly the ground level of buildings. Where it is appropriate to influence building design to achieve the goals for the public environment, specific requirements have been established.

These Guidelines include requirements for both public and private decision- makers, working cooperatively to create safe, attractive and lively streets within the Plan area.

Existing conditions in the Plan area vary widely from street to street and parcel to parcel and new developments will vary depending on site conditions, market and financial conditions, and program requirements. Therefore, these guidelines must be tailored to the specific conditions of individual development areas.

The framework of streets, both existing and proposed, varies between the portions of the Plan area located north of the Caltrain tracks and those located south of the tracks. South of the tracks, a network of local, collector and arterial streets is well established and serves the existing neighborhoods well. These areas will be protected as currently developed, with only minor street improvements in selected areas in order to improve safety, enhance circulation by all modes and provide beauti cation. Therefore, the area south of the Caltrain tracks is not the primary focus of these Streetscape Design Guidelines, except in those areas where specific improvements are recommended.

North of the Caltrain tracks, the existing framework of public streets and pedestrian ways differs markedly from the south. Streets such as Kifer Road, San Zeno Way and Lawrence Station Road frame the area, but there are no public rights-of-way available which penetrate through the area in either a north-south or east-west direction (with the exception of a short, dead- end segment of Sonora Court). As Chapter 4 describes, new streets and public rights-of-way are needed to serve future development of the area and provide improved access to the station and other local destinations. These Streetscape Design Guidelines are therefore intended to supplement the proposed framework of future streets and public ways and provide guidance on the design and character of these new public rights-of-way.

Streetscape Goals
ST-G1 Create a coordinated street environment that is supportive of new development and strengthens connections to the Lawrence Station and other important neighborhood destinations.

ST-G2 Design and construct streets as Complete Streets: context- sensitive, safe, convenient and attractive for all modes of travel and users.

ST-G3 Create a pedestrian environment of streets and pathways that is:

- Interesting, with appealing things to see, touch, hear and smell that makes one’ s time in the area a positive experience and encourages return visits.
- Attractive, with building and landscape improvements that create a beautiful setting in which people can walk, drive, shop, work, and live.
- Safe, allowing people to feel comfortable and secure, whether alone or in a group, during the day, evening and night.
- Successful, where walking becomes a primary means of local transportation, enhancing transit ridership and supporting a thriving neighborhood and retail climate.

ST-G4 Create a Streetscape Master Plan that defines a hierarchy of street spaces and places and relates to the varying functional roles of the Plan area streets.

The following guidelines provide both broad and detailed objectives for achieving these goals. Many elements of streetscape design should be consistent throughout the Plan area, while other

elements may be more appropriate to particular street types or location. Therefore, these Guidelines contain two parts

- General guidelines that apply to all streets in the Plan area.
- Guidelines that apply to specific streets or specific situations, both existing and new, in the Plan area.

GENERAL DESIGN GUIDELINES FOR NEW AND RENOVATED STREETS
Implementation of the following guidelines must take into account the cost and difficulty of disrupting existing conditions. Therefore the guidelines are not rigid requirements. The idea is to adapt to existing conditions wherever necessary while ensuring the design intent and goals are achieved.

Sidewalk Extensions (Bulbouts)
As described in Chapter 4, bulbouts will be provided throughout the Plan area. In general, they are only feasible on streets with on-street parking, because the bulbout extends into the parking lane, thereby widening the sidewalk. Therefore, their location must be carefully considered in order to minimize parking losses in areas where parking supply is critical.

In the Plan area, there are three types of bulbouts:

- Corner Bulbouts. This is particularly important at unsignalized and wide (multi-lane) intersections that carry large volumes of traffic. At signalized intersections, bulbouts have an added benefit of allowing slightly shorter signal cycle timing, thereby potentially improving traffic flow.
- Transit Bulbouts (Transit Mini-Plazas) are typically located at corners with bus stop locations. They are longer to accommodate the length of a bus. Because of their larger size, they provide additional space for passenger queuing, shelters, seating and other transit-related amenities.
- Amenity Bulbouts can be placed in any location where additional sidewalk space is desired. They provide opportunities for seating, planting, outdoor dining, furnishings and other amenities. They also provide opportunities for mid-block street crossings where appropriate. Their length depends on location.

Sidewalk Extensions (Bulbouts) Guidelines
SE-UDG1 Minimize impacts on existing drainage systems, transit turning requirements, parking lanes and rights-of-way, existing trees and pedestrian paths of travel when locating and installing sidewalk extensions.

SE-UDG2 To the extent possible, accommodate subsurface utilities, including existing drainage facilities in the design and construction of curb extensions.

Sidewalk Paving

Sidewalk Paving Goal
SW-G1 To provide a permanent, durable, interconnected network of pedestrian walkways that is accessible to all users, easily maintained, and provides a generally consistent appearance throughout the Plan area. Allow variation in materials and design in special nodes, plazas and gathering points.

Sidewalk Paving Guidelines
SW-UDG1 In general, use natural concrete (without unique color additives) for all sidewalks, including areas where public sidewalks extend into the setback area of a parcel.

