3 Case Studies and Overview of Cost Estimates

This chapter presents ten case studies of pedestrian districts located throughout the Bay Area. It also provides a ball-park cost estimate for each district, both for the case study site as a whole, and by linear square foot. Each case study represents an example of one of the typologies described in Chapter Two. The cost estimates provide jurisdictions a rough estimate of the overall cost of creating a similar environment and a sense of which facilities have the greatest impact on creating good pedestrian districts.

Taken together, the typologies in the previous chapter and the associated case studies help jurisdictions understand what type of pedestrian facilities are most appropriate in different types of neighborhoods.

A. Pedestrian District Case Studies

The purpose of the case studies is to provide Bay Area cities and counties with models of effective pedestrian districts and to provide direction for how they can create similar environments in their communities. As described in more detail below, each case study describes the major attractors and generators of pedestrian activity in the area, a summary of the planning history and regulatory framework that helped shape the area and the key pedestrian facilities that exist in the district roadway, the nature and size of its roadways. Each case study also includes key findings about why the areas succeeds (or in some cases is not currently succeeding) as a pedestrian district.

Table 3-1 below lists the case studies included in this chapter. Figure 3-1 shows the location of each case study site.

In most instances, the case study contained in this chapter provides a good example of the typology and presents a model for a jurisdiction about the type of pedestrian improvements that are most appropriate for a given typology. However, as noted in Chapter Two, two of the typologies (Pedestrian-Oriented Suburban Residential and Suburban Employment Center) currently do not have good existing examples in the Bay Area. Therefore, the case
### TABLE 3-1  **CASE STUDY SITES BY TYPOLgy**

<table>
<thead>
<tr>
<th>Case Study Site</th>
<th>County</th>
<th>Corresponding Typology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adam’s Point, Oakland</td>
<td>Alameda</td>
<td>Urban Residential</td>
</tr>
<tr>
<td>2. Hercules Waterfront District, Contra Costa</td>
<td>Suburban Residential</td>
<td></td>
</tr>
<tr>
<td>3. Telegraph Avenue, Berkeley</td>
<td>Alameda</td>
<td>Major Mixed-Use District</td>
</tr>
<tr>
<td>4. Fruitvale BART Station TOD, Oakland</td>
<td>Alameda</td>
<td>Urban Transit Village</td>
</tr>
<tr>
<td>5. San Pablo Avenue, West Berkeley</td>
<td>Alameda</td>
<td>Large Neighborhood Corridor</td>
</tr>
<tr>
<td>6. Downtown San Jose</td>
<td>Santa Clara</td>
<td>Major City Downtown</td>
</tr>
<tr>
<td>7. Downtown Santa Rosa</td>
<td>Sonoma</td>
<td>Medium-Sized City Downtown</td>
</tr>
<tr>
<td>8. Downtown Suisun City</td>
<td>Solano</td>
<td>Small Downtown or Local Commercial District</td>
</tr>
<tr>
<td>9. UCSF Medical Center</td>
<td>San Francisco</td>
<td>Urban Institutional</td>
</tr>
<tr>
<td>10. Hacienda Business Park, Pleasanton</td>
<td>Alameda</td>
<td>Suburban Employment Center</td>
</tr>
</tbody>
</table>

Study sites chosen for these typologies, Hercules and the Hacienda Business Park respectively, are places that have the potential to be good pedestrian districts, but have not yet become truly walkable environments. In these instances, the case studies not only describe the existing pedestrian infrastructure found in these places, but provide recommendations and directions for future improvements. These two pedestrian typologies are particularly important because they exemplify the most common type of development occurring in the Bay Area – residential and office development in outlying suburban areas.

Each case study contains the following sections:

- **District Boundaries and Location** describes the boundaries of district and its surrounding context.
District Overview presents information about the built environment, major attractors of pedestrian activity, transit providers and primary pedestrian paths of travel in each district.

Planning History describes the evolution of the district over time, including details about specific planning processes or efforts that may have helped create the district.

Regulatory Framework provides an overview of the local regulations, such as General Plan policies and zoning, that have shaped the district.

Key Findings explores the key factors that contribute to each case study site’s success as a pedestrian district. It also suggests improvements that could make the areas even better pedestrian environments. This section is typically based on field observations and on interviews with staff from the local jurisdictions and other people, such as the City’s planning consultant or a local developer, working in the district.

Pedestrian Environment and Facilities serves as a “technical appendix” for each case study, presenting detailed information about the major roadways or pedestrian paths in each district and a description of the pedestrian facilities that are present. This inventory of facilities directly informs the cost estimates completed for each case study site, described below.

B. Pedestrian District Cost Estimates

Ball-park cost estimates of each case study were also completed. The cost estimates indicate what it costs in 2005 dollars to implement the set of pedestrian improvements identified in the case study. Table 3-1 presents the costs as an aggregate for all of the improvements in the district, and on a per linear square foot basis. Both figures are presented as a low-to-high range. These figures are intended as approximations only.
### Table 3-2 Summary of Case Study Cost Estimates

<table>
<thead>
<tr>
<th>Case Study Site</th>
<th>Total Linear Feet (LF)</th>
<th>Total Estimated Cost (in millions)</th>
<th>Cost Per Linear Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adams Point, Oakland</td>
<td>24,200</td>
<td>$10.9 - $14</td>
<td>$450 - $580</td>
</tr>
<tr>
<td>2. Hercules Waterfront District</td>
<td>6,000</td>
<td>$4 - $4.7</td>
<td>$680 - $780</td>
</tr>
<tr>
<td>3. Berkeley’s Telegraph Avenue</td>
<td>5,900</td>
<td>$5.5 - $7</td>
<td>$950 - $1,230</td>
</tr>
<tr>
<td>4. Fruitvale BART Station TOD</td>
<td>2,300</td>
<td>$6.4 - $9.2</td>
<td>$2,750 - $4,220</td>
</tr>
<tr>
<td>5. San Pablo Avenue, Berkeley</td>
<td>2,400</td>
<td>$2.9 - $4.8</td>
<td>$1,200 - $2,000</td>
</tr>
<tr>
<td>6. Downtown San Jose</td>
<td>7,650</td>
<td>$7.3 - $11.3</td>
<td>$960 - $1,500</td>
</tr>
<tr>
<td>7. Downtown Santa Rosa</td>
<td>5,000</td>
<td>$5.6 - $8.3</td>
<td>$1,100 - $1,700</td>
</tr>
<tr>
<td>8. Downtown Suisun City</td>
<td>6,100</td>
<td>$4.9 - $6.7</td>
<td>$800 - $1,100</td>
</tr>
<tr>
<td>9. UCSF Medical Center</td>
<td>3,250</td>
<td>$2.2 - $3.3</td>
<td>$690 - $1,000</td>
</tr>
<tr>
<td>10. Hacienda Business Park</td>
<td>13,150</td>
<td>$6.7 - $8.9</td>
<td>$510 - $700</td>
</tr>
</tbody>
</table>

Appendix A includes a detailed breakdown of these costs, presenting specific costs by roadway and by type of pedestrian facilities and improvements present. Chapter Four of this report provides a generic cost estimate template that formed the basis of the cost estimates completed for each case site and that can be used by local jurisdictions as a planning tool to prepare conceptual cost estimate of future pedestrian improvements. More information about the methodology and assumptions for preparing the cost estimates are included in Chapter Four and in Appendix A.
ADAMS POINT NEIGHBORHOOD

Typology: Urban Residential
Location: Oakland, Alameda County
Size: Approximately 175 acres or 0.27 square miles

A. District Boundaries and Location
As seen in Figure 3-2, the Adams Point pedestrian district is located just north of Lake Merritt, approximately a half mile from downtown Oakland. This pedestrian district encompasses the entire Adams Point neighborhood, which stretches from Grand Avenue to the south to Interstate 580 (I-580) and MacArthur Boulevard to the north and east. The district is bounded on the west by Harrison Street and Oakland Avenue, which merge into a single roadway for a portion of the boundary.

Residential neighborhoods are located to the north, east and west of the district. The Grand Avenue shopping district begins at the southeastern corner of the neighborhood, on the far side of the Interstate. Lake Merritt creates the southern boundary and provides a major amenity and destination for the district. Commercial office buildings at the edge of downtown Oakland begin just southwest of the district.

B. District Overview
Figure 3-2 shows district boundaries, primary paths of pedestrian travel, major attractors and transit stops in the district vicinity. These are discussed in more detail below.

I. Built Environment
Development in the district is dense, with most buildings between three and four stories, although some apartment buildings near the lake rise as high as

Streets in the Adams Point neighborhood are tree-lined and have traffic calming measures such as speed bumps; many also provide great views of Lake Merritt.
eight floors. Adams Point is a high-density residential neighborhood comprised mainly of mid-rise apartment buildings with a few townhouses and single-family homes scattered throughout the district. There is a concentration of retail uses at the intersection of Grand Avenue and MacArthur Boulevard, and intermittent businesses along the length of Grand Avenue.

2. Major Attractors
The key attractors in the area that generate pedestrian traffic are shown on Figure 3-2 as numbered below:
1. The Grand Lake District, a retail district that includes a movie theater and many shops and restaurants, is located just beyond the district, east of I-580. Lakeview Elementary School is located at the edge of this retail district and also draws a great number of pedestrians.

2. A Park-and-Ride lot, which provides a casual carpool site, is located under I-580 next to Splash Pad Park where a popular farmers’ market takes place every Saturday.

3. Retail on Grand Avenue also draws pedestrians to and from the district. It is densest between MacArthur Boulevard and Euclid Avenue, but continues sporadically along the length of the street.

4. Lake Merritt, the surrounding park and a children’s attraction called Fairyland are major generators of pedestrian traffic.

5. Westlake Junior High School, located just outside the district to the northwest, is attended by many local students who walk to the site.

3. Transit Service
Six AC Transit bus lines (three local lines, two combined local and transbay lines, and one rapid bus transbay line, with additional improvements to the transbay service expected) serve the Adams Point neighborhood, primarily along Grand Avenue and MacArthur Boulevard. The local lines have 15 to 20 minute headways during commute hours and 30 to 60 minute headways at other times. The neighborhood is also within a half mile of the 19th Street BART station, which provides 7 minute headways during commute hours and 15 to 30 minute headways at other times.
4. Pedestrian Paths of Travel

Given its grid of roadways, pedestrian traffic in the district is fairly dispersed. The neighborhood has four primary pedestrian routes around the outside of the district and six within it. As noted in Figure 3-2, Grand Avenue runs along Lake Merritt at the southern boundary of the district and provides access to BART and downtown Oakland. Harrison Street/Oakland Avenue is the western boundary of the district and links to Grand Avenue via Bay Place. Bay Place is the third route on the periphery of the district and leads to Westlake Junior High School. There is also considerable pedestrian traffic on MacArthur Boulevard, which is the southeastern border of the neighborhood and connects to the Grand Avenue retail.

Figure 3-2 also shows six primary pedestrian routes within the district (Perkins, Lee and Adams Streets, and Orange, Van Buren and Euclid Avenues), which provide direct access to amenities at the edges of the district, including bus stops along Grand Avenue.

C. Planning History

The Adams Point neighborhood became a high density, walkable neighborhood in the 1920s when early apartment development was integrated into an existing neighborhood of grand single-family homes built after the 1906 earthquake. The neighborhood experienced a second boom of apartment and condominium construction in the 1960s and 70s, which resulted in the tallest buildings in the district. After this building boom, Adams Point residents became unhappy with the construction of large and often unattractive buildings, as well as the associated impacts on parking, which is quite limited in the area. Neighborhood residents successfully advocated for restrictions on condominium conversions, building design and parking requirements as well as having sections of the neighborhood down-zoned to limit residential densities.
Neighborhood residents have also expressed concerns about the speed of traffic on the streets around the Adams Point neighborhood, including Grand Avenue, Harrison Street/Oakland Avenue and Bay Place. Pedestrian advocates wanted to narrow these streets to slow traffic and remove the barrier to the lake and other neighborhoods created by these large arterial roadways. Although there was some neighborhood concern about creating traffic congestion, both Grand Avenue and Bay Place have undergone improvements, including narrowing, restriping and building or painting medians, to slow traffic. However, challenges to pedestrian walkability remain. Many streets intersect both Bay Place and Grand Avenue at odd angles, creating long pedestrian crossing distances. In addition, signaled intersections are coordinated for vehicular convenience, resulting in long wait times for pedestrians. These long waits often result in jay walking, a behavior that is particularly dangerous on Grand Avenue where fast moving traffic may not expect pedestrians in the roadway.

Harrison Street and Oakland Avenue also have significant traffic volumes and recently there has been some advocacy to turn both Oakland and Harrison into two-way streets, rather than the one-way couplet configuration that is now used near the freeway connection.
D. Regulatory Framework

The Adams Point pedestrian district is currently zoned R-50 Medium Density Residential or R-60 Medium-High Density Residential everywhere except on Harrison Street and Grand Avenue, which have sections that are zoned C-30 District Thoroughfare Commercial. The residential zoning designations require design review on most new buildings. The goal of both residential zoning designations is to allow attractive apartments at relatively high densities in some portions of the district and to prohibit higher density housing elsewhere. As mentioned previously, residents advocated for this R-35 downzoning in some places over concerns that the neighborhood was too dense and parking too difficult. The commercial zoning allows a mix of uses, including residential units, and has a maximum FAR of 3.0. Design review is also required in most instances. The entire district is also subject to a S-12 Residential Parking Combining Zone overlay that has stringent parking regulations, also as a result of resident advocacy efforts. Some areas are further subject to the S-4 Design Review Combining Zone overlay which requires additional design review.

Grand Avenue meets the requirements of a transit street in Oakland because it has Transbay service and one-quarter to one-half mile distances between bus stops. This designation results in signal coordination through a signal management plan and may result in bulb-outs being installed on Grand Avenue to smooth bus travel.

E. Key Findings

This section explores the key factors that contribute to the area’s success as a pedestrian district and factors that continue to create challenges. They are based on field observations as well as interviews with City of Oakland Planning Department staff.
The following factors have the greatest impact on creating this pedestrian district:

♦ The high residential density of the district results in a large number of residents using the streets.

♦ Proximity to major attractors, including the Grand Lake retail district, Downtown Oakland, BART and Lake Merritt facilitates walking as a primary mode of transportation.

♦ Extensive landscaping makes the streets attractive and interesting to pedestrians.

♦ Speed restrictions on residential streets slow traffic and ensure safety and comfort for pedestrians.

♦ Narrowing Grand Avenue from six lanes to four lanes, with a center turn and bike lanes, dramatically improved pedestrian safety and connections to Lake Merritt.

While the district currently operates well as a pedestrian district, a few changes or improvements could be made as described below.

♦ Individual streets within the district could be enhanced with street trees, additional crosswalks or traffic calming measures to further reduce speeds through the neighborhood.

♦ Pedestrian facilities along MacArthur Boulevard could be improved, including more street trees and further buffering from high traffic volumes, particularly at the Grand Avenue intersection.

♦ Pedestrian scale lighting to increase evening commuter safety.

♦ The arterial streets bordering Adams Point are also barriers to pedestrian travel. While Grand Avenue and Bay Place have been significantly improved in recent years, additional upgrades such as refuge islands and
more signalized crosswalks would further improve all four of the adjacent streets.

♦ Some vacant storefronts exist on Grand Avenue. More shops and a greater mix of retail uses would make the retail corridor within the district more appealing and usable for pedestrians.

