

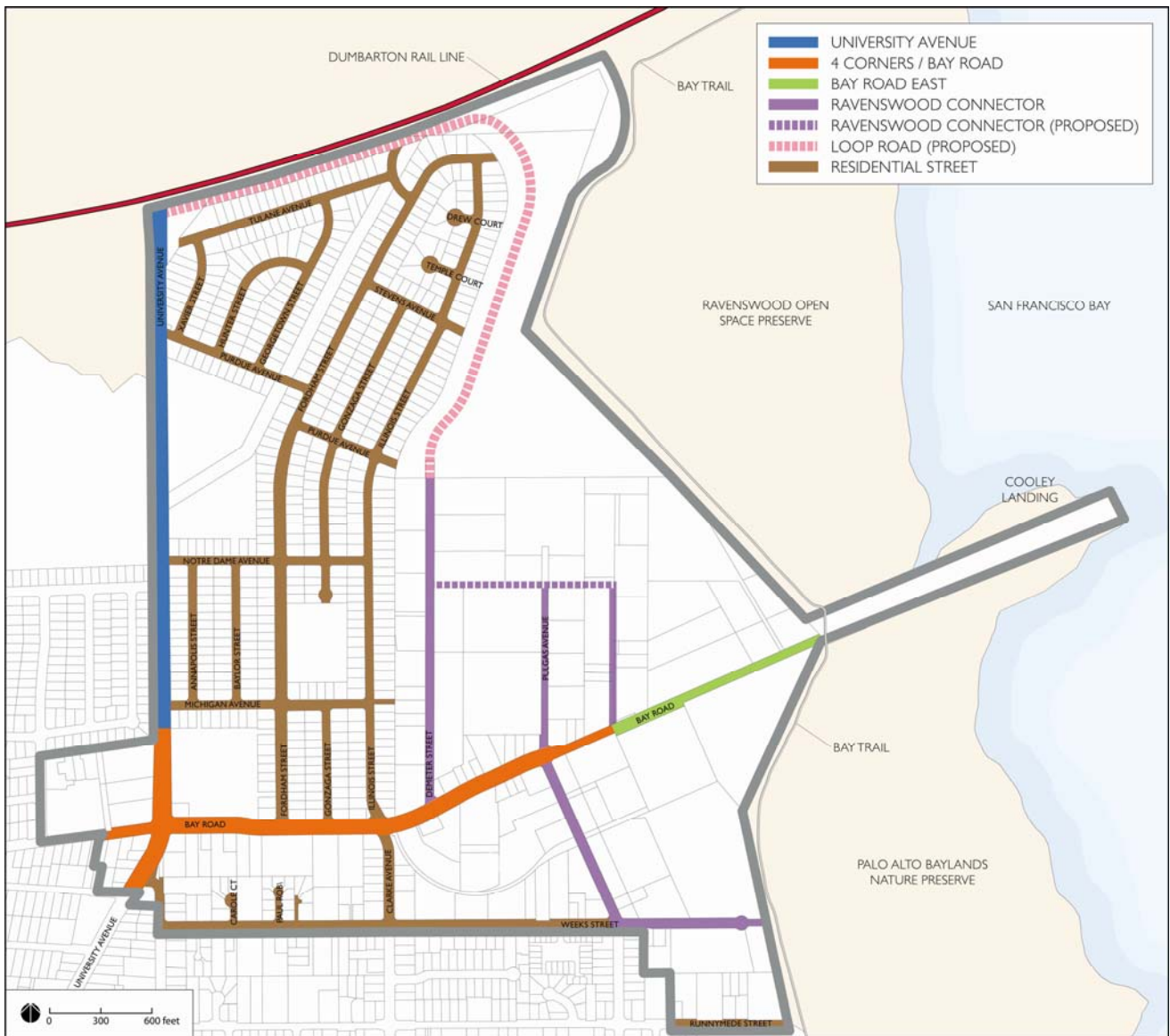
## **STREETSCAPE STANDARDS** **7**

The previous chapter outlined standards for land uses, focusing on development on private lands. This chapter provides guidance for streetscape design, to ensure that the public and private network of connections for pedestrians, bicycles, transit users and drivers will also contribute to the vision for the Plan Area. Standards for unique street types within the Plan Area are discussed below. At the end of this chapter are street right-of-way design guidelines with general principles that should be followed for all streets within the Plan Area.

### Street Types

The street sections and recommendations in this chapter are conceptual and may need to differ slightly to accommodate actual construction-related constraints. Street cross-sections in this chapter are generally shown as “typical,” meaning the cross-section is illustrating a straightforward roadway condition. Generally this means a mid-block condition, and not near corners where turning lanes may exist. Figure 7-1 shows the Plan Area with locations of street types.