SW-UDG2 Avoid special coloring, stamp patterns and unusual scoring patterns, except at special locations, since matching of colors and patterns can be di cult when future maintenance or repairs are conducted

SW-UDG3 Use special paving materials, such as unit pavers made of brick, stone, or concrete, at special nodes, plaza areas and streets, within sidewalk extensions and other special pedestrian areas in order to differentiate them from the sidewalk and de ne a specific place.

Street Planting

Street Planting Goal
STP-G1 Enhance the urban forest in the Plan area in order to:

- Provide shade and shelter
- Mitigate adverse environmental conditions such as wind and pollution
- Add scale to both pedestrian and vehicular streets
- Enhance property values
- Provide wildlife habitat
- Manage stormwater
- Beautify the area.

Street Planting Guidelines
STP-UDG1 Plant street trees on all streets.

STP-UDG2 Locate street trees in the curb zone of the street (within 4-6 feet of the curb, depending upon sidewalk width) unless the width of the sidewalk and/or right-of-way prevents planting in that area. In such cases, locate street tree planting within the front setback of private parcels if possible.

STP-UDG3 Use medium-to-large canopy trees on large streets.

STP-UDG4 Use pedestrian-scaled, ornamental trees to de ne small-scaled pedestrian ways.

STP-UDG5 To the extent feasible, space street trees a distance no greater than 40 feet.

STP-UDG6 Protect existing street trees wherever possible throughout the Plan area, particularly in the southern residential neighborhoods, along Kifer Road and on Sonora Court.

STP-UDG7 Where tree removal is unavoidable, provide replacement trees.

STP-UDG8 Ensure new tree plantings are appropriate for an urban environment and meet the following minimum criteria:

- Drought tolerance
- Ease of maintenance

STP-UDG9

- Non-invasive root system
- Adequate canopy height to allow clearance for service, emergency and transit vehicles.
- Open branching and leaf structure to allow visibility both to and from buildings, particularly in retail areas.
- Deciduous (in most cases) to allow summer shade and winter sun to reach the pedestrian areas of the street.
- High water table tolerance.
- Salt water tolerance to allow use of potential future recycled water systems.

For shrub and groundcover planting in planting strips and medians, follow the criteria above for street trees. In addition:

- Select and maintain planting not to exceed 24” in height.
- Select and maintain plantings that will remain within the confines of the planting strip area.

- Provide means of crossing planting strips for motorists parked adjacent to the planting.

Lighting

Lighting Goal
L-G1 Use lighting to create a nighttime environment that:
- Creates a sense of safety and security
- Is appealing and attractive
- Meets the functional needs for vehicular and pedestrian circulation
- Defines specific gateways streets, and subareas
- Enhances special areas, such as retail districts, parks, and natural features.

Lighting Guidelines
L-UDG1 As part of the Streetscape Master Plan, prepare a Lighting Master Plan for the Plan area. Include a lighting standard specific to the Plan area in order to create a unique district within the City.

L-UDG2 Consider Dark Sky goals and requirements in the preparation of the Lighting Master Plan and selection of luminaires during project design.

L-UDG3 Provide roadway illumination levels that are not excessive, yet adequate for safe vehicle operation at the design speed of the street.

L-UDG4 Utilize energy-efficient lighting, such as light-emitting diode (LED) bulbs.

L-UDG5 Use luminaires that provide white light, rather than yellow light, in primary pedestrian retail locations, including San Ysidro Way Extension, Willow Avenue north of Aster and in the Lawrence Station Plaza Area. White light, such as that provided by LED's, renders colors more naturally and attractively than that provided by high pressure sodium (HPS) and similar luminaires, thereby enhancing merchandizing and making the street feel more secure.

L-UDG6 Consider the use of luminaires that provide white light, on all streets and pedestrian ways in the Plan area.

L-UDG7 Use poles and fixtures that are attractive and complement the character of the street and building environment.

L-UDG8 Use pole heights that relate to the scale of the street and its users.
- Along pedestrian corridors and retail areas that are pedestrian in scale, mount luminaires on poles not exceeding 15 feet in height.
- On all other streets, mount luminaires on poles not exceeding 20 feet in height.

L-UDG9 In situations where light fixtures with a visible light source are desired, provide shielding or directionality to avoid glare into adjacent buildings.

Street Furnishings
Street furnishings are the various elements that are placed along sidewalks and plazas and include:
- Seating
- Trash receptacles
- Consolidated newspaper racks
- Bicycle racks
- Tree grates
- Tree guards
- Bollards

- Planters
- Kiosks and flower stands
- Signage and way finding elements
- Transit shelters
- Parking meters
- Utility and service devices (e.g., traffic signal controls, mail boxes, re hydrants, etc.).

Street Furnishing Goal
SF-G1 Provide well-designed furnishings along streets that are:

- Useful and comfortable for pedestrians
- Meet the functional needs of utilities and services
- Attractive
- Generally consistent throughout the Plan area.