F. Pedestrian Environment and Facilities
The following section describes the district’s pedestrian environment in detail by focusing on the primary paths of travel. The pedestrian facilities along each major roadway are identified.
I. Grand Avenue

**Type of Roadway:** Arterial  
**Roadway Width:** 80 to 90 feet  
**Speed Limit:** 30 mph  
**Average Roadway Speeds:** 30 to 45 mph  
**Parking:** On-street, diagonal and horizontal  
**Sidewalk Widths:** 10 to 17 feet (10 feet average)

**Pedestrian Facilities:**
- Park running along the majority of the avenue’s south side
- Street trees
- Pedestrian-oriented, decorative lighting fixtures
- Signalized crosswalks with countdown signals at MacArthur Boulevard, El Embarcadero, Euclid Avenue, Perkins Street, Staten Avenue, Park View and Bay Place intersections
- Unsignalized crosswalks at all other intersections
- Covered bus stops
- Retail awnings
- Directional signage
- Trash cans

Grand Avenue is the most-used pedestrian route in the district as residents use it to access the retail area, Lake Merritt, downtown Oakland, BART and AC Transit bus lines. Pedestrian activity takes place throughout the day, with morning and afternoon commute peaks. Although Grand Avenue is a wide road with a lot of fast moving vehicle traffic, signalized crosswalks are located at most intersections to allow safe pedestrian crossing. Other unsignalized crosswalks indicate the presence of pedestrians but are often insufficient to slow traffic.
2. Harrison Street/Oakland Avenue

Type of Roadway: Regional Corridor, one-way couplet above Orange
Roadway Width: 50 to 80 feet
Speed Limit: 30 mph (25 near School)
Average Roadway Speeds: 30 to 45 mph
Parking: Horizontal, on-street
Sidewalk Widths: 7 feet average, 17 feet in front of the school

Pedestrian Facilities:
♦ Street trees
♦ Yellow pedestrian signs near crosswalks
♦ School zone designation (flashing lights, crosswalk and signage)
♦ Standard overhead street lights
♦ Turn-outs for the school drop-off site
♦ Public plaza with benches at school
♦ Signalized crosswalks at Bay and Perry Places; unsignalized crosswalks at Orange and Pearl Streets, Fairmont Avenue and mid-block at the pedestrian path/Oakland Avenue intersection

Harrison Street/Oakland Avenue is a very busy regional corridor with access to I-580. High vehicle volumes and speeds on the wide street, particularly during commute hours, reduces its appeal and safety for pedestrians. However, the roadway provides a pedestrian connection to two major attractors, Westlake Junior High School and downtown Oakland. Speeds are somewhat reduced within the school zone where traffic fines are doubled. Pedestrian traffic falls off at the northern portion of Harrison Street/Oakland Avenue where the streets function as a one-way couplet. However, many people do access Oakland Avenue from a pedestrian path (pictured on page 12) that leads from Orange Avenue, within the district, to a corner store at the edge of the district.
3. MacArthur Boulevard

**Type of Roadway:** Arterial (primarily one-way in district)

**Roadway Width:** 25 to 35 feet

**Speed Limit:** 30 mph

**Parking:** Horizontal, on-street

**Sidewalk Widths:** 5 to 8 feet

**Pedestrian Facilities:**
- Street trees
- Sidewalk plaza with a bench at one bus stop
- Planting strip on west side of the street
- Soundwall and landscaping on east side to screen freeway
- Signalized crosswalks at Oakland Avenue, Adams Street (stop signs) and Grand Avenue
- Two pedestrian bridges over I-580: one at-grade on Adams Street and one on the Van Buren Avenue overpass
- Pedestrian cut-through to Orange Avenue

There is considerable pedestrian traffic on MacArthur Boulevard even though it is a fast moving roadway and a local reliever route for I-580. Noise and visual impacts from the freeway, along with relatively narrow sidewalks, sparse landscaping and high vehicle volumes on the street itself reduce the attractiveness of the overall environment. However, MacArthur Boulevard provides access to the busy AC Transit 57 bus line, as well as a direct route to Lake Merritt and the Grand Lake retail district. Additionally, the road has two pedestrian bridges across I-580 leading directly to the Rose Garden and elementary school, which are major attractors in the adjacent Grand Lake neighborhood. Access to these attractors seems to outweigh the general unpleasantness of walking on this street.

Residents often take the pedestrian bridge from MacArthur Boulevard over I-580 to access the Rose Garden and other amenities in the adjacent neighborhood.

Street trees and a soundwall along MacArthur Boulevard help buffer pedestrians from noisy traffic on the adjacent Interstate.
4. Bay Place

<table>
<thead>
<tr>
<th>Type of Roadway:</th>
<th>Arterial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Width:</td>
<td>61 to 100 feet</td>
</tr>
<tr>
<td>Speed Limit:</td>
<td>30 mph</td>
</tr>
<tr>
<td>Average Roadway Speeds:</td>
<td>30 to 45 mph</td>
</tr>
<tr>
<td>Parking:</td>
<td>Horizontal, on-street and lot</td>
</tr>
<tr>
<td>Sidewalk Widths:</td>
<td>9 feet</td>
</tr>
</tbody>
</table>

**Pedestrian Facilities:**
- Street trees
- Median with landscaping and standard light fixtures
- Yellow striped crosswalks at all intersections
- Signalized crosswalks at Grand Avenue and Harrison Street

Bay Place connects Harrison Street with Grand Avenue and provides a pleasant walking route to Lake Merritt and Westlake Junior High School. Although high-speed vehicle traffic is significant on Bay Place, traffic impacts are mitigated by the landscaped median, relatively wide sidewalks and street trees. A new Whole Foods grocery store is planned to open on Bay Place at Harrison Street, which will further increase pedestrian travel in this area, but also increase vehicular traffic.

Bay Place branches off Grand Avenue providing a pedestrian and vehicle connection to Harrison and 27th Streets.
5. Orange Avenue

Type of Roadway: Local Street
Roadway Width: 45 to 50 feet
Speed Limit: 25 mph
Average Roadway Speeds: 15 to 30 mph
Parking: On-street
Sidewalk Widths: 8 to 10 feet

Pedestrian Facilities:
♦ Street trees, landscaped yards and building entrances
♦ Speed bumps with zebra striping and 15 mph speed limit
♦ White-striped crosswalks at the Perkins Street/Harrison Street intersection
♦ Pedestrian cut-through to Oakland Avenue

Orange Avenue is a major pedestrian path from the northwest side of the district to Harrison Street, downtown, MacArthur Boulevard and the AC Transit 57 bus route. The speed bumps and posted 15 mph signs slow car traffic to acceptable speeds to make pedestrian travel comfortable.
6. Euclid Avenue and Perkins Street

Type of Roadway: Local Street
Roadway Width: 40 feet
Speed Limit: 25 mph
Average Roadway Speeds: 20 to 30 mph
Parking: Horizontal, on-street
Sidewalk Widths: 8 to 10 feet (no landscaped buffer), 6 feet (with landscaped buffer)

Pedestrian Facilities:
- Intermittent landscaped buffer strip between sidewalk and roadway
- White-striped crosswalks at Perkins Street and Grand Avenue, Adams Street, Van Buren Avenue and Orange Street, and at Euclid Avenue and Grand Avenue
- Speed bumps with zebra striping and 15 mph speed limit
- Landscaped yards and building entrances
- Stop signs at all intersections except Grand Avenue, which has a signal, and Euclid Avenue/Burk Street that has neither

Euclid Avenue and Perkins Street have considerable and consistent pedestrian usage because they provide direct routes from the neighborhood residences to Lake Merritt and retail on Grand Avenue.
7. Van Buren Avenue and Adams Street

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Roadway</td>
<td>Local Street</td>
</tr>
<tr>
<td>Roadway Width</td>
<td>40 feet</td>
</tr>
<tr>
<td>Speed Limit</td>
<td>25 mph</td>
</tr>
<tr>
<td>Average Roadway Speeds</td>
<td>15 to 25 mph</td>
</tr>
<tr>
<td>Parking</td>
<td>On-street</td>
</tr>
<tr>
<td>Sidewalk Widths</td>
<td>8 to 10 feet (no landscaped buffer), 6 feet (with landscaped buffer)</td>
</tr>
</tbody>
</table>

**Pedestrian Facilities:**
- Intermittent landscaped buffer strip between sidewalk and roadway
- White-striped crosswalks at the Perkins Street and MacArthur Boulevard intersections with both streets
- Street trees
- Landscaped yards and building entrances
- Stop signs at all intersections

Van Buren Avenue and Adams Street provide access to MacArthur Boulevard and the amenities beyond. Both streets have pedestrian bridges that connect the Adams Point neighborhood to key landmarks in the Grand Lake neighborhood on the opposite side of I-580. From the Adams Street pedestrian bridge, which also allows vehicle traffic, there is direct access to the Rose Garden. The Van Buren Avenue pedestrian bridge terminates behind Lakeside Elementary School and not far from the Grand Lake retail district.
8. Lee Street

**Type of Roadway:** Local Street (one-way)

**Roadway Width:** 35 feet

**Speed Limit:** 25 mph

**Average Roadway Speeds:** 15 to 25 mph

**Parking:** On-street

**Sidewalk Widths:** 8 to 10 feet (no landscaped buffer), 6 feet (with landscaped buffer)

**Pedestrian Facilities:**

- Intermittent landscaped buffer strip between sidewalk and roadway
- Speed bumps with zebra striping and 15 mph speed limit
- Landscaped yards and building entrances
- White-striped crosswalks at intersections with Montecito Avenue, Vernon Street and Grand Avenue.
- Stop signs at Van Buren and Grand Avenues

Lee Street also provides a pedestrian path to Lake Merritt and to retail on Grand Avenue from residential areas in Adams Point. Vehicle traffic is slow because of speed bumps and the narrower width of the roadway. This route also provides fewer options for through traffic and thus has lower vehicle volumes.
Hercules Waterfront District

Typology: Suburban Residential
Location: Hercules, Contra Costa County
Size: Approximately 94 acres

A. District Boundaries and Location
The Hercules Waterfront District is a developing, master-planned community located along the shore of San Pablo Bay in western Hercules. The district is bounded by San Pablo Bay to the west, Refugio Valley to the north, San Pablo Avenue to the east and Hercules’ older, traditional single-family housing subdivisions to the south.

As seen in Figure 3-3, the Hercules Waterfront District is located in a suburban bedroom community just off of Interstate 80 (I-80) near the western terminus of State Route 4 (SR 4). The master-planned Waterfront District has been designed using new urbanist and transit-oriented development (TOD) principles, meaning the district has been built with relatively high-density housing and a mix of uses, and supports public transportation by creating active pedestrian environments within walking distance of transit. The Hercules Waterfront District is a unique case study because major components of the project are still either under design and/or construction, with final build out still seven to ten years out. In addition to assessing its current effectiveness as a walkable community, this case study identifies ways the area could become a true pedestrian district in the future and serve as an example for other communities in the Suburban Residential typology.

B. District Overview
Figure 3-3 also provides an overview of the district, including district boundaries, primary paths of pedestrian travel, the location of major attractors and transit stops, as discussed in more detail below.
I. Built Environment

The Hercules Waterfront District consists of four distinct sub-districts: the Central Neighborhood (completed), the Historic Town Center (under construction), the Transit Village (future)—which will be located opposite the railroad tracks to a proposed Amtrak train station (labeled #2 on Figure 3-3), and the Refugio Neighborhood (future).

The Central Neighborhood is comprised of 217 single-family homes covering 47 acres; lot sizes range from 3,000 to 5,500 square feet. When completed, the 21-acre Historic Town Center will consist of approximately 150 live-work units, 45 units of multi-family housing, 85,000 square feet of commercial
space and 45,000 square feet of civic space. The Town Center will be located within walking distance of the planned ferry landing and train station, which are proposed along the shoreline of San Pablo Bay. The planned Transit Village, which will encompass 16 acres, is zoned for multi-family housing (420-460 apartments) and a mixed-use commercial area. Finally, the 10-acre Refugio Neighborhood will be zoned for single-family housing, but is proposed to consist of 78 single-family houses, 64 cottages constructed behind single family homes as in-law units and 14 townhouses.

2. Major Attractors
There are several major attractors proposed for the developing Waterfront District, which are shown on Figure 3-3 and numbered as follows:
1. A planned ferry terminal
2. A planned Amtrak station
3. Future retail at Railroad Street and Sycamore Avenue
4. Future civic uses in the Historic Town Center
5. A community park located at the corner of Railroad Avenue and Santa Fe Avenue*
6. The Bay Trail along San Pablo Bay shoreline*
The park and Bay Trail are existing attractors that draw pedestrian activity throughout the day, with spikes during the evening hours and on weekends.

3. Transit Service
Currently, the Hercules Waterfront District is not served by fixed-route transit service. The closest bus stops are located approximately one mile from the district, on San Pablo Avenue. The Hercules Transit Center, also located on San Pablo Avenue, is approximately 1.8 miles away near the I-80/SR 4 interchange. The West Contra Costa Transit Authority (WestCat) provides transit service to the Hercules Transit Center; headways generally range between 15 to 30 minutes, with slightly longer headways for inter-regional service. The Transit Center includes a park-and-ride lot with more than 250 parking spaces, bus shelters and bicycle parking.

While fixed-route transit service does not currently serve the Waterfront District, transit is an integral component of the developing project. The district’s housing and mixed-use developments have been planned around two major transit projects: Amtrak’s Capitol Corridor commuter rail service and ferry service from Hercules to San Francisco. Both transit stations will be located within walking distance of the Waterfront District. In 2006 or 2007, rail service is expected to begin with the development of a planned Amtrak Station along the shoreline. Ferry service is expected to begin with planning and design of the terminal in 2010 or 2011 and initial service beginning in 2012.

4. Pedestrian Paths of Travel
The main pedestrian routes in the district are along Railroad Street, a local street/residential collector that skirts the Central Neighborhood and will provide access to the Historic Town Center, Sycamore Avenue, a local street that bisects the Central Neighborhood, and the San Francisco Bay Trail,
which extends along the shoreline of San Pablo Bay adjacent to the District. Pedestrian activity is currently light in the Central Neighborhood as residents stroll the neighborhood throughout the day with greater activity occurring on weekends. Activity levels are expected to increase as the build-out of additional project phases occurs and the transit infrastructure is secured. A major pedestrian path is likely to develop, when the district is complete, from the residential development to the planned ferry terminal.

C. Planning History
The City of Hercules thrived as a company town since its founding in 1881 until the closure of its main manufacturing company in the late 1970s. In the 1980s the land around the closed factory was converted into residential uses and Hercules developed into a typical auto-oriented, low-density bedroom community with segregated land uses, minimal civic spaces and no town center.

With its main economic base gone, little commercial enterprise, and no town center or sense of place, Hercules struggled for years to secure sufficient tax revenues to support public services. With a financial crisis looming, the City needed to take action. In 1999, the City led a highly publicized design charrette to develop a community vision. More than 300 members of the community, along with City officials and staff, embraced the principles of new urbanism, traditional neighborhood development and TOD. The process led to the development of design guidelines and a form-based zoning ordinance for the district, both of which have enabled the development of the master-planned Hercules Waterfront neighborhood. The regulations encourage mixed-use development, prioritize pedestrian and bicycle transit, and integrate public transit. All of these features are incorporated into the design of the new community, which will include a ferry terminal and train station, as well as retail and civic uses to create a sustainable economic base. With its access to transit, mix of uses and pedestrian infrastructure, the Waterfront

Hands-on design charrettes and workshops held throughout the development of the Central Hercules Plan, drew hundreds of citizens from the community.
District can serve as a model of pedestrian oriented development for other suburban communities in the Bay Area.