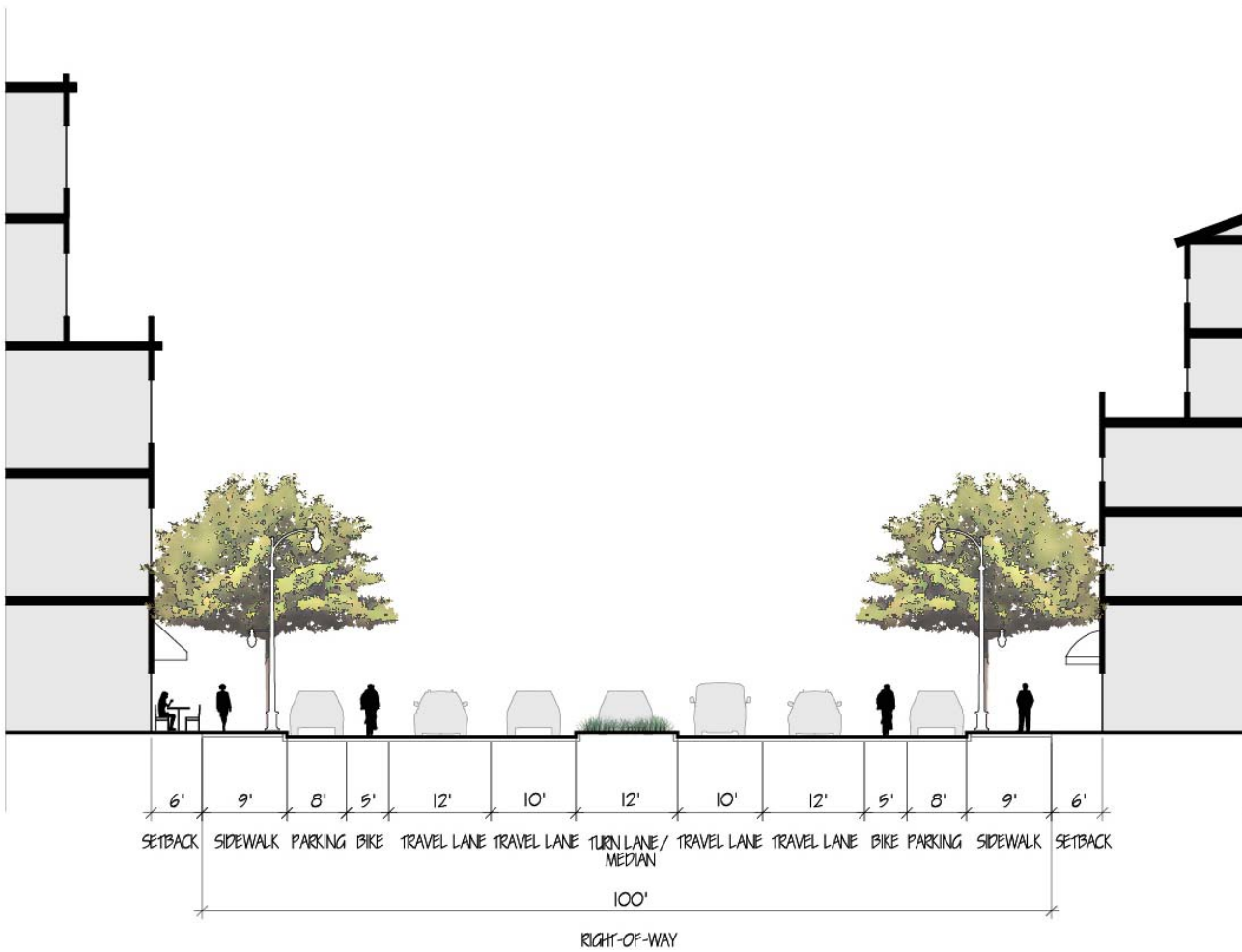
Figure 7-1: Street Types



**Street Type: 4 Corners/Bay Road**

This street section, shown in Figure 7-2, is envisioned for the streets that form the key intersection in the Plan Area: University Avenue and Bay Road. For University Avenue, the segment covered by this street type extends from Weeks Street to the south up to Michigan Avenue. For Bay Road, the segment is from Gloria Way on the west to Tara Street on the east. The streetscape in this area is meant to encourage walkability, accommodate transit, create an attractive gateway condition, and ensure pedestrian safety. The following standards should apply:

**Figure 7-2: 4 Corners/Bay Road**



## Roadway Design

**Street Lane Width:** 10 feet to 12 feet.

**Pedestrian Crossing Spacing:** Minimum of every 300 feet to 400 feet.

**Crosswalks:** Pedestrian refuge areas should be incorporated into all pedestrian crossings where possible.

**On-Street Parking:** Identify on-street parking with clearly marked striping or another method, such as special paving or colored materials.