Street Furnishings Guidelines
SF-UDG1 Generally, use street furnishings that are:

- Designed to convey a coordinated design expression between all of the furnishing elements in the Plan area.
- Readily available from established manufacturers to avoid expensive custom fabrication and ensure ease of replacement.
- Durable and easy to maintain.

SF-UDG2 Incorporate unique, specially-designed street furnishing elements to provide a unique character in special areas, such as gateways, nodes, pedestrian corridors and retail districts, and gathering places.

SF-UDG3 Design and/or finish utility and service devices to either visually recede or, as appropriate, match other furnishing items.

The following guidelines apply to specific street furnishing elements:

Seating
SF-UDG4 Install seating that is user-friendly, but does not encourage long term use and sleeping.
Trash Receptacles

SF-UDG5 Provide two trash receptacles at diagonally opposite corners of each intersection in areas with high pedestrian circulation.

SF-UDG6 Provide trash receptacles with recycling options.

Bicycle Racks and Lockers
SF-UDG7 In retail areas, provide three bicycle racks on each side of the street in each block.

SF-UDG8 Place bicycle racks in the curb zone such that locked bicycles do not obstruct the sidewalk pedestrian path of travel.

SF-UDG9 In places where a larger number of bicycle racks are needed, consider the use of an on-street parking space or creation of a sidewalk extension (amenity bulbout) for bicycle parking.

SF-UDG10 Monitor the use of bicycle rack use and adjust the location, quantity and type of bicycle racks, where warranted. This process should involve the local bicycling community.

SF-UDG11 Evaluate the adequacy of bicycle racks and bicycle lockers at the Lawrence Station plaza on each side of the tracks. Periodically adjust, as warranted.

Tree Grates and Guards
SF-UDG12 Provide tree grates for all new or transplanted trees that are located in paved pedestrian areas in order to increase the usable sidewalk area and protect the tree's roots.

SF-UDG13 Ensure all tree grates meet ADA accessibility standards
SF-UDG14 City standards require 4 feet x 4 feet minimum dimensions, for tree grates. 5 feet x 5 feet is preferred if space allows.

SF-UDG15 Install tree guards on all new and transplanted trees in heavy pedestrian areas including the Transit Core and at the Caltrain Station plaza area in order to support and protect trees against vandalism and other damage.

SF-UDG16 Install tree guards that are strong and durable, appropriately sized to avoid damage to the tree as it reaches maturity and compatible with the design of the tree grate.
Transit Shelters

SF-UDG17 To the extent feasible, provide transit shelters at all bus transit stops.

SF-UDG18 Shelters may be custom-designed or pre-manufactured products.

SF-UDG19 Shelter facilities may be incorporated into adjacent buildings.

SF-UDG20 Ensure transit shelter facilities are publicly-accessible 24 hours per day.

SF-UDG21 Include the following features in transit shelters:
- Shelter from wind and rain
- Seating
- Lighting, either from street sources or within the shelter
- Information related to area-wide way finding, transit routes, scheduling and costs
- Transparent design to allow users be visible from the surrounding streets and feel secure
- Constructed and sited to minimize visual obstruction of adjacent businesses and residences
- ADA compliant, both in design and siting
- Compatible with the character of the street and surrounding built environment.

SF-UDG22 Coordinate with Santa Clara Valley Transportation Agency (VTA) on specific design requirements and location.

On-street Signage and Wayfinding
Today, way finding throughout the Plan area is exceedingly di cult. Even for longtime residents and employees of the area, it is not clear that the linkage to the Lawrence Station and other local destinations is close and easy. The new framework of streets and public rights of way will significantly help to facilitate connections for all travelers to the station. However, there will remain a need for a coherent and clear system of signage to direct pedestrians, bicyclists and motorists to the station and other important area destinations.

On-Street Signage and Wayfinding Goal
OSW-G1 Install a coordinated signage program that:
- Clearly and attractively directs people to Lawrence Station and other neighborhood destinations, services and amenities.
- Reinforces a sense of place with design elements that give the neighborhood a unique identity.

On-Street Signage and Wayfinding Guidelines

OSW-UDG1 As part of the Sense of Place plan to be completed per implementation of this Plan, create a Streetscape Master Plan, that includes a Signage and Way nding plan for the Plan area.

OSW-UDG2 Include the following features in the planning and installation of the signage and way nding system:

- Direct pedestrians, bicyclists and motorists to major area destinations, especially Lawrence Station.
- Promote transit use by indicating the location of bus and shuttle stops and system routing.
- Facilitate efficient traffic flow by directing drivers to destinations such as important roadways and parking facilities.
- Select typography, graphics, form, illumination and mounting to be compatible with the design of area street furnishings.
- Avoid visual clutter through the creation of efficient and clear signage that does not require a large amount of repetition.
- Consolidate information on a single pole, whenever feasible.
- Design directional signage in a consistent manner throughout the Plan area, regardless of the street type or land use.
- Design signage and way finding system to be appropriately- scaled to the various modes and speeds of travel.

OSW-UDG3 Coordinate with Santa Clara County, Caltrain and VTA on the design requirements of all public way finding systems.