D. Regulatory Framework

The 2001 Central Hercules Plan was crafted to guide the development of approximately 430 acres in Central Hercules, including the Waterfront Neighborhood pedestrian district. The Plan envisions a pedestrian-oriented district with a strong city center, access to major transit resources and recreation in the Waterfront community.

To implement the Central Hercules Plan, the District Regulating Code was adopted as a chapter in the City’s Zoning Ordinance. The Regulating Code acts as the blueprint for development in the Central Hercules Plan Area. Development in the rest of the City falls under the community’s existing Zoning Ordinance. The intent of the Regulating Code is to provide a framework and design criteria to implement the principles of the 2001 Central Hercules Plan. The code explicitly allows increased densities in mixed use areas and a streamlined review of the development process in Central Hercules including an administrative environmental review when projects meet code specifications and an accelerated design review process conducted by staff. In addition, the Code contains design guidelines based on street type, which address lot configuration, building placement, building volume and architectural details.

Together, the Central Hercules Plan documents comprise a “typological urban design code.” Hercules is the first California city to enact such a code.
E. Key Findings

This section explores the key factors that contribute to the area’s pedestrian orientation and factors that could help it further develop into a true pedestrian district. Findings are based on field observations as well as interviews with City of Hercules planning staff.

Currently, the only existing portion of the Waterfront District is the Central Neighborhood. The density and pedestrian accommodations provided in this neighborhood, which include a complete network of sidewalks and amenities such as street trees, landscaping, and pedestrian scale lighting, contribute to its success as a pedestrian district. However, the functionality of the larger Waterfront District cannot be fully evaluated until major commercial, civic and transit features have been constructed. When build-out is complete the district will likely attract pedestrians in much greater numbers and function...
more fully as a complete pedestrian district. The following factors are most important for the successful completion of the pedestrian district:

- Form Based Zoning enacted through the City’s District Regulating Code allows for a mix of uses oriented towards pedestrian activity.
- Streets have been designed using principles that are meant to lower speeds and encourage bicycle and pedestrian use, including narrow street widths, one way couplets, parking restrictions, chicanes and alleyways.
- Pedestrian features, including a continuous sidewalk system, street trees, pedestrian scale lighting and landscaping, create an attractive and walkable streetscape.
- Implementation of transit infrastructure, including the construction of the Amtrak station and ferry terminal.

In addition to the improvements already planned for the Waterfront District the following additional changes or improvements could be made:

- Fixed route transit service should be provided to the Central Neighborhood.
- The Bay Trail is a tremendous recreational resource in the district; efforts should be made to better incorporate the resource.
- Although traffic volumes are low, crosswalks should be added within the residential neighborhood to indicate to vehicles that they have entered into a high pedestrian activity area and that pedestrian travel is a priority.

F. Pedestrian Environment and Facilities

The following section describes the pedestrian environment in detail by focusing on the primary paths of travel in the district, the size of the roadway or pedestrian space, and the pedestrian facilities along each roadway.
1. Railroad Avenue

Type of Roadway: Local Street
Roadway Width: 34 feet
Speed Limit: 25 mph
Average Roadway Speeds: 25 to 35 mph
Parking: Horizontal, on-street
Sidewalk Widths: 5 feet

Pedestrian Facilities:
♦ Sidewalks
♦ Landscaped buffer
♦ Street trees and plantings
♦ Pedestrian-scale lighting fixtures
♦ One chicane, just north of Santa Fe Road at the beginning of the residential portion

Railroad Avenue is a local street that provides access to and from the Hercules Waterfront District to services, transit and outlying neighborhoods in the greater community. Five-foot sidewalks facilitate pedestrian travel within the Central Neighborhood. Light pedestrian activity is present throughout the day, and residents use Railroad Avenue in combination with other local streets as a recreational loop.

Upon completion, mixed-use commercial and civic buildings in the Historic Town Center will front Railroad Avenue and draw larger volumes of pedestrian traffic from the Waterfront District and outlying neighborhoods.
2. Sycamore Avenue

Type of Roadway: Local Street
Roadway Width: 34 feet
Speed Limit: 25 mph
Average Roadway Speeds: 25 to 35 mph
Parking: Horizontal, on-street
Sidewalk Widths: 5 feet

Pedestrian Facilities:
- Sidewalks
- Street trees and plantings
- Pedestrian-scale lighting

Sycamore Avenue is a local street that bisects the Central Neighborhood. As a neighborhood connector, Sycamore Avenue carries residential traffic, provides sidewalks for light pedestrian activity and includes on-street parking.
3. **Bay Trail**

- **Type of Roadway:** N/A
- **Roadway Width:** N/A
- **Speed Limit:** N/A
- **Average Roadway Speeds:** N/A
- **Parking:** N/A
- **Sidewalk Widths:** 10 feet

**Pedestrian Facilities:**
- ♦ Multi-use pathway
- ♦ Benches
- ♦ Trash receptacles

The San Francisco Bay Trail is a planned recreational corridor that, when complete, will encircle San Francisco and San Pablo Bays with a continuous 400-mile network of bicycling and hiking trails. Approximately three-quarters of a mile of this off-street recreational trail is being developed along the San Pablo Bay in Hercules. The 10-foot wide multi-use pathway, which extends between the Waterfront District and the Pinole Bayfront Park, draws pedestrians and bicyclists from throughout the area. Activity is highest during the mornings, evenings and on weekends when residents and visitors use the trail for recreation.
**BERKELEY’S TELEGRAPH AVENUE**

**Typology:** Major Mixed-Use District  
**Location:** Berkeley, Alameda County  
**Size:** The district is four blocks long and one to three blocks deep.

### A. District Boundaries and Location

The Telegraph Avenue pedestrian district is a four block long corridor that runs along Telegraph Avenue from Bancroft Avenue and the UC Berkeley campus to the north, to Dwight Way to the south, as shown in Figure 3-4. The district also stretches one block west and three blocks east on Bancroft Avenue and one block in either direction on Durant Avenue. It is two and a half miles from Interstate 80 and one and three quarter miles from Highway 24.

The UC Berkeley campus forms the northern border of the district, and high-density residential neighborhoods (predominantly serving students) are located to the east and west of the district. People’s Park, a local landmark is also located in this neighborhood between Haste Street and Dwight Way, one block east of Telegraph Avenue.

### B. District Overview

Figure 3-4 provides an overview of the primary routes of pedestrian travel through the district, the location of major attractors in the district, major parking lots and transit stops, as discussed in more detail below. Figure 3-4 also shows the district boundaries.

### I. Built Environment

The Telegraph Avenue district is a mixed-use commercial neighborhood. The first story of all buildings on Telegraph, Bancroft and Durant Avenues con-
tain retail uses and many contain housing units on the upper floors. Bancroft Avenue has retail uses on the south side of the street; the UC Berkeley campus fronts the north side. The blocks of Bancroft and Durant Avenues included in the case study also include some institutional uses and parking garages. Development in the district is dense, with buildings ranging from one to six stories. Additionally, retail façades along Telegraph Avenue tend to be dramatic and creative, with bold signage and window displays and there are very few driveways breaking up the streetscape.
2. Major Attractors
The key attractors to the area are shown in Figure 3-4 as numbered below:

1. UC Berkeley campus, which has a student population of approximately 35,000, and 14,000 additional faculty and staff.
2. Retail shops on Telegraph, Bancroft and Durant Avenues.

Parking garages along Bancroft and Durant Avenues, also shown in Figure 3-4, generate significant pedestrian travel from people driving into the district and walking from the garages to nearby shops or the University.

3. Transit Service
Six AC Transit bus lines serve the Telegraph Avenue pedestrian district, with 10 to 20 minute headways during commute hours and 30 to 60 minute headways at other times. The area is also within a half mile of the Downtown Berkeley BART station, with 7 minute headways during commute hours and 15 to 30 minute headways at other times. Future plans for Bus Rapid Transit (BRT) along Telegraph Avenue from Oakland to the UC Berkeley campus are underway and could radically change the existing street design. Discussions regarding BRT implementation include creating a transit-only street along the portion of Telegraph Avenue in this district.

4. Pedestrian Paths of Travel
As noted in Figure 3-4, Telegraph Avenue is a major pedestrian route in the district. There is also considerable pedestrian traffic to and from the shops and parking areas on Bancroft and Durant Avenues. Many students, faculty
and staff also walk into the district either from the university or the adjacent residential neighborhoods via other streets serving the district.

C. Planning History
Development on Telegraph Avenue took place predominantly in the 1930s and 40s. There were primitive zoning standards at that time, but it was not until the 1960s and 70s that true zoning applied to the area. The resulting district is mixed-use, and comprised of historic and newer buildings along a narrow street. Such a traditional urban shopping street would be difficult to build using conventional planning standards that require significant parking and wider roadways.

A number of planning challenges have affected the quality of the pedestrian district over the years. Beginning in the 1960s and continuing into the early 1990s, Telegraph Avenue was the site of outbreaks of civil disobedience, which created an atmosphere of tension. This tension has made undertaking major policy initiatives and policing, either on the part of the City or the University, difficult. As a result, issues such as loitering and panhandling have become difficult to address.

A second challenge has been the need to balance pedestrian and vehicle travel needs. Many nearby residents as well some pedestrian advocates have argued that the one-way streets in the district should be converted to two-way travel to slow traffic and improve pedestrian safety. Telegraph Avenue street vendors and merchants respond that converting the roads and slowing traffic speeds

Eye-catching retail signage along Telegraph Avenue creates interest at the pedestrian level.

Street vendors, allowed on Telegraph Avenue, mix with street people and pedestrians on the narrow sidewalks. This mix sometimes causes significant congestion on the sidewalks.
would hamper access to their businesses, as the district is far from any other regional access roads or freeways.

There are a number of efforts underway to maintain Telegraph Avenue as a vital pedestrian-oriented commercial district. The first is the organization of a Business Improvement District (BID) created by local merchants. The BID has resulted in an overall upgrade to the appearance of the area and improved maintenance on the street including removing litter, steam cleaning the street, and painting out graffiti. In addition, the City and UC Berkeley are completing the Southside Plan, a long-range plan for the area that includes many policies for improving pedestrian quality of life in the district. These policies include adding pedestrian-scaled lighting, ensuring regular trash collection and adding directional signage to points of interest in the district. The Southside Plan also contains a policy to consider converting Bancroft and Durant Avenues to two-way streets.

D. Regulatory Framework
The Telegraph Avenue pedestrian district is currently zoned commercial, which allows both commercial and relatively high-density residential uses. A goal of the zoning is to create a mix of retail, services and housing in close proximity to promote walking and limit vehicular traffic. Once the Southside Plan is adopted, the zoning will be amended to include additional regulations to enhance the pedestrian-oriented nature of the district, including allowing the approval of new mixed-use buildings on Telegraph without parking and new design review guidelines that encourage distinctive facade treatments.

E. Key Findings
This section explores the key factors that contribute to the area’s success as a pedestrian district and factors that continue to create challenges.
Overall, the Telegraph Avenue pedestrian district has a long history as a vibrant and attractive mixed-use retail area. The district is located in an area with an extremely high population of UC Berkeley students, faculty and staff who use Telegraph Avenue daily to get to and from campus, buy food and shop for other retail items. The district’s sound pedestrian infrastructure, particularly the street trees and signalized crosswalks, creates a comfortable environment for walking. Additionally, the street attracts people because of the visual interest provided by a wide array of façades, and because it provides retail and other services for a residential population that is within close walking distance.

The following factors have had the most impact on creating this district:

♦ Relatively wide sidewalks with street trees and slow traffic combine to make the district a very comfortable walking environment.

♦ Signalized crosswalks that slow traffic on one-way arterials helps maintain the safety and comfort of pedestrians within the district.
Gateway treatments at the entrance to the UC Berkeley encourage pedestrian traffic between the two areas by drawing the eye and creating visual interest.

Consolidated parking garages, including shared parking arrangements between the City and UC Berkeley, help attract people to the district who park and then walk in the district.

The mix of uses in the district, including housing above retail, reduces auto dependency and enables walking.

The wide range of stores with interesting façades add to the visual interest of the street. Restaurants, in particular, generate pedestrian traffic.

Regular maintenance provided by the Business Improvement District has helped keep the area attractive and comfortable for pedestrians.

While the district currently operates well as a pedestrian district, a few changes or improvements could be made as described below.

Sidewalks are narrowest on Telegraph Avenue where pedestrian use is highest. Side streets, including Channing, Bancroft and Durant, have wider sidewalks. Current traffic volumes and the existing street design make it infeasible to widen sidewalks at this time, but if the street becomes a BRT/Transit street it could happen.

Clear directional signage indicating key destinations within the district would help pedestrians better navigate this very dense area.

More late night uses in the district would improve pedestrian safety.

More enforceable city policies regarding street behavior would improve the character of the district and help attract a broader mix of pedestrians.
The City’s existing commercial quota system controls the number of certain types of uses that are allowed at any one time on Telegraph Avenue. This system often makes it difficult for retail vacancies to be filled quickly, creating vacant storefronts and undermining the vibrant mix of uses that contribute to the district.

F. Pedestrian Environment and Facilities

The following section describes the pedestrian environment in detail by focusing on the primary paths of travel in the Telegraph Avenue pedestrian district. The character of the roadway and the pedestrian facilities for each pedestrian path are described.
## I. Telegraph Avenue

**Type of Roadway:** Local (one-way)  
**Roadway Width:** 32 to 40 feet  
**Speed Limit:** 25 mph  
**Average Roadway Speeds:** 5 to 15 mph  
**Parking:** Horizontal loading zones only  
**Sidewalk Widths:** 8 to 10 feet (15 feet at bulb-outs)

**Pedestrian Facilities:**
- Street trees with decorative grates
- Street vendors along the length of the street
- Standard lighting fixtures
- Signalized crosswalks with brick pavers and signals
- Cut-outs for bus stops and loading
- Trash cans and newspaper dispensers
- Banners
- Retail awnings

Telegraph Avenue is the core of the pedestrian district, with heavy foot traffic from early morning until ten or eleven at night, especially to and from the UC Berkeley campus. Traffic moves very slowly on the street, stopping for signals at each intersection. Telegraph Avenue has 24-hour loading zones for retail deliveries and constant loading and unloading further slows vehicle traffic. Some pedestrian travel continues south on Telegraph out of the district, but drops off dramatically at Dwight Way where the character changes from a pedestrian-oriented to an auto-oriented street. The roadway becomes much wider and vehicle travel becomes two-way with increased travel.
2. Bancroft Avenue

Type of Roadway: Arterial (one-way)
Roadway Width: 40 feet
Speed Limit: 25 mph
Average Roadway Speeds: 25 to 30 mph
Parking: Horizontal, on-street and structured
Sidewalk Widths: 35 feet along campus

Pedestrian Facilities:
- Street trees with decorative grates
- Food vendors at campus entrance
- Standard lighting fixtures
- Signalized crosswalks with brick pavers
- Covered bus stops
- Signalized mid-block crosswalk and zebra striping
- Campus entry with bollards and brick paving
- Banners
- Retail awnings
- Cut-outs for bus stops and short-term parking
- Yellow pedestrian signs

Bancroft Avenue is the southern boundary of the UC Berkeley campus. Pedestrian traffic at the intersection of Bancroft and Telegraph Avenues is particularly heavy as there is a campus gateway and Bancroft provides a direct route for many pedestrians heading to classes or residences and to retail and parking uses east of Telegraph Avenue. Pedestrian traffic is lighter east of Telegraph Avenue because pedestrians tend to walk through campus to downtown Berkeley. Bancroft Avenue is also the primary vehicle route from the district to downtown Berkeley to the west. There are three travel lanes, allowing vehicle movement one-way from east to west at relatively high speeds.
3. **Durant Avenue**

<table>
<thead>
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<th>Type of Roadway:</th>
<th>Local (one-way)</th>
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<tbody>
<tr>
<td>Roadway Width:</td>
<td>42 feet</td>
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<tr>
<td>Speed Limit:</td>
<td>25 mph</td>
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<tr>
<td>Average Roadway Speeds:</td>
<td>25 to 30 mph</td>
</tr>
<tr>
<td>Parking:</td>
<td>On-street and structured</td>
</tr>
<tr>
<td>Sidewalk Widths:</td>
<td>11 to 12 feet</td>
</tr>
</tbody>
</table>

**Pedestrian Facilities:**
- Street trees with decorative grates
- Standard lighting fixtures
- Signalized crosswalks with brick pavers
- Cut-outs for bus stops and short-term parking

Retail use and parking garages in the first block of the Durant Avenue to the east and west of Telegraph Avenue draw a significant amount of pedestrian traffic. Activity is constant throughout the day, following a similar pattern to that described for Telegraph Avenue. Durant Avenue is the primary vehicle route from downtown Berkeley to Telegraph Avenue, campus and student residences on the east side of the district. There are three travel lanes, allowing vehicle movement one-way from west to east, at relatively high speeds.