## Pedestrian Design

**Minimum Sidewalk Width:** 10 feet.

## Bicycle Design

**Facilities:** Class II bicycle lanes should be provided at a minimum width of 5 feet where possible.

**Bicycle Parking:** Bicycle racks should be provided where possible, and at a minimum at the University Avenue/Bay Road and Pulgas Avenue/Illinois Street intersections.

## Transit Design

**Shelters:** Bus shelters should be provided at transit stops. Where on-street parking exists, consider bus bulbouts.

## Pedestrian Street Lighting

**Pedestrian Street Lighting Spacing:** 20 to 30 feet apart.

**Pedestrian Street Lighting Height:** 10 to 16 feet.

## Street Trees

**Tree Size (as defined by canopy diameter upon maturity):** Large canopy trees (40+ foot diameter) should be planted.

**Trees Spacing:** 20 to 30 feet apart.

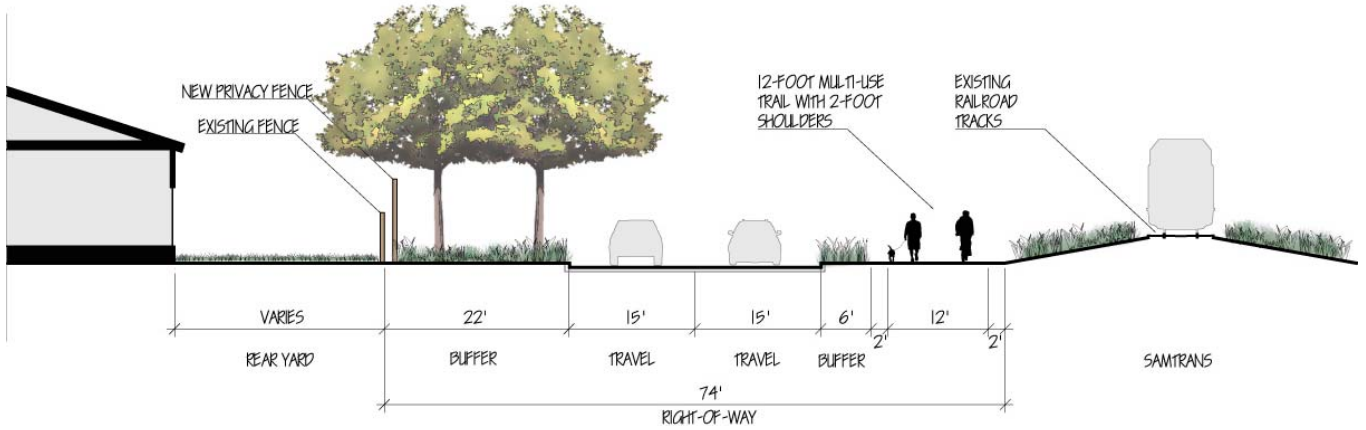
**Planting:** Trees should be planted within tree wells with tree grates.

## Street Type: Loop Road

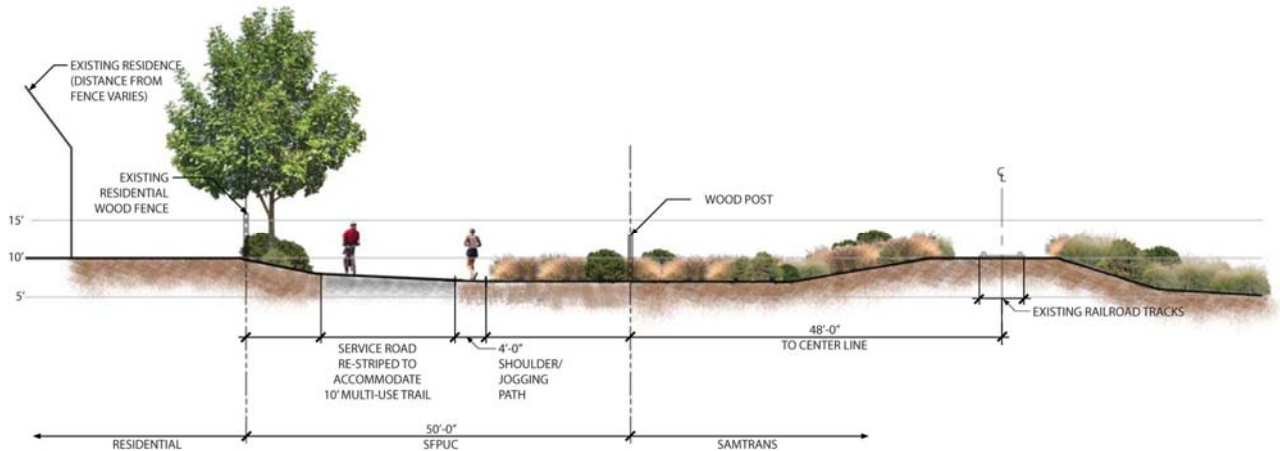
This street section shown in Figure 7-3 is envisioned for the new Loop Road proposed to connect University Avenue with Demeter Street around the northern perimeter of University Village. The street design is intended to allow for larger buses, trucks, and employment shuttles, but still allow for a pedestrian and bicycle-friendly environment that respects the adjacent natural areas. This is the long-term solution proposed for this portion of the loop road. Figure 7-4 shows a shorter-term solution for this area prior to construction of the loop road. The section shows the existing SFPUC service road as restriped for a multi-use path with a 4-foot shoulder. Figure 7-5 shows the portion of the