Banners in Rights-of-Way
OSW-UDG4 To avoid visual clutter, limit the use of banners to retail areas and the Caltrain Station plaza areas in order to enhance the identity and visibility of these areas.

SG-51 To the extent feasible, integrate banner mounting systems into other necessary poles, such as those used for street lighting and signage.

I
ntersection Design (General Guidelines)
As the Lawrence Station Plan Area redevelops over time, modifications to several existing intersections will be required. Additionally, many new intersections will be created in locations where new streets are constructed. This section describes guidelines that apply to the renovation of existing intersections as well as the construction of new intersections in the Plan area. The guidelines that follow are conceptual in nature. Further traffic and civil engineering studies will be required prior to design and construction at specific locations.

General Intersection Design Goal
ID-G1 Enhance safety and convenience for all intersection users, particularly for pedestrians and bicyclists, in a manner that is compatible with the design character of the particular street and neighborhood.

General Intersection Design Guidelines
ID-UDG1 Provide highly visible crosswalks on all intersections in accordance with City standards.

ID-UDG2 Where feasible, provide maximum curb return radii of 15 feet in order to reduce pedestrian street crossing distance and slow turning traffic.

ID-UDG3 Wherever feasible, provide sidewalk extensions (bulbouts) with a 15-foot maximum curb return.

ID-UDG4 Where sidewalk extensions (bulbouts) are installed, install drainage improvements as needed in order to allow clear walkways. Alternatively, curb extensions may be built separate from the existing curb to continue drainage along the existing curb. Ensure such improvements are ADA compliant.

ID-UDG5 Provide lighting adequate for intersection safety as well as illumination of sidewalks.

ID-UDG6 Stripe bicycle lanes, where designated, continuously to the stop bar.

ID-UDG7 At signalized intersections, provide:

- Pedestrian countdown signals to indicate how many seconds are available for pedestrians to cross and to signal motorists that they should anticipate and yield to pedestrians in the intersection.
- Pedestrian median refuges (where applicable) with pedestrian push buttons on noses of raised landscaped median.
- Visual and audible cues for pedestrians who are sight and hearing impaired.

ID-UDG8 Eliminate all "free-right" turns at intersections in the Plan area.

DESIGN GUIDELINES FOR SPECIFIC STREETS
The following guidelines are intended to provide more direction for specific streets that will play a particularly important functional role within the Plan area.

The Loop

The Loop Design Goal
TL-G1 The Loop will be a primary collector street, designed to convey the character of a richly-landscaped green boulevard, providing direct north-south and east-west connections to the Lawrence Station and other destinations in the Plan area north of the Caltrain tracks for all modes of travel.

Street Cross Section Guidelines
TL-UDG1 Provide a right-of-way width of 65 feet (see Figure 6.19). This dimension may vary in select locations based on local conditions.

TL-UDG2 Within this right-of-way, provide the following functional elements: one vehicular travel lane in each direction, a landscaped center median with left turn pockets, Class II bicycle lanes, on-street parking, and a pedestrian zone with wide sidewalks and street trees.

TL-UDG3 Coordinate with VTA to ensure the street cross-section is adequate for bus transit usage if desired in the future.

Intersection Design Guidelines
TL-UDG4 Provide sidewalk extensions (bulbouts) at all intersections along The Loop.

TL-UDG5 Install transit bulbouts, where appropriate, at all intersections.

TL-UDG6 Provide median pedestrian refuges as needed at select intersection locations.

TL-UDG7 Provide mid-block pedestrian crossings along the length of the street if distances between intersections exceed 400 feet.

TL-UDG8 Link mid-block pedestrian crossings directly to pedestrian routes to the station and other destinations.

TL-UDG9 Employ traffic calming devices to ensure safe pedestrian crossings.

Pedestrian Environment Guidelines
TL-UDG10 Include a generous planting strip for large street trees, signage and lighting, and a wide sidewalk between the curb and the right-of-way line.

TL-UDG11 Provide a minimum sidewalk width of six feet.

Adjacent Land Uses and Setback Guidelines
Land uses adjoining the Loop will typically be office/R&D or residential. Retail will not be located along the street except in the vicinity of the Lawrence Station (see guidelines following for The Loop-Lawrence Station segment).

~~**TL-UDG12**~~
~~Set buildings back 15 feet from the back of sidewalk/right-of- way line to allow for generous landscaping in the front yard of all buildings as well as grade separation for residential units located at the ground floor.~~

The Loop (Sonora Court Segment)
Sonora Court runs in an east-west direction parallel to and north of the Caltrain tracks and Lawrence Station. The street is currently a dead-end local street with minimal traffic serving an area of low-density industrial / R&D uses. Perhaps the most noteworthy aspect of Sonora Court is the very large and handsome Redwood street trees that line the street on both sides in a wide planting strip between the curb and the sidewalk. These trees are among the most significant natural assets of the entire Plan area.

Sonora Court will become a key east-west segment of The Loop accessing Lawrence Station on the west side of the Lawrence Expressway. However, the cross-section of this street segment will vary, both in width and configuration, from that envisioned for most other segments in order to preserve and protect the existing mature Redwood trees.