![Wide sidewalks crowded with pedestrians heading to restaurants on Durant Avenue during the mid-day lunch rush.](image1)

![New façade, street vendors and a new, covered bus stop at the corner of Durant and Telegraph Avenues. Brick pavers indicate the pedestrian crossing area across the three lanes of one-way traffic on Durant.](image2)
### 4. Channing Way

<table>
<thead>
<tr>
<th>Type of Roadway:</th>
<th>Local street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Width:</td>
<td>30 to 35 feet</td>
</tr>
<tr>
<td>Speed Limit:</td>
<td>25 mph</td>
</tr>
<tr>
<td>Average Roadway Speeds:</td>
<td>15 to 25 mph</td>
</tr>
<tr>
<td>Parking:</td>
<td>Horizontal and on-street (one side)</td>
</tr>
<tr>
<td>Sidewalk Widths:</td>
<td>11 to 12 feet</td>
</tr>
</tbody>
</table>

**Pedestrian Facilities:**
- Street trees with decorative grates
- Standard lighting fixtures
- Signalized crosswalks with brick pavers at Telegraph intersection
- Mid-block with zebra striping one-half block west of district

Pedestrian activity is limited on Channing Way compared to the surrounding streets. The street predominantly provides access to the district and beyond. The travel way is narrower than other streets in the district and vehicle travel is two-way. The street is also a designated bicycle route. These features combined to slow vehicular traffic compared to other streets in the district.
5. **Haste Street**

- **Type of Roadway:** Arterial (one-way)
- **Roadway Width:** 36 feet
- **Speed Limit:** 25 mph
- **Average Roadway Speeds:** 25 to 30 mph
- **Parking:** Horizontal and on-street
- **Sidewalk Widths:** 11 to 12 feet

**Pedestrian Facilities:**
- Street trees
- Standard lighting fixtures
- Signalized crosswalks with brick pavers at Telegraph Avenue intersection

Pedestrian travel is limited on Haste Street, which functions largely as a vehicular route from the eastern side of the Telegraph Avenue pedestrian district to downtown Berkeley. Pedestrians do use the route to access People’s Park and the residential neighborhood beyond. This route has a high percentage of loiterers and panhandlers who live or hang out in the park.
6. Dwight Way

**Type of Roadway:** Arterial (one-way)

**Roadway Width:** 40 to 42 feet wide

**Speed Limit:** 25 mph

**Average Roadway Speeds:** 25 to 30 mph

**Parking:** Horizontal and on-street

**Sidewalk Widths:** 7 feet

**Pedestrian Facilities:**
- Street trees
- Standard lighting fixtures
- Signalized crosswalks
- Pedestrian island at junction with Telegraph Avenue

As already discussed, Dwight Way is the southern border of the pedestrian district. South of this border, pedestrian travel on Telegraph Avenue drops off dramatically. Like Durant Avenue, Dwight Way is a primary vehicle route from downtown Berkeley to the district and the neighborhood and Campus beyond. Additionally, Dwight Way provides a major route to south Berkeley because where the road hits the district, Telegraph Avenue becomes two-way again. There are three travel lanes on Dwight, allowing vehicle movement one-way from west to east. West of the district, vehicle travel is precluded from turning south by road barriers.
FRUITVALE BART STATION TOD

**Typology:** Urban Transit Village  
**Location:** Oakland, Alameda County  
**Size:** A 16-acre node of pedestrian activity, two blocks wide by three blocks long.

**A. District Boundaries and Location**  
The Fruitvale BART Station Transit-Oriented Development (Fruitvale TOD) pedestrian district is a two-block by three-block pedestrian activity node, bounded by the elevated BART tracks to the southwest, Fruitvale Avenue and 33rd Avenue to the west, 35th Avenue to the east and International Boulevard to the north.

The pedestrian district is primarily surrounded by residential neighborhoods, except for the area to the west, which is comprised of a mix of single-family residences, industrial buildings and big box retail. The pedestrian district is also defined by parking lots immediately north and south of the pedestrian area and major transportation thoroughfares, including Interstate 880 (I-880), Fruitvale Avenue and International Boulevard.

**B. District Overview**  
Figure 3-5 shows the district boundaries, primary paths of pedestrian travel, the location of major attractors, and major parking lots and transit stops, as discussed in more detail below.

**1. Built Environment**  
The Fruitvale TOD pedestrian district is a mixed-use neighborhood focused around a BART station and the commercial uses on International Boulevard. International Boulevard is a commercial corridor comprised of two- to- four story buildings containing primarily neighborhood-serving retail uses. Between these two major land uses is Fruitvale Village, a new transit-oriented

[The BART station and new pedestrian plaza in Fruitvale Village are major contributors to the identity and success of the Fruitvale TOD pedestrian district.]
development of ground floor retail with four-story multi-family housing, community services, office uses and neighborhood-serving retail. Fruitvale Village was designed to fit into the two- to four-story multi-family residential buildings and few single-family residences that surround the new development. Building heights throughout the district range from one to four stories. Several BART parking lots front on 12th Street just outside the district boundary, which generate pedestrian traffic walking from these lots through Fruitvale Village to the BART Station.

2. Major Attractors
The Fruitvale TOD pedestrian district has four main attractors numbered as follows in Figure 3-5:
1. Fruitvale Village, a newly-built mixed use, transit village next to the BART station
2. The combined BART and bus station
3. The commercial district along International Boulevard
4. Avenida de la Fuente, a new pedestrian paseo that connects Fruitvale Village and International Boulevard.

3. Transit Service
Service to Richmond, Dublin/Pleasanton, Fremont and Daly City is available at the Fruitvale BART Station, located at the southern border of the district, with 15-minute headways during commute hours and 25-minute headways at other times. The area is also served by ten AC Transit lines, with 15 to 30 minute headways.

4. Pedestrian Paths of Travel
As seen in Figure 3-5, the primary paths of pedestrian travel through the district are from the BART station, through the Fruitvale Village pedestrian plaza and along the Avenida de la Fuente pedestrian paseo (street closed to cars) to International Boulevard. Pedestrian activity continues for one block in each direction along International Boulevard where new pedestrian improvements have recently been installed. There is also a high amount of pedestrian traffic along East 12th Street to and from the BART Station from nearby parking lots and residential neighborhoods. Pedestrian activity is constant throughout the district, although there are peaks when BART trains arrive or depart and during commute hours.

C. Planning History
While International Boulevard in Oakland’s Fruitvale neighborhood has always been a commercial center full of pedestrian activity, the area recently has been transformed into a more distinct pedestrian district through a suc-
Successful facade improvement program, road narrowing projects, streetscape improvements and the development of the Fruitvale Village.

Pedestrian safety is a long-standing concern in the Fruitvale neighborhood, which has one of the highest residential densities in the city. It also has lower-than-average car ownership and higher-than-average transit ridership. Finally, International Boulevard, the area’s main retail corridor, has high traffic and pedestrian volumes and a poor safety history, with 10 percent of all Oakland’s pedestrian collisions taking place along the corridor.

Concerns about pedestrian safety and the economic vitality of the corridor came to a head in 1991 when BART proposed a new parking garage at the Fruitvale BART station. With assistance from a local non-profit group called the Unity Council, the community challenged the proposal on the basis that the new development would worsen traffic patterns, increase barriers to walking in the neighborhood and diminish opportunities for retail. The conflict was resolved through an extensive planning process led by the Unity Council.
and supported by BART, AC Transit and the City of Oakland. The process resulted in plans for the Fruitvale Village development and a series of pedestrian improvements to link the BART station and the new development to the existing commercial activity on International Boulevard.

**D. Regulatory Framework**

The General Plan land use and zoning designations in the Fruitvale TOD pedestrian district were adopted in the late 1990s to support the development of higher density mixed-use, transit- and pedestrian-oriented uses. The regulations were put in place after the Fruitvale Village planning process had been underway for several years, in order to support neighborhood revitalization and the community’s goal of improving International Boulevard as its main street.

The City’s General Plan allows between 30 to 125 residential units per gross acre in the district and a commercial FAR of up to 4.0. The area is zoned Commercial Shopping District (C-28), which allows a range of commercial uses and relatively high-density housing. The district is part of the City’s
Transit Oriented Development (S-15) overlay that is intended to enhance areas around the City’s transportation nodes by allowing high-density, compact mixed-use development and encouraging a balance of pedestrian-oriented activities and transit opportunities. The overlay also provides design guidelines to create a safe, pleasant pedestrian environment near transit stations.

The entitlements for the Fruitvale Village development were approved as part of a Planned Unit Development (PUD), which permits flexibility in certain zoning regulations to allow for comprehensive planning of sufficiently large developments. Therefore, some variations from the specific zoning standards may be found in the Fruitvale Village.

The City of Oakland also did the following to encourage the pedestrian district:

♦ Passed an ordinance capping parking around the Fruitvale Village development to maintain the area’s pedestrian-oriented character.
♦ Vacated half of the East 12th Street right-of-way along the southwest border of Fruitvale Village, and all of 34th Avenue between International Boulevard and the BART station, to make room for two pedestrian plazas.

♦ Made the Fruitvale TOD a high priority for pedestrian improvements in the City’s Pedestrian Master Plan.

**E. Key Findings**
This section explores the factors that contribute to the area’s success as a pedestrian district and factors that continue to create challenges.

The Fruitvale TOD serves as a successful pedestrian district because of the array of uses that attract pedestrians and its easy access to transit. Recent improvements to International Boulevard and East 12th Street have increased the safety and comfort of the walking environment. These improvements, along with the relocation of the BART parking lot out of the main path of pedestrian travel, have removed barriers to accessing the Fruitvale TOD from surrounding neighborhoods and allowed the area to develop into a cohesive district. One key lesson learned by the staff managing the project was that designing and budgeting for basic infrastructure and safety should come before aesthetic considerations, which are less crucial to success and can be accommodated depending on remaining funds.

*The median on International Boulevard narrows the crossing distance for pedestrians and slows car traffic. The street trees are attractive and buffer pedestrians from passing cars. Bollards also define the pedestrian environment, but they can also add to visual clutter and increase costs unnecessarily when used in such great numbers.*
The following factors have had the greatest impact on creating this pedestrian district:

♦ Moving the BART parking lot out of main pedestrian pathways removed a visual and physical barrier between the International Boulevard business district and the BART station. The location of the Fruitvale Village adjacent to the BART station, rather than separated by a parking lot, encourages pedestrian travel through the development, which in turn helps support businesses and create a more vital pedestrian environment.

♦ The pedestrian plaza in the center of the Fruitvale Village is a distinct gathering place and creates a vital pedestrian path for those walking to or from BART to destinations in the neighborhood.

♦ New uses in the Fruitvale Village development have drawn pedestrians to the area and put eyes on the street as retailers watch out for the areas immediately around their stores.

♦ The AC Transit bus transfer center has concentrated bus lines and improved the transfer time between buses and BART, and draws pedestrian activity through the commercial spaces in the new plazas.
Narrowing East 12th Street by widening sidewalks and adding pedestrian lighting, street trees and crosswalks, as well as narrowing International Boulevard by adding a median, worked to slow cars and increase pedestrian comfort and safety.

Street trees have been very effective in slowing down cars on International Boulevard because they add a vertical element to the street, and have improved the comfort of pedestrians through shading and traffic buffering.

While the district currently operates well as a pedestrian district, several factors continue to create challenges.

Avenida de la Fuente is fronted on one side by a blank wall, reducing the perceived safety and vitality of the walkway. Additionally, visibility of the plaza from International Boulevard is somewhat limited.

The landscaped median on International Boulevard has seating areas at each end bounded by four-foot high concrete walls, which limit the visibility of pedestrians at crosswalks.

Although they are well liked by pedestrians and merchants because of their aesthetic qualities, the colored crosswalks on International Boulevard are expensive and not very visible to drivers. They also fade over time. Funds may have been better spent on highly visible and less expensive materials such as continental crosswalks striped with white thermoplastic, a reflective tape that is whiter and brighter than paint.

The newly constructed median on International Boulevard provides an attractive refuge for pedestrians crossing the large street. However, the four-foot high walls at the intersections (shown above), which were installed to provide a buffer for seating areas, limit visibility for drivers making turning movements.
Pedestrian access for all users could be improved. Major paths of travel, including the two plazas, the median and the crosswalks, have a number of obstacles that may impede less-abled pedestrians. These obstacles include stairs, bollards and the stamped concrete used to create texture in pedestrian paths. In addition to the features described above, there were a number of challenges to overcome in the recent planning and construction process that led to the district’s recent improvements. These include:

- Acquiring sufficient land to move the BART parking lot and consolidate the pedestrian improvements along existing rights-of-way. Several land swaps were negotiated to assemble necessary parcels and design was used to minimize building footprints.
Overcoming BART’s one-to-one replacement policy for parking, which required a large parking structure and created ingress and egress conflicts and localized congestion. Multi-modal transportation facilities including the BikeStation were maximized on the site, traffic was redirected off main arterials and safety issues were addressed through design.

Ensuring inter-agency coordination between BART, the City of Oakland and the non-profit developer to work together on adjacent portions of the district. Relationships developed over long association and through the process of developing a shared vision that met the needs of all participants.

Determining appropriate design treatments to slow traffic on large arterials and prioritize pedestrian movements. The City’s pedestrian policies, guidelines and level of service standards need to be refined to change these streets to prioritize pedestrian needs. The city is working on additional pedestrian standards for large arterials for future projects.