Loop Road proposed for the eastern perimeter of University Village. The following standards should apply:

**Figure 7-3: Loop Road (Northern Perimeter of University Village)**

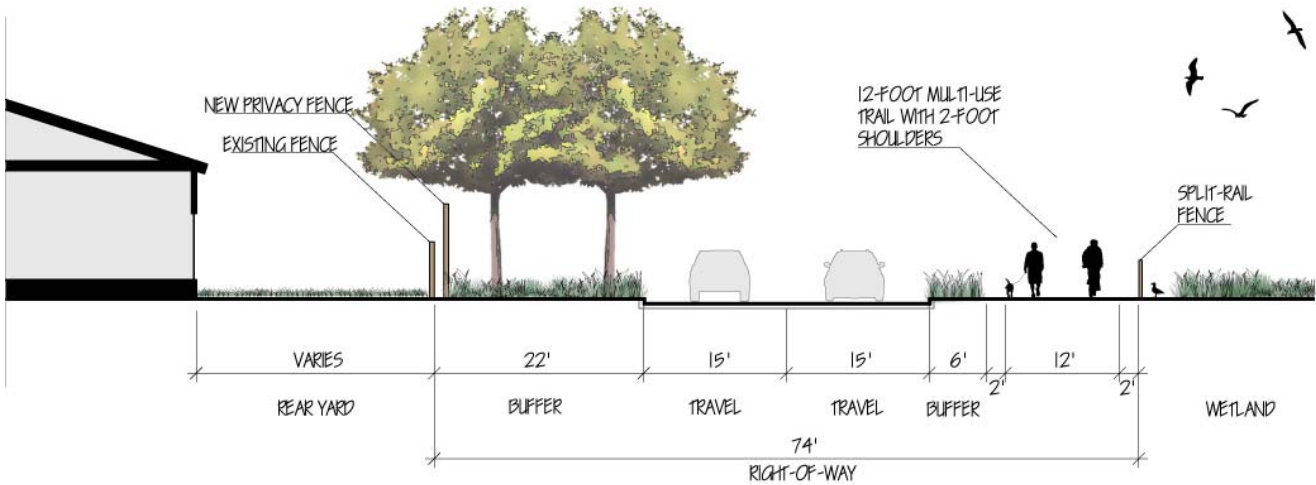


**Figure 7-4: Interim Design (Northern Perimeter of University Village)**



Source: Courtesy of Callander Associates, David Powers & Associates, Association of Bay Area Governments and Midpeninsula Regional Open Space District.

**Figure 7-5: Loop Road (Eastern Perimeter at University Village)**



**Roadway Design**

**Street Lane Width:** 15 feet.

**Pedestrian Crossing Spacing:** To be determined prior to construction in coordination with Engineering and Planning Departments.

**On-Street Parking:** On-street parking is not allowed on the Loop Road unless additional right-of-way is acquired.

**Bicycle and Pedestrian Design**

**Facilities:** Multi-use paths that allow pedestrian and bicycle use should be provided on one side only of the Loop Road. A 12-foot-wide paved area with two-foot shoulders should be provided.

**Pedestrian Street Lighting**

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at important destinations and at pedestrian crossings. Provide minimal street lighting to satisfy safety concerns for the Loop Road to minimize impact on natural resources.

**Street Lighting Height:** No greater than 16 to 20 feet.

**Street Trees**

**Location:** Trees should be planted on the southern and western sides of the street only. Trees should not be planted between the Loop Road and natural areas to the east.