The Loop (Sonora Court Segment) Design Goals
SC-G1 The design goals for the Sonora Court segment of the Loop include the following:

- Preserve and protect the existing Redwood trees.
- Design the street (particularly the pedestrian zone) to capitalize on the existing trees and wide planting areas to create a mature, park-like environment, with attractive, usable outdoor urban spaces that relate to, and enhance future building development along the street.
- Capitalize on the existing Redwood trees to create a unified design vocabulary for this segment of the Loop that is unique from other street segments.

Street Cross Section Guidelines
SC-UDG1 Provide an overall public right-of-way width of 56 feet. (See Figure 6.20)

SC-UDG2 Within this right-of-way, retain the existing paved roadway cross- section and curb locations and the existing curbside planting strip in order to avoid disturbance to the root systems of the Redwood trees.

SC-UDG3 Reallocate the paved street space between the curbs to provide the following functional elements: one vehicular travel lane in each direction, Class II bicycle lanes, and parking on one side of the street.

Pedestrian Environment Guidelines
SC-UDG4 Retain the curbside planting strip where the Redwoods are located at its current dimension.

SC-UDG5 Incorporate small outdoor seating areas for passive activities and outdoor dining.

SC-UDG6 Retain the existing location and footprint of the sidewalk in order to protect the existing trees. Repairs and repaving will be allowed as needed.

SC-UDG7 Exercise extreme care when initiating construction activities in the vicinity of the Redwood trees. Minimize changes within the planting strip containing the Redwood trees.

SC-UDG8 Before construction activities, consult with a certi ed arborist.

Adjacent Land Uses and Setback Guidelines
Land uses adjoining the Sonora Court segment of The Loop will typically be office/R&D or residential at high densities. Retail will be allowed along the street in the vicinity of the Lawrence Station.
SC-UDG9 Retain the existing building streetwall line (set back from the curb) in order to protect the existing Redwoods and reinforce the park-like character of the street.

SC-UDG10 Use the space between the back of sidewalk and building line to create spaces for outdoor dining and passive activities.
LS-UDG11 Set buildings back to allow for increased pedestrian space and outdoor dining and merchandizing in conformance with guidelines for San Ysidro Way Extension.

LS-UDG12 Establish building setback requirements for the station side of The Loop based on the functional requirements of transit/ station operations.

The Loop (Lawrence Station Segment)
The Loop will align directly adjacent to, and parallel with the Lawrence Caltrain Station in this segment thereby providing direct access for passengers, transit riders, bicyclists and pedestrians to the station plaza. It will also intersect with the San Ysidro Way Extension retail street and the pedestrian/ bicycle undercrossing from the southern residential neighborhoods. Therefore, its design configuration will change from the standard design that will be found over most of its length. This will be a highly active location and therefore safety, ease of movement for all modes, good visibility of the station, and abundant amenities to serve transit patrons and local residents and workers are all needed.

The Loop (Lawrence Station Segment) Design Goals
LS-G1 The design goals for the Lawrence Station segment include the following:

- Design the street as a multi-purpose plaza-like place that seamlessly anchors the retail street to the north with the Lawrence Station plaza.
- Emphasize the safe movement of pedestrians and bicycles throughout the plaza-like area while also allowing motor vehicles.
- Create a unified design vocabulary for the entire intersection plaza area that conveys the feeling that pedestrians and bicyclists have priority over motor vehicles.
- Provide safe and efficient bus drop-o facilities.

San Ysidro Way Extension Retail Street
Future retail uses and services will be focused along the southern extension of San Ysidro Way, a new pedestrian-oriented mixed-use street that will run north-south between Kifer Road and the Lawrence Station, west of the Lawrence Expressway. This street will form the walkable heart of the new mixed-use Transit Core neighborhood, providing neighborhood-serving goods and services for residents and workers in the Plan area.

The character of the street is envisioned as a walkable, mixed-use neighborhood commercial street with a scale and character similar to Santana Row in San Jose, Castro Street in Mountain View or Murphy Avenue and its surrounding district in downtown Sunnyvale.

San Ysidro Way Extension Retail Street Design Goals
SY-G1 The goals for this street include the following:

- Promote and emphasize pedestrian activity.
- Create an environment that supports the development of pedestrian-oriented retail.
- Support transit usage, particularly Caltrain, with safe and attractive pedestrian circulation to and from the station and nearby bus transit stops.
- Create a distinct identity for the retail area.
- Design for low vehicular travel speeds.

Street Cross Section Guidelines
SY-UDG1 Provide a right-of-way width of 68 feet (see Figure 6.22).

Street Cross Section Guidelines
LS-UDG1 Provide the Lawrence Station segment of The Loop with a right- of-way width of 77 feet (see Figure 6.21).

LS-UDG2 Within this right-of-way, provide the following functional elements: one vehicular travel lane in each direction, Class II bicycle lanes, a pedestrian zone with a wide sidewalk and street trees on the north side of the street, a bus drop-o zone and an extension of the Lawrence Station Plaza on the south side of the street.