F. Pedestrian Environment and Facilities
The following section describes the pedestrian environment and facilities in detail by focusing on the primary paths of travel through the district and on other key components such as the Transit Village plaza.
1. International Boulevard

**Type of Roadway:** Arterial
**Roadway Width:** 78 feet
**Speed Limit:** 25 mph
**Average Roadway Speeds:** 20-35 mph
**Parking:** Horizontal on-street
**Sidewalk Widths:** 10-12 feet with tree wells

**Pedestrian Facilities:**
- Landscaped median
- Frequently-placed bollards along both sides of median
- Bulb-outs at signalized intersections
- Decorative paved crossings
- Audible pedestrian crossing cues
- Tactile ADA strips at crossings
- Pedestrian lighting

International Boulevard has long been a commercial center of the Latino community. The street has neighborhood-serving retail uses such as a bank, a grocery store and several community service uses, major attractors for pedestrians. The corridor is also a major pedestrian path to the BART station and into the surrounding neighborhood, with heavy traffic volumes on International Boulevard. Within the pedestrian district, a wide, landscaped median narrows the roadway and slows traffic. The median is not present to the east or west of the district; thus, traffic speeds increase rapidly outside the area.
2. East 12th Street

Type of Roadway: Local
Roadway Width: 38 feet
Speed Limit: 25 mph
Average Roadway Speeds: 15-20 mph
Parking: Horizontal, on-street
Sidewalk Widths: 5-6 feet
with tree wells

Pedestrian Facilities:
♦ Mid-block crossing with bulb-outs at main entrance to Fruitvale Village, linking it to the pedestrian paseo
♦ Decorative crosswalk pavement at Avenida de la Fuente
♦ Bollards at mid-block crossing

East 12th Street is a local street that runs through the middle of the district. Pedestrians cross East 12th Street on their way from the BART Station, through Fruitvale Village and Avenida de la Fuente, to International Boulevard. Local traffic uses East 12th Street to access the BART station and retail uses in Fruitvale Village. As part of the redevelopment of the neighborhood, the road was narrowed to slow traffic and reduce vehicle volumes by encouraging through traffic to use other routes. Few major attractors exist on East 12th Street; it primarily serves as a link from the BART station to other parts of the larger Fruitvale neighborhood. Pedestrians leaving the BART station must cross East 12th Street to reach the commercial district on International Boulevard.
3. Avenida de la Fuente

**Type of Roadway:** Pedestrian Paseo  
**Roadway Width:** N/A  
**Posted Speed Limit:** N/A  
**Average Roadway Speeds:** N/A  
**Parking:** N/A  
**Sidewalk Widths:** 55 feet

**Pedestrian Facilities:**
- Benches
- Public art
- Pedestrian lighting fixtures
- Decorative paved crossings at crossing linking it to East 12th Street
- Gateway features (including two decorated pillars and an arch)
- Decorative paving (white with red design features)
- Street trees
- Bollards

Avenida de la Fuente is a one-block long pedestrian paseo connecting Fruitvale Village to International Boulevard. The Fruitvale Development Corporation offices are on one side of the Avenida and a blank wall is on the other side. The Avenida is both an attractor as a public space and a major pedestrian path, with consistently high activity throughout the day.
4. Fruitvale Village

**Residential:** 47 rental apartments

**Office:** 23,390 square feet of Class A space
40,017 square feet set-aside for community service

**Commercial:** 39,707 square feet of retail

**Pedestrian Facilities:**
- Benches
- Public art
- Pedestrian lighting features
- Water fountain
- Gateway features (including signage and vertical building features to accentuate entrance)
- Information kiosks
- Extensive landscaped planters
- Banners
- Patio seating

The retail uses and pedestrian plaza in the Fruitvale Village draw a large number of pedestrians. The plaza is also the primary walking route from the BART station to East 12th Street and International Boulevard beyond Avenida de la Fuente. Vehicle traffic accesses Fruitvale Village through a structured parking garage between Fruitvale Boulevard and 33rd Street, or through a parking lot between 35th and 36th Streets.

The seating, trees, fountain and other pedestrian amenities in the Fruitvale Village pedestrian plaza provide an amenity for the district’s residents, especially living above the plaza. It also provides direct access to the BART station.

Ground floor retail is an additional draw to the plaza. Having merchants and shoppers in the plaza also increases safety by putting eyes on the street.
Downtown San Jose

Typology: Major City Downtown
Location: San Jose, Santa Clara County
Size: An approximately 175-acre node of pedestrian activity, roughly 6 blocks long and 8 blocks deep

A. District Boundaries and Location
The Downtown San Jose pedestrian district is generally bound by Santa Clara Street on the north, Viola Avenue and San Salvador Street on the south, San Jose State University and 6th Street on the east, and Almaden Boulevard on the west. Several museums and a major convention center are located within the downtown core area, and a strong relationship exists between downtown and the San Jose State University campus to the east.

B. Key District Components
Figure 3-7 shows the Downtown San Jose pedestrian district, including boundaries, primary paths of pedestrian travel, the location of major attractors and major transit stops, which is discussed in more detail below.

I. Built Environment
The diverse mix of uses in downtown San Jose are typical of most major downtown areas, and are contained within buildings ranging from 3 to 20 stories tall. Major office, retail, hotel, convention, cultural and tourist uses exist within the district. A new 530,000 square foot City Hall complex with an 18-story tower has recently been completed in the northeast portion of the district. In addition, a large amount of residential development has been constructed in recent years. A central feature of downtown San Jose is the Plaza de Cesar Chavez, a two-block long oval-shaped park that is heavily used by downtown visitors, employees and residents.
2. Major Attractors

The density and intensity of uses in downtown San Jose, and in fact of most major downtown cities, generate a tremendous amount of pedestrian activity. The most notable pedestrian attractors are shown in Figure 3-7 as numbered below:

1. San Jose State University, which has strong pedestrian connection with the downtown
2. The Plaza de Cesar Chavez, the most prominent and heavily used public open space in downtown San Jose
3. The McEnry Convention Center, regularly utilized by major conventions
4. The new San Jose City Hall, which generates significant employee and visitor pedestrian traffic

Figure 3-7: Downtown San Jose Pedestrian District.
The combined rail-bus stops on 1st and 2nd Streets at Santa Clara Street and the Paseo de San Antonio, as well as at the Convention Center, could also be considered major pedestrian attractors. Multiple parking garages (both public and private) exist on most downtown blocks.

3. Transit Service

Downtown San Jose is bisected by numerous bus lines, as well as by two VTA light rail routes. Light rail and dedicated bus lanes exist on 1st and 2nd Streets, making these two corridors the most transit-intensive in the downtown area. Headways on the numerous bus lines and VTA light rail generally range between 15 and 20 minutes on weekdays. The light rail line and many bus routes shift to an east-west alignment along San Carlos Street on the south side of the downtown core. Though located outside of the area considered to be the downtown pedestrian district, the downtown San Jose train station is located approximately one-half mile to the west, and is served by Amtrak, ACE, light rail and Caltrain. DASH shuttles circulate between downtown and the train station on weekdays.

Future BART service to San Jose is proposed to include a station underneath Santa Clara Street, spanning the 3-block segment between Market and 2nd Streets.
4. Pedestrian Paths of Travel

All streets within downtown San Jose experience a notable amount of pedestrian traffic, though the most heavily-used routes are shown in Figure 3-7. The pedestrian-oriented, linear transit malls along 1st and 2nd Streets experience heavy pedestrian traffic throughout the day. The Paseo de San Antonio is a four-block long pedestrian paseo that links San Jose State University, major transit stops on 1st and 2nd Streets, and the Plaza de Cesar Chavez, creating the most important and heavily used downtown east-west pedestrian linkage. South Market Street, which splits around both sides of the Plaza de Cesar Chavez and connects the northern downtown area to the convention center, is also an important pedestrian corridor. Finally, East San Fernando Street is a primary pedestrian route that connects the downtown core to the new City Hall.

C. Planning History

Downtown San Jose has developed over more than 150 years and has an extremely diverse mixture of historic and modern uses. Redevelopment efforts in the past two decades have transformed the downtown area into a cultural and civic center with vibrant, pedestrian-oriented streets and a heavy emphasis on transit. The current downtown area began to grow in the mid 1800s. Although downtown San Jose has undergone numerous transformations over the past century and a half, many of the innovative streetscape and pedestrian improvements seen in San Jose today have been constructed in the past 20 years. VTA light rail service and associated streetscape improvements were completed in 1988 and were a catalyst to pedestrian-oriented downtown improvements.

Challenges to achieving a pedestrian-oriented downtown included a lack of residential and visitor uses, leading to a deserted downtown on evenings and weekends, and a prevalence of surface parking lots and uninviting streetscapes. The City’s redevelopment efforts have since included a significant
amount of residential and mixed-use infill downtown, as well as construction of the Tech Museum, a major convention facility and associated hotels.

An innovative parking program implemented by the City provides uniform signage and real-time demand data to users among both public and private parking facilities. The parking program also makes use of the DASH shuttle system to transport users between downtown and the Diridon train station, where lower-cost parking areas are provided. By implementing such parking innovations, the City allowed increased development to take place downtown, helping to create a denser center with increased pedestrian activity.

In addition to facilitating land use changes in the downtown core, the San Jose Redevelopment Agency has implemented numerous streetscape projects that have significantly improved the pedestrian experience and pedestrian circulation. The *San Jose Downtown Streetscape Master Plan* was prepared in 2003 and provides a blueprint for future streetscape and pedestrian improvements.

**D. Regulatory Framework**

In 2004, the City of San Jose adopted a set of broad-sweeping regulatory changes for downtown in 2004. These are referred to as the *San Jose Greater Downtown Strategy for Development: Strategy 2000* and include adoption of a new downtown zoning ordinance, a comprehensive rezoning of the downtown area, and a set of downtown design guidelines. An EIR will be prepared for the *Strategy 2000 Plan*, providing project-level environmental review for most major developments and projects. Implementation of the strategic plan and adoption of the EIR will significantly streamline the development process for both public and private projects in downtown San Jose.

The strategic plan also includes an implementation strategy aimed at constructing the many downtown infrastructure (including streetscape) improvements that have been included in adopted plans over the years. The
process will allow developers to know what specific improvements they will be required to construct, and establish a mechanism to apportion the costs of major projects. If successful, this comprehensive approach will result in improvements such as those shown in the Downtown Streetscape Master Plan to be constructed, rather than just remain in plan form as “wish list” items.

E. Key Findings

As indicated above, numerous streetscape improvements have been constructed in downtown San Jose in the past 20 years. While it is impossible to describe all of the improvements, this section describes changes that appear to have been particularly effective and those that need improvement to serve the district.
The following factors have the greatest impact on creating this pedestrian district:

♦ 1st and 2nd Street transit corridors create a pedestrian-oriented environment that still accommodates multiple modes of travel, including automobiles, making the streets more vibrant than other unsuccessful transit malls around the country.

♦ The use of street trees and arcades create a pleasant walking environment on a year-round basis.

♦ The Paseo de San Antonio links several major pedestrian destinations, creating a heavily-used, vehicle-free pedestrian corridor that supports lively public spaces and small retail and café uses.

♦ Pedestrian way-finding signs are located throughout the downtown area, creating an easily-navigable area that encourages visitors and tourists to explore downtown on foot.

♦ Plentiful seating areas including benches, low walls and public art are used a great deal, and reinforce the pedestrian-oriented nature of downtown streets.

♦ The Plaza de Cesar Chavez includes bountiful pedestrian amenities ranging from attractive public restrooms to an interactive fountain that is popular with children on warm days. The plaza serves as both a pedestrian destination and a pedestrian route between major downtown attractors.

♦ The City’s downtown planning efforts have prioritized pedestrian improvements and the Downtown Streetscape Master Plan outlines specific steps for implementing improvements.
While the district currently operates well as a pedestrian district, the following issues negatively impact the pedestrian environment:

- Large numbers of newspaper racks block pedestrian mobility at some locations.
- Some surface parking lots remain, which create less attractive breaks in the streetscape environment and discourage pedestrians from walking.
- The unsignalized crossings of Paseo de San Antonio at 1st and 2nd Streets are not easily seen by motorists and could benefit from higher-visibility crosswalks.
- Several downtown buildings, including the north side of the Tech Museum on Park Avenue, have blank unarticulated facades that create a less interesting pedestrian walking environment.
- Many pedestrian crossings lack bulb-outs where they could feasibly be constructed. Bulb-outs would help reduce pedestrian crossing distances, increase pedestrian visibility to drivers and slow the speeds of turning traffic.

F. Pedestrian Environment and Facilities

The following section describes the pedestrian environment in detail by focusing on the primary paths of travel in the district. The size of the roadway, pedestrian space and pedestrian facilities are described.
I. 1st and 2nd Streets

**Type of Roadway:** Local - Transit Mall  
**Roadway Width:** 25 feet (excluding rail area)  
**Speed Limit:** 25 mph  
**Average Roadway Speeds:** 20 mph  
**Parking:** none  
**Sidewalk Widths:** 10 to 12 feet (excluding rail area)

**Pedestrian Facilities:**
- 10- to 12-foot sidewalks
- Street trees
- Benches
- Pedestrian-scale lighting
- Informational transit kiosks with downtown maps
- Transit shelters
- Double-sized (20-foot wide) crosswalks

1st and 2nd Streets are one-way couplets (1st Street northbound, 2nd Street southbound) that include VTA light rail, a dedicated bus lane and one lane of vehicular traffic. A significant amount of space is dedicated to pedestrians, including a 10-foot wide island between light rail tracks and the street that accommodates all transit stops and waiting areas. The vehicular portions of the street are only 25-feet wide, including one exclusive bus lane, resulting in very short pedestrian crossing distances. Pedestrians appear to feel comfortable crossing the streets at both designated and unmarked locations. The Paseo de San Antonio crosses 1st and 2nd Streets at unsignalized marked crosswalks that are 20 feet and include three stripes, the first of which tends to function as a “stop line” for vehicular traffic. Both 1st and 2nd Streets are lined by a diverse mixture of new and old buildings, many of which have ground-floor retail uses. The prevalence of street trees, street furniture, pedestrian-scale architecture and the sheer number of pedestrians using the streets make them attractive and functional pedestrian environments.
2. Paseo de San Antonio

Type of Roadway: Pedestrian Paseo
Roadway Width: N/A
Speed Limit: N/A
Average Roadway Speeds: N/A
Parking: N/A
Sidewalk Widths: Variable

Pedestrian Facilities:
♦ Paseo restricted to pedestrian traffic
♦ Decorative paving
♦ Pedestrian-scale lighting
♦ Ample seating areas
♦ Sidewalk cafés
♦ Bollards at intersections with streets
♦ Public art

The Paseo de San Antonio extends for four blocks between San Jose State University and the Plaza de Cesar Chavez, forming a major downtown east-west pedestrian corridor that connects several major pedestrian attractors. The pedestrian-only street passes between buildings where public and private spaces seamlessly integrate. The presence of retail uses, sidewalk cafés, pedestrian-scale amenities such as lighting and art, and abundant seating make the paseo both a transportation link and a heavily-used public open space.

Retail use on the Paseo de San Antonio draws steady pedestrian activity during the week, with larger volumes on weekends.

The Paseo de San Antonio, with its sidewalk cafés, is a pedestrian-only thoroughfare.
3. South Market Street

Type of Roadway: Arterial
Roadway Width: 52 feet
Speed Limit: 25 mph
Average Roadway Speeds: 20 to 30 mph
Parking: Both sides
Sidewalk Widths: 12 to 20 feet

Pedestrian Facilities:
♦ Wide sidewalks with some arcades
♦ Street trees
♦ Adjacent to park (Plaza de Cesar Chavez)
♦ Audible crossing cues at signalized intersections
♦ Pedestrian-scale guide signs to attractions
♦ 20-foot wide crosswalks at Paseo de San Antonio

South Market Street splits into two one-way streets around the Plaza de Cesar Chavez. Sidewalks range between 12 and 15 feet wide on the “non-park” side of the street, with 14- to 20-feet wide sidewalks alongside the park. Several buildings along the street include pedestrian arcades that provide protection from sun and rain. Most pedestrian crossings take place at signalized intersections, including a signalized midblock crossing at the Paseo de San Antonio.