LS-UDG3 Design The Loop at this location to feel like a large plaza extending from the San Ysidro Way Extension retail street to the Lawrence Station Platform.

LS-UDG4 Generously size travel lanes to accommodate the confluence of buses, autos and other traffic that will traverse the area.

LS-UDG5 Provide a wide bus drop-o and kiss-and-ride zone adjoining the station-side plaza.

LS-UDG6 Coordinate the design of the plaza and street function with Caltrain, VTA and other transit agencies.

Intersection Design Guidelines
LS-UDG7 Design the intersection to accommodate all modes of travel with an emphasis on pedestrians and bicyclists.

LS-UDG8 If warranted, signalize the intersection and include "pedestrian scramble" signalization.

Pedestrian Environment Guidelines
LS-UDG9 Use special pedestrian paving, planting, lighting and other streetscape materials to create an identifiable plaza-like place that extends from the San Ysidro Way Extension retail street all the way to the station platform.

LS-UDG10 Provide space for passenger waiting and seating, public art, lighting and other amenities on the plaza space.

Adjacent Land Uses and Setback Guidelines
Land uses adjoining the Lawrence Station segment of the Loop will typically be office/R&D or residential at high densities, with retail uses required at the ground oor where The Loop intersects or traverses San Ysidro Way Extension.

LS-UDG11 Set buildings back to allow for increased pedestrian space and outdoor dining and merchandizing in conformance with guidelines for San Ysidro Way Extension.

LS-UDG12 Establish building setback requirements for the station side of The Loop based on the functional requirements of transit/ station operations.

San Ysidro Way Extension Retail Street
Future retail uses and services will be focused along the southern extension of San Ysidro Way, a new pedestrian-oriented mixed-use street that will run north-south between Kifer Road and the Lawrence Station, west of the Lawrence Expressway. This street will form the walkable heart of the new mixed-use Transit Core neighborhood, providing neighborhood-serving goods and services for residents and workers in the Plan area.

The character of the street is envisioned as a walkable, mixed-use neighborhood commercial street with a scale and character similar to Santana Row in San Jose, Castro Street in Mountain View or Murphy Avenue and its surrounding district in downtown Sunnyvale.

San Ysidro Way Extension Retail Street Design Goals

SY-G1 The goals for this street include the following:

- Promote and emphasize pedestrian activity.
- Create an environment that supports the development of pedestrian-oriented retail.
- Support transit usage, particularly Caltrain, with safe and attractive pedestrian circulation to and from the station and nearby bus transit stops.
- Create a distinct identity for the retail area.
- Design for low vehicular travel speeds.

Street Cross Section Guidelines
SY-UDG1 Provide a right-of-way width of 68 feet (see Figure 6.22).

SY-UDG2 Within this right-of-way, provide the following functional elements: one vehicular travel lane in each direction, on-street parking, and a wide pedestrian zone.

SY-UDG3 Install traffic calming measures to ensure traffic speeds will be low.

SY-UDG4 Bicycle lanes will not be needed due to low traffic speeds. However, install bicycle notations and warning systems such as “sharrows” and “Share the Road” signs to indicate bicycles will be welcome.

SY-UDG5 Coordinate with VTA to ensure the street cross-section is adequate for bus transit usage if desired in the future.

Intersection Design Guidelines
SY-UDG6 Provide sidewalk extensions (corner bulbouts) at all intersections.

Pedestrian Environment Guidelines
SY-UDG7 Provide a minimum sidewalk width of 15-feet.

SY-UDG8 Since the buildings along the street will be built at, or near, the right-of-way line, the sidewalk is defined here as the entire area between the curb and the building wall. The sidewalk may be contained completely within the public right-of-way or may cross into the parcel.

SY-UDG9 Subdivide the sidewalk into three areas, or zones (see Figures 6.23 and 6.24):

- Curb Zone: minimum four feet wide, containing the elements that separate the sidewalk from the street and provide the necessary infrastructure to support pedestrian and motorist activity, including lighting, signage, furnishings, street trees, and other vertical elements.
- Pedestrian Circulation Zone: minimum six-feet wide, and clear of obstruction.

- Building Zone: immediately adjacent to the building wall. Depending on the width of the overall sidewalk, the building zone may contain amenities such as seating, outdoor dining, merchandise displays, planting or architectural elements of the building, as long as these do not interfere with pedestrian movement.

SY-UDG10 Wrap the 15 feet sidewalk around the building for a minimum of 25 feet at intersection corners.

SY-UDG11 Provide pedestrian scaled lighting with luminaires mounted at a height not exceeding 15 feet.

SY-UDG12 Use luminaires that provide a white light source, such as metal halide or LED, rather than yellow light sources such as high- pressure sodium.

SY-UDG13 Plant pedestrian-scaled ornamental trees unique to this location along the street.

SY-UDG14 Provide tree grates and tree guards for all trees planted in tree wells in pavement areas.

SY-UDG15 Provide a minimum tree well size of 4 feet x 4 feet.

Special Condition at The Loop/Lawrence Station Plaza
SY-UDG16 Provide a wider sidewalk (25 feet) on either side of the street between Sonora Court and the Lawrence Station Plaza.

SY-UDG17 Design the entire area between the Sonora Court segment of The Loop and the Lawrence Station Plaza as an extension of the Station Plaza.

SY-UDG18 Ensure the wider sidewalk contains a:
- 6 feet minimum unobstructed pedestrian circulation zone.
- 4 feet minimum curb zone.

SY-UDG19 Include street furnishings, street trees and other plantings, special paving, public art and amenities, public gathering places, temporary installations, cafe seating and merchandise displays in the wider sidewalk and plaza extension.

SY-UDG20 Specify a unique species of street trees in the Station Plaza area to enhance the unique quality of that area.

Adjacent Land Uses and Setback Guidelines
Land uses fronting the San Ysidro Way Extension will be office/R&D or residential at high densities on the upper floors. Retail is required at the ground floor.

SY-UDG21 Locate ground oor retail at the back of sidewalk right-of-way line (zero setback).

SY-UDG22 Minor additional setback is allowed in conformance with guidelines for retail buildings described earlier in this chapter.

Kifer Road
Kifer Road is an important existing thoroughfare, designated by the City of Sunnyvale as a Collector, which must accommodate relatively high volumes of traffic as well as transit vehicles and trucks. Despite its importance for motor vehicle traffic, however, Kifer Road currently has a right-of-way and pavement width that exceeds current or foreseeable traffic demand. It is also designed with an emphasis on accommodating vehicular traffic, with unappealing facilities for pedestrians and bicyclists, no on-street parking and few areas of attractive planting and streetscape improvements.

Kifer Road Design Goals
KR-G1 The goals for Kifer Road include the following:

- Ensure it provides e cient access for motor vehicles and bus transit without consuming unnecessary excess quantities of land for that purpose.
- Enhance its usability for pedestrians and bicyclists.
- Strengthen the existing visual quality and character of the street as a green boulevard.

Street Cross Section Guidelines
KR-UDG1 Provide a publicly-accessible right-of-way that accommodates the street and pedestrian environment (see Figure 6.25).

KR-UDG2 Within this right-of-way, to the extent feasible, retain the existing roadway curb locations.

KR-UDG3 Reallocate the paved street space between the curbs to provide the following functional elements: one vehicular travel lane in each direction, a landscaped center median with left turn pockets, Class II bicycle lanes, and on-street parking.

KR-UDG4 Coordinate changes to the cross-section of Kifer Road with the City of Santa Clara and Santa Clara County.

Intersection Design Guidelines
KR-UDG5 Provide sidewalk extensions (corner bulbouts) at all intersections where feasible.

KR-UDG6 Install transit bulbouts at all intersections, where appropriate.

KR-UDG7 Provide median pedestrian refuges as needed at select intersection locations.

KR-UDG8 Provide mid-block pedestrian crossings along the length of the street if distances between intersections exceed 400 feet.

KR-UDG9 Link mid-block pedestrian crossings directly to pedestrian routes to the station and other destinations.

KR-UDG10 Employ traffic calming devices to ensure safe pedestrian crossings.

Pedestrian Environment Guidelines
KR-UDG11 Between the curb and the building setback line, include generous plantings of large trees, signage and lighting, and a wide sidewalk.

KR-UDG12 Provide a minimum sidewalk width of ten feet.

KR-UDG13 Protect all existing street trees over 3” caliper along Kifer Road.

KR-UDG14 In ll areas that lack existing trees with new street tree plantings.

KR-UDG15 Complement the existing character of the street by in lling new trees in an informal arrangement with a variety of species.

Adjacent Land Uses and Setback Guidelines
Land uses adjoining Kifer Road will typically be office/R&D or residential with retail uses required at the ground oor where Kifer intersects the San Ysidro Way Extension retail street. Densities will vary along the length of the street, depending upon proximity to the Lawrence Station.

KR-UDG16 Set buildings back a minimum of 25 feet from the existing curb to allow for a widened sidewalk and generous landscaping in the front yard of all buildings as well as grade separation for residential units located at the ground oor.

~~**KR-UDG17** Minimize parking between front of building and any street. Provide no more than two rfllflows of parking in this area.~~

New Internal Local Circulation Streets
In order to create a more accessible and pedestrian-oriented pattern of development, new internal circulation streets will be needed, especially north of the Caltrain tracks, and possibly in the Peninsula Subarea (Calstone/ Peninsula Building Materials property). The conceptual locations and alignment of these streets is illustrated in Figure 4.2: Fine-Grained Street Network. Actual locations of these streets will depend upon the development plans of individual property owners.

New Internal Local Circulation Streets Design Goals
NI-G1 Provide local access to Lawrence Station and other neighborhood destinations for pedestrians, bicycles and autos.

NI-G2 Provide direct access to property.

NI-G3 Establish a block framework for diverse neighborhood development at a range of densities.

NI-G4 Promote and emphasize pedestrian activity.
NI-G5 Design for low vehicular travel speeds.