There is great architectural diversity among buildings along South Market Street, ranging from the historic San Jose Museum of Art building to the ultra-modern Tech Museum. The diversity in architecture and uses, combined with the presence of the very active Plaza de Cesar Chavez and other major pedestrian attractors, makes South Market Street a popular pedestrian route.
**Downtown Santa Rosa**

**Typology:** Medium Sized City - Downtown  
**Location:** Santa Rosa, Sonoma County  
**Size:** Approximately 80 acres, or roughly 5 blocks long and 5 blocks deep

A. **District Boundaries and Location**  
Santa Rosa’s Downtown district covers approximately 20 blocks and is bounded by 7th Street on the north, Sonoma Avenue on the south, E Street on the east and B Street on the west. Santa Rosa’s downtown core is surrounded by US 101 to the west, and a mix of commercial corridors and traditional single family residential neighborhoods to north, south and east.

B. **District Overview**  
Figure 3-8 details the district including its boundaries, primary paths of pedestrian travel, the location of major attractors and transit stops, as discussed further below.

I. **Built Environment**  
Santa Rosa’s downtown district has a physical character similar to that of other traditional northern California downtowns: it is compact, comprised of small walkable blocks, contains a mix of two- to five-story buildings with varying architecture, and has a variety of pedestrian-oriented features that give it a livable quality. Santa Rosa’s downtown is a major center for civic, financial, cultural and office uses in the North Bay. The district is home to various local, regional, State, and federal offices. There are 11 City-operated parking lots dispersed throughout the district, consisting of five multi-storied parking structures and six lots of varying sizes. Santa Rosa Plaza, a regional indoor shopping mall that spans several blocks, dominates the western end of

*The 2nd Street Transit Mall is a hub of pedestrian activity in the Downtown District.*
the district. Santa Rosa City Hall anchors the southern end of the district and Courthouse Square, a heavily used public plaza, straddles both sides of Mendocino Avenue in the center of the district.

2. Major Attractors

Major attractors of pedestrian activity in the downtown district are shown on Figure 3-8 and numbered as follows:
1. Santa Rosa City Hall, which anchors the south end of the district
2. Santa Rosa Plaza, a Regional Shopping Mall on the western edge of the district, which attracts many visitors to the area from the city and region.
3. The Sonoma County Library, Central Branch is located at the eastern edge of the district on 3rd and E Streets.

4. Courthouse Square is located between 3rd and 4th Streets on Mendocino Avenue, in the center of the district. The Square is split by Mendocino Avenue and contains a variety of traditional features, including variations in topography, water elements, public art, seating areas, lawns and an amphitheatre.

3. Transit Service

Transit in the downtown district is provided via fixed-route bus service. While routes operate on Mendocino Avenue and several other local streets, most boardings take place at the 2nd Street Transit Mall, which encompasses a full city block between Mendocino Avenue and B Street. Closed to auto traffic, the Transit Mall is serviced by five transit agencies: Santa Rosa City Bus, Sonoma County Transit, Golden Gate Transit, Mendocino Transit and Vine Transit. Headways generally range between 15 to 30 minutes, with somewhat longer headways for inter-regional service. The transit mall includes an information kiosk, all-weather seating areas, bicycle parking, restrooms and water fountains. The facility is centrally located to most uses within the downtown core and experiences sustained pedestrian traffic throughout the day, with spikes of activity during peak commute periods.
4. Pedestrian Paths of Travel

Pedestrian activity is present throughout the day in Santa Rosa’s downtown district with spikes of activity during the lunch hour and early evening. Sidewalks are found on each street, and a number of alleyways and pedestrian connections exist to facilitate pedestrian travel between destinations. The primary paths of pedestrian travel through the district are on 4th Street and Mendocino Avenue. 4th Street, between B and E Streets, is the focal point of pedestrian activity in downtown Santa Rosa. The Santa Rosa Creek Prince Memorial Greenway, once a concrete flood control channel, is now a popular greenway extending west along the southern boundary of the district from Santa Rosa Avenue.

C. Planning History

Santa Rosa’s downtown district has served as Sonoma County’s commercial, administrative and cultural hub for over a century. Several notable changes have occurred through the 20th century that have affected its physical form. First, US 101 was constructed through Santa Rosa in the 1950’s, dividing the downtown district into two halves: downtown (Courthouse Square) on the east and Railroad Square on the west. Second, seismic damage led to the removal of the old courthouse in the late 1960s, and a 4-lane connector between Mendocino and Santa Rosa Avenues was introduced through the center of the square where the old Courthouse had previously stood. Next, Santa Rosa Plaza, a regional shopping mall that occupies roughly six city blocks, was developed along the western edge of the district in the 1970s, defining the district’s western edge and further separating downtown from Railroad Square. Finally, like so many other communities around the State and nation, the growth of other major retail areas outside of the downtown have added pressure to the district’s ability to remain competitive and its business vitality has somewhat declined.
Several planning efforts are underway to improve the pedestrian environment in the downtown district, including studies to address re-unifying Courthouse Square, improve pedestrian linkages between the downtown district and the nearby Railroad Square District, and to improve the pedestrian environment and circulation around the Santa Rosa Plaza.

**D. Regulatory Framework**

Suburban development throughout Sonoma County over the past several decades has challenged the economic viability of the downtown district. The City has been working to combat these forces with a focused effort on restoring the downtown district’s economic vitality and pedestrian environment. These efforts are supported in the City’s regulatory framework including:

- A main goal of the 2002 General Plan is to maintain downtown as the major regional office, financial, civic and cultural center in the North Bay, and a vital mixed use center (LUL-C).
- Nearly the entire district falls under the C-2 General Commercial Zoning District and has a General Plan designation of Retail & Business Services.
E. Key Findings

This section explores the key factors that contribute to the area’s success as a pedestrian district and factors that continue to create challenges.

Numerous improvements have been made in the downtown district over the years to make the area a more vibrant pedestrian and economic environment. These improvements include upgraded pedestrian facilities, higher density land use designations, transit projects, and policy and ordinance changes to support the vitality of the district. This section describes those changes that have been effective and those that need improvement to serve the district.

The following factors have the greatest impact on creating this pedestrian district:

♦ The district contains a good mix of local retailers and restaurants that are geared towards pedestrians.

♦ The use of bollards, street trees and planters on local streets help to buffer the pedestrian environment from vehicle traffic.

♦ Crossing enhancements, including paving treatments, pedestrian actuated signals and audible crossing aids, exist.

♦ Public art and monuments create an interesting pedestrian environment.

♦ The weekly downtown farmers market and street fair closes 4th Street to vehicle traffic, creating a pedestrian mall. The summertime market draws thousands of pedestrians to the downtown district.
- Consolidated public parking structures dispersed throughout the district provide convenient parking, facilitating pedestrian activity and minimizing the number of surface parking lots.

- Courthouse Square contains a variety of pedestrian-oriented features that draw casual users into the public plaza, and also serves as a destination of its own.

While the downtown currently operates well as a pedestrian district, the following issues impact the pedestrian environment in the downtown district:

- Arterial thoroughfares and the Santa Rosa Plaza act as barriers to pedestrian travel.

- Pedestrian travel along Mendocino Avenue is impeded in places by narrow sidewalks and obstructions.

- Several locations in the district lack storefronts, window displays and other items of interest to pedestrians.

- The Santa Rosa Plaza shopping mall forms a barrier between the downtown pedestrian district and neighboring Railroad Square historic district.

- Courthouse Square, the community’s central public plaza, is severed by a major arterial.

**F. Pedestrian Environment and Facilities**

The following section describes the pedestrian environment in detail by focusing on the primary paths of travel in the pedestrian district, including the size of the roadway and the pedestrian facilities on each pedestrian path.
1. **4th Street**

**Type of Roadway:** Local Street  
**Roadway width:** 48 feet  
**Speed Limit:** 25 mph posted  
**Average Roadway Speeds:** 20–30 mph  
**Parking:** Diagonal and parallel both sides, metered  
**Sidewalk widths:** 12–20 feet  

**Pedestrian Facilities:**  
- Wide sidewalks with decorative paving  
- Street trees  
- Bollards  
- Sidewalk dining  
- Public art  
- Pedestrian-scale signs  
- Decorative light standards  
- Crosswalk paving treatments  
- Audible pedestrian crossing aids  
- Bike racks

4th Street, between B and E Streets, is the focal point of pedestrian activity in downtown Santa Rosa. Framed by two- to four-story buildings that house ground-floor retailers and a variety of upper-level uses, this two-lane east-west route runs through the center of the district and connects several major attractors. Wide sidewalks, outdoor dining and numerous independent storefronts invite local and regional pedestrian activity. A mixture of diagonal and parallel parking effectively narrows the travel lanes and reduces traffic speeds; bollards, street trees, planters and bicycle parking help to further buffer the pedestrian environment from the street.
2. Mendocino Avenue

**Type of Roadway:** Arterial  
**Roadway Width:** 50 feet  
**Speed Limit:** 30 mph  
**Average Roadway Speeds:** 30-35 mph  
**Parking:** Intermittent  
**Sidewalk Widths:** 10 feet  

**Pedestrian Facilities:**  
♦ Street trees  
♦ Crosswalk paving treatments  
♦ Audible pedestrian crossing aids

Mendocino Avenue is the main north-south arterial roadway through downtown Santa Rosa. It carries significant volumes of through traffic headed north to destinations like the Santa Rosa Junior College, County Government Complex and medical campuses, and south to the City’s main commercial strip. While traffic-calming measures are in place to slow traffic on Mendocino Avenue through the downtown district, there is a distinct difference in feel, traffic volumes and pedestrian amenities provided on this arterial than as the local streets in the district.
3. Prince Memorial Greenway

**Type of Roadway:** Pedestrian Promenade  
**Width:** N/A  
**Speed Limit:** N/A  
**Average Roadway Speeds:** N/A  
**Parking:** N/A  
**Sidewalk widths:** 10 feet

**Pedestrian Facilities:**
- Decorative concrete paving surfaces
- Benches/seating
- Decorative pedestrian lighting
- Decorative masonry work and iron railings
- Public spaces and creek overlooks
- Extensive landscaping
- Public art
- Monuments

Pedestrians and bicyclists use the Prince Memorial Greenway to connect between Santa Rosa’s Downtown and Railroad Square districts. The greenway incorporates 10-foot pedestrian and bicycle pathways along Santa Rosa Creek. Use is consistent throughout the day. Pedestrians enjoy monuments, benches, creek overlooks, interpretive opportunities and neighborhood connections.
**Downtown Suisun City**

**Typology:** Small Downtown/Local Commercial District  
**Location:** Suisun City, Solano County  
**Size:** An approximately half-mile long waterfront corridor

**A. District Boundaries and Location**  
Suisun City’s downtown district covers approximately ten city blocks. The district is oriented around the northern and western edges of Suisun Harbor along Main, Solano and Kellogg Streets. Downtown Suisun City is bounded by State Route 12 (SR 12) to the north, Suisun Harbor to the east, Cordelia Street to the south, and the Union Pacific Railroad track and marshland to the west.

**B. District Overview**  
Figure 3-9 illustrates the district boundaries, primary paths of pedestrian travel, locations of major attractors, parking and transit, which are discussed in more detail below.

**I. Built Environment**  
Suisun City’s downtown district has been purposefully designed with the intent of creating a pedestrian-oriented atmosphere. The district includes a number of features that work together to accomplish this, including a 5,000-foot long waterfront promenade for pedestrians and bicyclists that connects public spaces and pedestrian plazas; a variety of restaurants, shops, and services oriented to pedestrians; and an intermodal train station, which is supported by a park-and-ride lot.

The downtown district is predominantly surrounded by residential neighborhoods. These surrounding residential neighborhoods consist of a mix of traditional detached single-family residences on small to mid-sized lots,
along with several smaller-sized, infill, single-family housing projects developed at higher densities using new-urbanist development principles. A major feature in the downtown district is an abundance of parking. The 300-plus space park-and-ride lot located across from Suisun City’s Intermodal Train Station at the north end of the district. Through the center of the district parking separates the waterfront promenade from Main Street between Lotz Way and Sacramento Street; however, the lot is narrow and softened by extensive tree plantings and landscaping. A third lot, which is located on Kellogg Street, accommodates restaurant patrons and promenade users at the southern end of the district.
The rest of the district’s development can be typified as single-story businesses and restaurants oriented towards the street, with existing single-family residences and higher-density housing projects filling vacant parcels around the periphery of the district. Many of the businesses and restaurants located at the south end of the plaza on Solano Street and Kellogg Street include 2-story buildings with mixed ground floor commercial and second story residential uses.

A major component of the built environment and a focal point of the pedestrian environment is the Harbor Plaza. The Plaza is a major public space with a stage, gazebo, expansive lawns, and landscaping. Prefabricated metal warehouses housing industrial uses and vacant lots previously occupied the site.

2. Major Attractors

Major pedestrian attractors in the district are labeled with a star on Figure 3-9 and are numbered as follows:

1. One Harbor Center
2. Harbor Plaza
3. Kellogg Street Restaurant District

Additional attractors include the 5,000-foot long waterfront promenade, the Marina with its public docks and fishing access, the Intermodal Train Station.
and a variety of independent restaurants, specialty shops, and boutiques. City Hall, Crescent Elementary School, Crystal Middle School and a community park are located within a quarter mile of the district.

3. Transit Service
The north end of Suisun City’s downtown district is anchored by its inter-modal train station in a renovated historic train station (circa 1910). The train station is Solano County’s only passenger/commuter rail stop between San Francisco/Oakland and Sacramento. The station, along with the 300-plus space park-and-ride lot across the street hosts both local and regional transit providers. Amtrak’s Capitol Corridor service operates daily with one-hour headways. Fairfield Suisun Transit and Vallejo Transit provide local bus service as well as commuter bus service along I-80 and SR 12 with 15 to 30 minute headways. The station also hosts Greyhound Bus Lines, which provides regional and interstate travel.

4. Pedestrian Paths of Travel
Suisun City’s most active pedestrian route, the Waterfront Promenade, extends approximately 5,000 feet around Suisun Harbor through downtown. Pedestrians use the promenade throughout the day for recreation, and to access uses in and around downtown area. Spikes of moderate activity occur during the lunch hour and early evening, and heavy activity is experienced on weekends and during special events. Main Street, which parallels the promenade, experiences similar activity patterns. To the south of Solano Avenue, pedestrian routes split between the promenade and streets with retail and restaurant uses, including Kellogg and Morgan Streets. Extending southward into the dense Delta Cove residential development on the southern periphery of downtown, these streets sustain low levels of pedestrian activity throughout the day.
C. Planning History

Suisun City was established in the 1850s during the California Gold Rush, along a trading route between the foothills of the Sierra Nevada and the San Francisco Bay Area. Suisun City prospered in its early days as a trading town. The development of its railroad depot in the 1860s continued that prosperity and it remained a hub of agricultural Solano County until I-80 opened in the 1960s. The opening of I-80 diverted commercial traffic away from the railroad and Suisun City’s waterfront into nearby Fairfield. This led to a period of disinvestment that crippled Suisun City’s Old Town. Industrial uses along the harbor polluted the ground and water, and the businesses on Main Street failed.

A series of efforts were kicked off in the 1980s to restore Old Town and the Waterfront. In 1982, the Planning Department brought together a group of concerned citizens, architects and planning staff to develop a Specific Plan for the revitalization of downtown. Unfortunately, for years no actions were taken, and the City’s economic, environmental and social conditions worsened. Then in 1989, the City implemented an aggressive redevelopment program led by the efforts of Suisun City Redevelopment Agency and supported by the City Council and the public.

Using the latest in new-urbanism design philosophy the City issued $58 million in bonds to develop downtown designs, purchase blighted properties in the district and install new public infrastructure including water, sewer, streetscape projects, sidewalks, parking, facade improvement programs and the Town Plaza. Suisun City also received funding from MTC’s Transportation for Livable Communities grant program and the Solano Transportation Authority. The waterfront is once again accessible to the general public,
Main Street is a thriving retail district, a new Public Marina is open and pedestrians actively use the promenade and Harbor Plaza.

D. Regulatory Framework
In 1990 the Suisun City Redevelopment Agency developed a Specific Plan to address development in the downtown district. The following goals were developed to create a regulatory framework for development within the district:

♦ Strengthen the economic viability of the Historic Old Town, Waterfront and adjacent areas, and the city as a whole.

♦ Preserve and enhance the historic character of the area.

♦ Facilitate appropriate water-oriented and economic uses of the Suisun Channel and adjacent land areas.

♦ Protect and enhance natural open space and recreational amenities of the Suisun Channel and adjoining areas.

♦ Foster participation between the public and private sector in carrying out a program of revitalization for the Planning Area.
E. Key Findings

This section explores the key factors that contribute to the area’s success as a pedestrian district and factors that continue to create challenges. This section is based on field observations as well as interviews with Suisun City Planning Department staff.

Suisun City’s downtown district has undergone a complete renaissance in the past 15 years, as previously described. Improvements have been made to every aspect of infrastructure thanks to a series of bonds, public private investments and grants. The result has been the revitalization of a community that is based around pedestrian activity and transit.

The following factors have the greatest impact on creating Suisun City’s pedestrian district:

♦ The waterfront promenade provides direct connectivity to major attractors, including the transportation center.

♦ Wide sidewalks accommodate both pedestrians and recreational activities, such as rollerblading, and are well suited to handle large numbers of pedestrians during special events and festivals.

♦ Low traffic speeds along downtown streets, along with good design, provide a level of pedestrian comfort.

♦ The use of colored concrete softens the sun’s glare and adds visual interest to the pedestrian environment.

♦ Street tree planting and extensive landscaping provide a measure of separation from the roadway, enhancing the pedestrian environment along Main, Solano and Kellogg Streets.

♦ Street trees also provide a vertical element to the streetscape to help slow vehicle speeds and shade for pedestrians in warmer months.

♦ Ample pedestrian amenities, including seating, trash and recycling receptacles, public restrooms and points of interest, foster a positive pedestrian experience.
♦ Ample parking allows visitors to get out and walk.

While the district currently operates well as a pedestrian district, a few changes or improvements could be made as described below:

♦ Roadway crossings, especially along Main Street and at the transportation center, lack treatments that increase visibility such as bulb-outs and more prominent striping.
♦ A number of remaining vacant and underutilized parcels disrupt the urban fabric and can discourage pedestrians from walking.

F. Pedestrian Environment and Facilities

The following section describes the pedestrian environment in detail by focusing on the primary paths of travel in the pedestrian district, and includes size of the roadway and its pedestrian facilities.
1. Main Street

**Type of Roadway:** Local Street  
**Roadway Width:** 46 feet  
**Speed Limit:** 25 mph  
**Average Roadway Speeds:** 25 to 30 mph  
**Parking:** Horizontal, both sides  
**Sidewalk Widths:** 10 to 12 feet

**Pedestrian Facilities:**
- Wide colored sidewalks
- Decorative light standards
- Street trees
- Curb cuts, tactile devices, striped crosswalks

Suisun City’s downtown district is oriented around Main Street, which provides primary access to the district as well as residential neighborhoods located south of the downtown. As such, Main Street carries considerable vehicle and pedestrian traffic throughout the day, with spikes during the lunch hour and commute periods. One Harbor Center, a recently developed 3-story professional building, anchors the north end of Main Street and the waterfront promenade. Along the east side of Main Street lays public parking and the harbor front promenade. Along the east side of Main Street lays public parking and the harbor front promenade. On the west side of Main Street there are a number of one- and two-story commercial businesses and restaurants.
2. Kellogg Street

Type of Roadway: Local Street
Roadway Width: 32 feet
Speed Limit: 25 mph
Average Roadway Speeds: 25 mph
Parking: Horizontal, east side only
Sidewalk Widths: 5 to 12 feet

Pedestrian Facilities:
- Colored, concrete sidewalks
- Sidewalk dining and displays
- Extensive tree plantings and landscaping
- Decorative light standards

Kellogg Street is a local street one block east of Main Street along the waterfront that extends the downtown south along the waterfront from Main Street. It carries low volumes of residential traffic and is home to the Harbor Theatre, public parking, Delta Cove (a high-density residential development), and a concentration of restaurants that have outdoor seating oriented towards the waterfront and its promenade and public spaces.

Extensive street tree plantings, monuments and district banners provide an interesting pedestrian environment on Kellogg Street.

Outdoor dining on Kellogg Street faces the promenade, waterfront and public open spaces.
3. Waterfront Promenade and Harbor Plaza

Type of Roadway: Pedestrian Promenade
Width: N/A
Speed Limit: N/A
Average Roadway Speeds: N/A
Parking: Dedicated lot
Sidewalk widths: 16 to 20 feet

Pedestrian Facilities:
♦ Colored, concrete paving surfaces
♦ Benches/seating
♦ Decorative pedestrian lighting
♦ Decorative iron railings
♦ Public plaza
♦ Extensive landscaping
♦ Public art
♦ Stage/amphitheatre
♦ Monuments

The waterfront promenade is a 5,000-foot long pedestrian and bicycle pathway that rings Suisun Harbor. It extends roughly from the corner of City Hall, on the eastern side of the Harbor, around to Walnut Street on the southwestern side of the Harbor. The promenade, along with its plaza, open spaces, public dock and fishing access, is a regional destination as well as a pedestrian travel way through the downtown district.
Typology: Urban Institutional  
Location: San Francisco, City and County  
Size: The district is ⅓ mile long corridor of pedestrian activity, four blocks long and one block deep.

A. District Boundaries and Location  
This district is a three block long corridor that runs along Parnassus Avenue between the buildings of the University of California at San Francisco Parnassus Medical Center (UCSF). The district is bounded to the east by Hillpoint Avenue, to the west by Third Avenue, to the north by Carl and Irving Streets and to the south by the open space behind the UCSF medical buildings on that side of Parnassus Avenue. Steep slopes lead up to Parnassus Avenue, providing clear topographic boundaries at the edges of the district. There are no major freeways close to the site; the nearest regional connector is Lincoln Boulevard, just south of the park. The UCSF pedestrian district is located within walking distance of two neighborhood commercial districts – the Irving Street/Ninth Avenue area to the west and Cole Valley to the east. Golden Gate Park is three blocks to the north.

B. District Overview  
Figure 3-10 shows the district boundaries and provides an overview of the district’s primary paths of pedestrian travel and the location of major attractors and transit stops in the district, as discussed in more detail below.

I. Built Environment  
Parnassus Avenue, the core of this pedestrian district, is bordered on both sides by UCSF. The campus is extremely dense and is comprised of 33-acres with 3.7 million gross square feet of development. Most buildings on the site are approximately 12 stories high, although there are a few buildings that are lower, averaging four to five stories in height.
Land uses in the medical center include instructional and research facilities, medical and hospital uses, administrative offices, recreational facilities, dining and service retail, housing and parking. UCSF also has two parking garages in the district and two in adjacent areas. There are also a number of two to four story townhouses in the district located on Third, Hillway and Hill Point Avenues. The district is surrounded on all other sides by residential neighborhoods of mixed densities.

2. Major Attractors
The key attractor in the area is the UCSF Medical Center (shown as #1 on the figure above), which contains medical, research and educational facilities. Retail, restaurant and service uses located in the UCSF medical center buildings are used by the Center’s students, faculty, staff and visitors.
3. Transit Service
Service to the UCSF pedestrian district is available on the Muni light rail line, which runs along Carl and Irving Streets, with 7 minute headways during commute hours and 10 to 20 minute headways at other times. The area is also served by three Muni bus lines, with 10 to 12 minute headways during commute hours and 15 to 20 minute headways at other times.

4. Pedestrian Paths of Travel
As shown in Figure 3-10, there are five primary pedestrian paths running through the district:
- Parnassus Avenue between Hill Point Avenue and Third Avenue
- Two internal pedestrian passages running from Parnassus to Carl and Irving Streets where the Muni light rail line runs and two parking garages are located
- Hill Point and 3rd Avenues also connecting Parnassus to the Muni light rail and parking garages

Most pedestrian activity takes place on Parnassus Avenue, where students, faculty, staff and patients move back and forth between buildings, stop for snacks at food vendors or meet each other on the street to catch up. Although less intense than the activity on Parnassus Avenue, pedestrian travel on the pathways between Parnassus and Carl and Irving Streets is consistent throughout the day as people move back and forth between transit and the district.
This area has been a pedestrian district since as early as 1954 when the Parnassus location became the official medical center for the entire UC system. As a result of this concentration of medical services, the area was built up with 6 to 12 story buildings designed to facilitate collaboration between doctors, teachers and students. The campus design thus encouraged significant foot traffic between buildings. Although the buildings have been renovated and replaced, UCSF remains a densely developed environment that successfully encourages pedestrian travel between buildings.

Today, the three-block pedestrian district on Parnassus Avenue has such high pedestrian volumes that the City of San Francisco Department of Parking and Traffic (SFDOT) considers the area a high priority location for pedestrian improvements. Along with several other improvements, SFDOT has approved and installed signalized mid-block pedestrian crosswalks with yellow-green pedestrian signs and white ladder painting, something they only allow at very high pedestrian volume locations. UCSF planning staff has conducted numerous transportation studies including a multi-modal analysis to determine what actions would be most effective for improving the district. Addi-
tionally, UCSF has just started an 18-month process to develop design guidelines and a campus master plan.

Most of the improvements in the pedestrian district resulted from requests from UCSF. Although improvements, such as the installation of pedestrian yield signs on the median island at Fourth and Parnassus Avenues, are generally paid for with City funds, UCSF helps to fund the most complex or costly requests.

D. Regulatory Framework
This section describes the UCSF long range development plan, which governs development in the pedestrian district, and other City and UCSF efforts that helped create the environment.

The UCSF pedestrian district runs through a University of California campus. As a result, the district is regulated by the *University of California, San Francisco 1996 Long Range Development Plan* (LRDP) and subsequent amendments. Because of impacts on the neighboring community, the LRDP limits total building space at the UCSF to 3,657,266 gross square feet (gsf) and strives to limit the average daily population at the site to 16,000 persons. The LRDP also has a Transit First policy to support transit use and improve the pedestrian environment. Specific Transit First policies include directional signage to facilitate that movement of people between the Medical Center, parking garages and public transit stops and express elevators to facilitate pedestrian access between Irving Street and Parnassus Avenue, which are separated by steep topography.

UCSF medical center, including the hospitals, research and training facilities is the major attractor to the district. As a state-owned facility, the University is granted planning authority over land use and other regulatory issues.
The City of San Francisco does not have specific policies for the development of the UCSF property. However, as mentioned above, San Francisco does have a citywide policy to prioritize installations of pedestrian improvements based on locational characteristics that include pedestrian collision history, high pedestrian volumes, crossing conflicts and the size of arterials. Improvements are also prioritized based on the feasibility, cost and projected impacts of the project. Finally, the City has draft Crosswalk Guidelines to regulate the location, design, installation and removal of crosswalks. These guidelines determine the appropriate type of crosswalk based on street type, pedestrian volumes, safety history, block length, stopping sight distance and mid-block visibility.

E. Key Findings

UCSF is a very successful pedestrian district with high pedestrian and vehicle volumes, which makes the area lively. Signalized crossings and significant efforts to provide pedestrian amenities improve the safety, comfort and attractiveness of walking in the area.

The following factors have the greatest impact on creating this pedestrian district:

♦ Traffic signals at mid-block crosswalks have been most effective for controlling vehicle speed and forcing car traffic to yield to pedestrians as they travel through the district. They also help channelize pedestrians and minimize jay walking.
♦ A narrow street with a clear priority for pedestrian travel has resulted in most through traffic avoiding the street, particularly during peak hours.

♦ UCSF’s Transit First policy, which limits parking and provides long-distance shuttle vans, ride share vehicles, and tax-deductible transit passes, makes transit travel to the campus more convenient and has been very effective for encouraging pedestrian activity.

♦ Trails to the campus through the Mount Sutro Open Space Area encourage people to walk to campus from other neighborhoods and provide an additional amenity to the district.

♦ Street trees, plazas, public art and other amenities make the street comfortable and functional for pedestrians.

♦ Food vendors, restaurants and retail located in the district are great attractors of pedestrian activity.

♦ Turnouts make it possible for buses to wait for the large number of passengers and disabled or elderly riders to exit vehicles without blocking traffic.

♦ Pedestrian volume counts have been useful to in ascertaining appropriate improvements for the site.

♦ Memoranda of Understanding with large institutions such as UCSF, the University of San Francisco and City College, ensure institutional help for cities to cover the costs of pedestrian improvements on streets in and around major facilities, which are often large generators of pedestrian activity.

♦ Organizing crossing points with more crosswalks and signals has been an important step to improving the safety of crossing Parnassus Avenue. The two standard crosswalks that existed before were insufficient.

Extremely wide sidewalks, with special bricked paving and amenities, such as food carts and newspaper racks, make for an attractive pedestrian environment. The extra space provided on the sidewalks spreads out walking traffic and avoids congestion.

Trucks making deliveries to UCSF often park in the middle of Parnassus Avenue to deliver supplies because of the highly limited space available.
for the high pedestrian volumes in the area.

While UCSF currently operates well as a pedestrian district, a few changes or improvements could be made, such as:

- Conflicts between pedestrians and vehicles continue to be a major challenge in the district. Pedestrians tend to cross Parnassus Avenue at or near the entry points into the district while cars, coming up into the district cannot see them because of the steep slopes.

- “Yield to Pedestrians” signs at district entry points indicate to cars that pedestrians are present and make them more visible in crosswalks to a certain extent. However, traffic continues to enter the district too quickly. The Yield to Pedestrian signs on unraised median do not ensure that vehicles slow down and the signs are often damaged or torn up as cars turn left at intersections tend to hit the signs. Locating pop-up signs three to four feet from intersections would improve their longevity.

- Gateways into the district are insufficiently marked and signaled, in particular because the steep slopes on Parnassus Avenue approaching the district limit visibility. Signs indicating entry into the district could help slow vehicular traffic and prepare drivers for a high number of pedestrians.

- Clear paths of travel, particularly well-signed routes to key destinations, are important for organizing the flow of pedestrian travel. Recent surveys of UCSF students, faculty and staff have indicated that wayfinding aids may need to be improved in the district to more clearly indicate routes.
Given the topography of the site, there are very few locations to accommodate truck loading. Thus, UCSF has allowed trucks to park in the median to unload their goods. This is functional, but unattractive. It also increases congestion on the street and results in workers involved in loading and unloading materials crossing the street mid-block.