Street Cross Section Guidelines
NI-UDG1 Provide a minimum right-of-way width of 50 feet.

NI-UDG2 Within this right-of-way, provide the following minimum functional elements: one vehicular travel lane in each direction, on-street parking on one side of the street, and a pedestrian zone with sidewalks and a planting strip on both sides of the street.

NI-UDG3 Install traffic calming measures to ensure traffic speeds will be low.

NI-UDG4 Due to low vehicular travel speeds, bicycles will share the street with vehicular traffic.

NI-UDG5 Employ traffic calming devices to ensure safe pedestrian crossings.

NI-UDG6 Build streets per city standards for residential streets.

Pedestrian Environment Guidelines
NI-UDG7 Provide a minimum sidewalk width of ve feet separated from the street by a minimum four-foot-wide planting strip containing street trees, lighting and signage.

Adjacent Land Uses and Setback Guidelines
~~Land uses and densities adjoining the new Internal Circulation Streets will vary depending upon location.~~
~~**NI-UDG8** In general, set buildings back a minimum of 15 feet from the back of sidewalk/right-of-way line to allow for landscaping unless a variation in setback is warranted due to local conditions.~~

NI-UDG9 Provide an adequate setback to ensure the pedestrian zone feels public and attractive.

~~**NI-UDG10** Parking in the front yard is not allowed.~~

NI-UDG101 ~~1~~ Parking access lanes may cross the pedestrian zone and front yard.

Pedestrian and Bicycle Ways (Class I Multi-use Trails)

New Pedestrian and Bicycle Ways Design Goals
PB-G1 In situations where access routes by motor vehicles is either unnecessary or impractical, complete the circulation framework for the Lawrence Station Plan area with a network of publicly accessible routes for pedestrians and bicycles.

PB-G2 Ensure pedestrian/bicycle ways are safe and accessible to all users.

Pedestrian and Bicycle Way Cross-Section
PB-UDG1 When located in an open landscape, provide a typical right-of- way width of 25 feet.

PB-UDG2 Within this right-of-way, provide a minimum paved width of 12 feet. This will allow adequate room for multiple pedestrian and bicycle users as well as maintenance and emergency vehicles, if needed.

PB-UDG3 In constrained situations, such as between buildings, pedestrian and bicycle ways shall have a minimum paved right-of-way of 10 feet.

Design and Materials Guidelines
PB-UDG4 Use concrete or similar permanent paving.

PB-UDG5 Provide continuous pedestrian-scaled lighting on all pedestrian ways to ensure a feeling security.
PB-UDG6 Use overhead lighting rather than with bollards to allow easy visibility of oncoming pedestrians and bicyclists.

PB-UDG7 Plantings may be of a design that is either consistent with the palette of adjoin properties or of a design that delineates the pedestrian way.

PB-UDG8 Ensure that plantings do not obscure visibility of the pedestrian way from surrounding properties and public spaces and do not interfere with emergency vehicle access.

Other Streets
Lawrence Expressway
As mentioned previously in this Plan, the Expressway is owned and managed by Santa Clara County, and therefore is not under the jurisdictional control of the City of Sunnyvale. However, the County is in the process of considering major modifications to the Expressway in the segment that traverses the Plan area, including grade-separation (elevated or below grade). These modifications have the potential to greatly improve local accessibility and quality of the neighborhoods in the Plan area. To support this process, the City of Sunnyvale has articulated several goals for the improvement of the Lawrence Expressway

Lawrence Expressway Design Guidelines
LE-UDG1 Improve the intersections at Reed/Monroe and Kifer, including the provision of pedestrian countdown timers.

LE-UDG2 Improve the appearance of the embankments by providing additional landscape improvements.

LE-UDG3 Widen sidewalks and provide wider, separated bicycle lanes on the Expressway in order to provide a safe and efficient means for pedestrians and bicyclists to cross the Caltrain tracks and access other areas of the city.

LE-UDG4 Provide additional east-west crossings of the Expressway, both north and south of the Caltrain tracks. These should be placed at a spacing not to exceed 400 feet, via tunnels through the embankments or elevated structure, or one or more bridges if the roadway is placed below grade.

Willow Street
Willow Street currently provides the only vehicular access to the Lawrence Caltrain station from the south, and is also a key access route for pedestrians and bicyclists.

Design Goals for Willow Street
WS-G1 Design to be safe and attractive for residents of the study area and those south of Reed who walk or ride to the station.

Design Guidelines for Lawrence Expressway
WS-UDG1 Provide continuous sidewalks on both sides of Willow Street, with a minimum 6 foot dimension.

WS-UDG2 Provide improved pedestrian lighting to give a sense of safety along Willow Street.

WS-UDG3 Improve signage to the station and expand to include signage on Reed and Monroe Avenues as well as Lawrence Expressway.

WS-UDG4 Accommodate bicycles in the roadway. The narrow right of way suggests that a shared lane is necessary. Install bicycle notations and warning systems such as "sharrows" and "Share the Road" signs to indicate bicycles will be welcome.