F. Pedestrian Environment and Facilities
The following sections describe the key pedestrian paths in the pedestrian district including primary roadways and other components such as internal pedestrian passageways. For each path, the size of the travel-way and the pedestrian facilities present are described.
1. Parnassus Avenue

Type of Roadway: Local
Roadway width: 46-50 feet wide
Speed Limit: 25 mph
Average Roadway Speeds: 15 mph
Parking: Horizontal on-street, loading zones and structured
Sidewalk widths: 8-14 feet wide with tree wells

Pedestrian Facilities:
- Drop-off areas with bulb-outs
- Pedestrian ramps at intersections and drop-off areas
- Two signalized mid-block crosswalks with unraised median
- Countdown with audible cues
- Yellow-green pedestrian signs
- "Stop for Pedestrians" signs at unsignalized intersections
- Special Paving for sidewalks and four pedestrian plazas with extensive seating, including one covered area
- Food vendors and a cafe with outdoor seating
- Landscaping and street trees with decorative grates
- Bus shelters, information kiosks, news racks and public art
- Raised pedestrian islands and painted medians

Parnassus Avenue, a two-lane, two directional street with wide sidewalks, street trees and several plazas, patios and seating areas is the major pedestrian path in the district. Food vendors are permitted on the sidewalk in front of the main hospital entrance. This and other pedestrian amenities make the street comfortable for walking. Parnassus Avenue sees the bulk of the district’s activity and experiences high volumes of pedestrian traffic from students, doctors and patients moving between buildings. Pedestrian activity is pretty constant throughout the day. People tend to congregate at the entrances to medical buildings and at food carts, bus stops and plazas.
2. Hillway Avenue

Type of Roadway: Local
Roadway width: 40 feet wide
Speed Limit: 25 mph
Average Roadway Speeds: 20-25 mph
Parking: Vertical on-street and structured
Sidewalk widths: 5 feet wide

Pedestrian Facilities:
- Pedestrian crossings
- Standard crosswalk markings
- Street trees

Hillway Avenue provides a major pedestrian connection to the light rail line that provides transit to the pedestrian district, as well as to parking garages that are located along Carl and Irving Streets. The street is steep, but has attractive sidewalks and street trees. Thus, it is well used by people coming to and leaving UCSF. Activity is relatively constant throughout the day.
3. Third Avenue

Type of Roadway: Local
Roadway width: 40 feet wide
Speed Limit: 25 mph
Average Roadway Speeds: 20-25 mph
Parking: Vertical o-street and structured
Sidewalk widths: 5 feet wide

Pedestrian Facilities:
♦ Standard crosswalk markings
♦ Vertical parking as buffer to pedestrians
♦ Street trees

Like Hillway Avenue, Third Avenue provides a major pedestrian connection to the light rail line that provides transit to the district, as well as to parking garages that are located along Carl and Irving Streets. Third Avenue is also a route used by pedestrians walking to the Irving Street/Ninth Avenue shopping district, six blocks to the west. The street is steep, but has attractive sidewalks and street trees. Pedestrians travel regularly throughout the day along Third Avenue to and from Carl and Irving Streets below to Parnassus Avenue above.

Steeply descending Third Street is the western border of the district.
4. Carl Street and Irving Streets

**Type of Roadway:** Arterial  
**Roadway width:** 32-40 feet wide  
**Speed Limit:** 25 mph  
**Average Roadway Speeds:** 25 – 30 mph  
**Parking:** Structured  
**Sidewalk widths:** 10-15 feet wide

**Pedestrian Facilities:**
- Street trees
- Bus shelters
- ADA accessible light rail stops
- Striped crosswalks
- Information kiosks

Carl and Irving Streets run along the northern boundary of the pedestrian district. The two streets form one corridor, which bends from Carl to Irving approximately mid-way along the boundary of the UCSF pedestrian district. The N-Judah Muni light rail line runs along these two streets, providing a major connection to the rest of San Francisco. Carl and Irving streets also provide a primary car route between Cole Valley and the Irving Street/Ninth Avenue shopping district.

Most pedestrian activity on Carl and Irving Streets is directed towards the Muni light rail line that runs along the corridor. Some pedestrians also cross these two streets to access cars parked in the surrounding neighborhoods or travel to Golden Gate Park, three blocks from the pedestrian district.

The transit provided by Muni light rail is a crucial factor to the success of the pedestrian district. The reliable and frequent service makes it possible for many UCSF visitors to travel without cars and thus to explore the district on foot.

There is very limited parking in the UCSF district. Parking garages on Carl and Irving Streets accommodate most cars brought to the district.
5. **Internal Pedestrian Passages**

<table>
<thead>
<tr>
<th>Type of Roadway</th>
<th>Internal Pedestrian Pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway width</td>
<td>N/A</td>
</tr>
<tr>
<td>Speed Limit</td>
<td>N/A</td>
</tr>
<tr>
<td>Average Roadway Speeds</td>
<td>N/A</td>
</tr>
<tr>
<td>Parking</td>
<td>Structured</td>
</tr>
<tr>
<td>Sidewalk widths</td>
<td>10-15 feet wide</td>
</tr>
</tbody>
</table>

**Pedestrian Facilities:**
- High speed elevator
- Signage
- Retail and restaurant services

Internal pedestrian paths run through Millberry Hall, a medical building on the north side of campus with express elevators to the lower street level. Another internal pedestrian passage runs through a parking garage that can be entered from both Parnassus Avenue and Irving Street below. These internal passages are an important component of the pedestrian network connecting UCSF to the surrounding neighborhood and light rail line. The steep topography of the site makes passage to the lower streets difficult. Internal passages provide convenient and space efficient travel routes for pedestrians. Foot traffic passes back and forth through the medical building and parking garage to access the Muni light rail line.
HACIENDA BUSINESS PARK

**Typology:** Suburban Employment Center  
**Location:** Pleasanton, Alameda County  
**Size:** Approximately 875 gross acres, 730 net acre

A. District Boundaries and Location  
As seen in Figure 3-11, Hacienda Business Park is located just south of Interstate 580 and east of Interstate 680 in the City of Pleasanton, about equidistant to San Francisco to the northwest, Silicon Valley to the southwest and the Central Valley to the east. Hacienda Business Park is bordered on the west by Hopyard Road, to the north by Owens and Rosewood Drives, to the east generally by Tassajara Creek and to the south by Arroyo Mocho Canal. Chabot Canal runs through the park, paralleling Hopyard Road. Industrial uses flank the business park at the northern end of the district. Residential neighborhoods have been built all around the district to the south.

Although it has the potential to become an area that encourages pedestrian activity, the Hacienda Business Park is not yet a true pedestrian district. However, as described below, efforts are underway to improve the pedestrian orientation of the Park and make it into a good model for other communities in the Suburban Employment Center typography.

B. District Overview  
Figure 3-11 shows district boundaries, primary paths of pedestrian travel, major attractors and transit stops in the area, as discussed below.
I. Built Environment

Hacienda Business Park was originally built as a conventional office park with wide streets and large office buildings surrounded by parking. The land uses in the district still largely reflect the original plan of the park. There is just over 5,365,000 million square feet of four- to five-story mid-rise offices and close to 1,660,000 square feet of one- to three story research and development or flex space. However, Hacienda Business Park is not entirely office uses. Today, there are approximately 1,500 residential units housing close to 3,500 residents in two apartment complexes, 300 single-family homes and a similar number of townhouses. In addition, there is approximately 920,000 square feet of mixed commercial uses including restaurants and neighborhood retail.

2. Major Attractors

The key attractors in the area are shown on Figure 3-11 and include the following (as numbered below):
1. The Dublin Pleasanton BART Station, which is the largest generator of pedestrian activity.

2. The housing located east of Hacienda Drive. Although residents typically drive to and from their homes, some walk around the Park recreationally.

3. The Park itself, which attracts some pedestrians from the BART station each morning and evening, and also generates some pedestrian travel around the lunch hour.

3. Transit Service

BART connects the business park to Oakland, Berkeley and San Francisco as well as other regional destinations. Hacienda is a 30- to 50-minute BART ride from these destinations. Headways are 15 minutes during the week and 20 minutes on Saturdays. The Altamont Commuter Express (ACE) train connects the business park to the Central Valley. This train runs six times a day, approximately every hour three times during the morning and three times during the evening commute. As the eastern terminus of the BART system and the mass transit hub of the I-680 corridor, Hacienda is served by seven additional transit providers that provide service throughout the Bay Area and the Central Valley, including the County Connection, the San Joaquin Commuter, Amtrak bus service and Livermore Almador Valley Transit Authority (LAVTA) Wheels buses.

4. Pedestrian Paths of Travel

As already mentioned, the Hacienda Business Park is still in the developmental stage in terms of pedestrian amenities and activity. The only clear pedestrian routes link the BART

While the BART Station is adjacent to Hacienda Business Park, pedestrians must cross multiple parking lots before reaching the closest park in the Park.

Pedestrians create their own paths out of the BART station that are more direct than walking through a large parking lot.
station and the nearest office and residential uses, as shown in Figure 3-11.

C. Planning History
As its name suggests, Hacienda Business Park is predominantly a large corporate campus. However, recent planning efforts are beginning to turn the Park into a more mixed-use area with residential and retail uses as well as office and improve access to transit to promote walking.

Construction of the Park began in 1982, and the first office building was completed in August 1983. The roads for the site were built with six to eight wide lanes and projected to carry very high volumes of vehicle traffic. Almost every building was built within a large sea of parking to serve the corporate tenants. Minimal pedestrian amenities built.

The transformation of the district began in the economic downturn of the 1990s reduced the attractiveness of office space and led the developers to consider other types of uses that might be successful at the site. Market analyses indicated that both residential and retail uses were in high demand in the area. With this information in hand, the City of Pleasanton rezoned the area from an office designation to a Planned Unit Development (PUD) designation that allows a mix of uses.

Development on infill sites would shorten perceived walking distances between building and add pedestrian interest along the street.
Another major change that effected the course of development was the construction of the Dublin/Pleasanton BART station adjacent to the Hacienda Business Park. Bringing BART within walking distance of the district created regional connections that brought the businesses in the park in contact with a much larger labor market and encouraged employees to travel to work by transit. The addition of a BART station adjacent to the Park also created an opportunity to reduce dependence on the automobile to get and from the site and increased opportunities for walking from transit to destinations within the Park.

While the shift to a greater mix of uses and improved transit infrastructure has improved the pedestrian orientation of Hacienda Business Park, the built environment of the Park still reflects the original intention of the developers. Wide streets provide significantly more vehicle capacity than is currently necessary for the site and provide an uncomfortable walking environment, even where sidewalks and crosswalks are present. Parking lots break up the visual landscape and increase perceived distances between buildings, reducing the appeal of walking.

Hacienda Business Park is a potential pedestrian district because the City and land owners involved in the project understand the challenges and have taken steps to rectify them. The Business Park owners are currently drafting a specific plan with the clear goal of creating a functional and attractive pedestrian district. This process is being undertaken at the same time that the city is updating its General Plan with similar intentions for the area.
The City also recently received a Station Area Planning Grant from MTC to help fund the specific plan.

The planning process has just begun and will focus on the portion of the Park closest to the BART station. Five sites have been identified in this area where land owners have agreed to explore pedestrian oriented redevelopment. Strategically located either near the BART station, close to residential areas or towards the edge of the business park, these sites provide opportunities for infill development on parking lots surrounding buildings. In addition, the Hacienda Business Park Specific Plan will consider improvements to pedestrian access to BART which might include road narrowing; adding sidewalks, street trees and crosswalks in front of the station; or building a clear and convenient pedestrian path from the street through the BART parking lot. Design guidelines will also be developed to guide future development projects.

D. Regulatory Framework

Hacienda Business Park is a mixed-use planned unit development (PUD) of distinction and quality. At 854 acres, Hacienda is the largest such development in Northern California. All infrastructure improvements for Hacienda are complete, and over eight million square feet of space has been developed to date. Land uses allowed by the PUD include 4 and 5-story mid-rise office; 2 and 3-story garden office; 1 and 2-story "office/flex", 16 units/acre residential development and retail/commercial development. As currently zoned, the Park can contain approximately 11 million square feet of office, R&D, commercial and residential space. Within the business park, there are different types of PUD zoning. Most of the land is zoned for a mix of industrial, commercial and office uses. There is also space designated for high density residential as well as public and institutional uses.
E. Key Findings
Overall, the Hacienda Business Park has a long way to go to become a true pedestrian district. The regulatory framework allowing a mix of uses and the Park’s proximity to BART make the location very attractive as easily accessible. However, the built environment as it currently exists is not conducive to walking. The following strategies would have the greatest impact in transforming the business park into a pedestrian district. Many of these are already being considered as part of the planning process currently underway.

♦ Reducing the width of streets by removing lanes and installing medians and sidewalks would greatly increase pedestrian comfort and safety. Although future traffic volumes should be taken into account, the district currently has more roadway capacity than is necessary for the volume of cars that use the site. Thus road narrowing appears feasible.

♦ Improving pedestrian connections between the developed parcels and the BART station as well as to other transit providers. While crosswalks and sidewalks already exist on most streets in the Park, additional pedestrian facilities such as pedestrian lighting, directional signage and amenities such as benches and more landscaping would help create distinct paths of travel and make the large roadways more conducive to walking.

♦ Encouraging higher density infill development, particularly in the areas closest to the transit station and on existing surface parking lots, to create an interesting street frontage more appealing for pedestrians than empty parking lots.

Access to the BART station from the Park is across a parking lot and under the freeway.
♦ Designing and siting new buildings with minimal setbacks and with a pedestrian orientation towards sidewalks, including entryways facing the street (not a parking lot) and attractive facades.

♦ Encouraging more active uses such as retail along current or potential major pedestrian paths, including near the BART station.

♦ Focusing on the improvement of the public realm through the installation of street trees, plazas, public art, and seating for pedestrians.

♦ Creating a distinctive and interesting street front along major pathways through the introduction of design guidance that encourages interesting and pedestrian oriented façades.

♦ Building high quality residential housing units within walking distance (a half mile at most) of the transit station.

♦ Creating pedestrian connections between the Hacienda Business Park and the City of Pleasanton by using existing trails or planning new trails to connect the areas and by designating major pedestrian pathways between nearby residential uses and the district and installing significant pedestrian amenities along these streets. The Iron Horse Trail is one such trail proposed to continue south from its terminus at the Bart station and continue south on Owens Street. In addition, Chabot and Arroyo Mocho Canals could also be improved as pedestrian and bicycle paths traveling through the park and connecting to other points in Pleasanton.
F. Pedestrian Environment and Facilities

As noted earlier, there are currently only limited pedestrian facilities in the Hacienda Business Park. Virtually all roadways are six to eight lanes wide, with sidewalks. Because of their size, the majority of roadways include signalized intersections with white-striped crosswalks. Some crosswalks also include colored paving. Some intersection also have landscaped medians to reduce the distance pedestrians need to cross. The photos below show examples of the existing roadways in the Park, and the type of pedestrian infrastructure that exists.

Most roadways in the Park are six to eight lanes.

Because of their size, all intersections in the Park have traffic signals and crosswalks.

An example of the landscaped median that help reduce the perceived distance crossing the Park’s wide streets.