**Tree Size (as defined by canopy diameter upon maturity):** Medium canopy trees (25- to 40-foot diameter) should be planted along the Loop Road.

**Trees Spacing:** 15 to 20 feet apart, in clusters or allees.

**Planting:** Trees should be planted within a permeable landscaped buffer separating the Loop Road from residential properties to the south or west.

**Street Tree Type:** Trees should be native species that have been proven to thrive in similar environmental conditions, and that can tolerate exposure to salt water.

**Street Type: Bay Road East**

Bay Road will taper from four lanes at Tara Street to two lanes until reaching the Bay Trail. The street section shown in Figure 7-6 is envisioned for Bay Road with a 50-foot right-of-way. The street design is intended to facilitate safe and pedestrian-friendly connections to the office areas envisioned in the Plan Area, as well as provide connections to Cooley Landing. This segment of Bay Road is intended to facilitate wider building-to-building distances to preserve views to and transition to the natural areas to the east.

**Figure 7-6: Bay Road (East of Bay Road/Tara Road Intersection)**



It should be noted that the existing 50-foot right-of-way may require expansion depending on the scale and location of future development. Based on this, potential future right-of-way is also shown in Figure 7-5, however the dimensions are not yet known. It is anticipated that the future right-of-way would provide for sidewalks and landscaping. The cross-section above shows a conceptual configuration, but this configuration could vary significantly based on future design processes. The following standards should apply:

#### Roadway Design

**Street Lane Width:** 10 to 12 feet.

**Pedestrian Crossing Spacing:** Minimum of every 300 to 400 feet.

**On-Street Parking:** Where possible, provide for on-street parallel parking.

#### Pedestrian Design

**Minimum Sidewalk Width:** 6 feet.

#### Bicycle Design

**Facilities:** Class II bicycle lanes should be provided at a minimum width of 5 feet where possible.

#### Transit Design

If warranted, provide bus shelters along the roadway for employment shuttles or public transit service.

#### Pedestrian Street Lighting

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at key destinations, such as entrances. Street lighting should be provided at crosswalk locations and intersections.

#### Street Trees

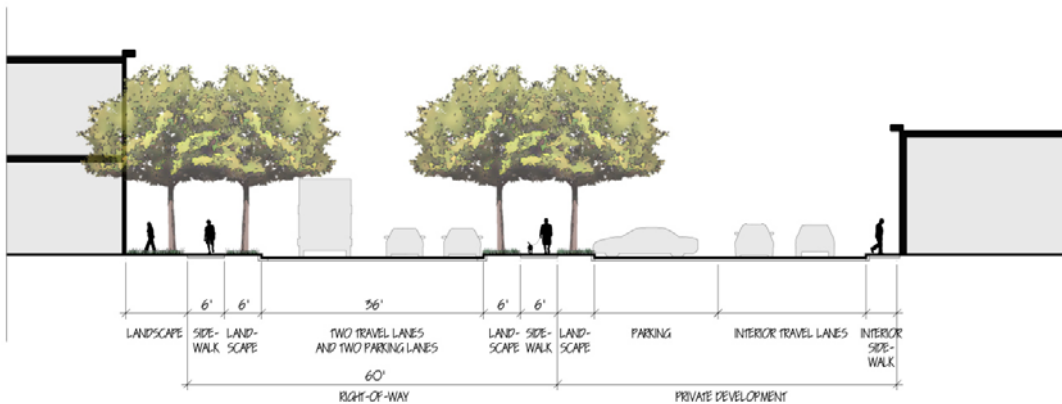
**Tree Size (as defined by canopy diameter upon maturity):** Large canopy trees (+40-foot diameter) should be planted.

**Tree Spacing:** 20 to 30 feet apart.

**Planting:** Trees should be planted within tree wells with tree grates.

#### Street Type: Ravenswood Connector (typical)

This street section shown in Figure 7-7 is envisioned for segments of the roadway network that are connecting through existing industrial areas and areas envisioned for future R&D and industrial uses. The street design is intended to allow for maximum flexibility in accommodating large service vehicles and delivery trucks, but still allow for a pedestrian- and bicycle-friendly environment. The following standards should apply:

**Figure 7-7: Ravenswood Connector (Typical)****Roadway Design**

**Street Lane Width:** 10 to 18 feet.

**Pedestrian Crossing Spacing:** Minimum of every 500 to 600 feet.

**On-Street Parking:** Where possible, provide for on-street parallel parking.

**Pedestrian Design**

**Minimum Sidewalk Width:** 6 feet.

**Bicycle Design**

**Facilities:** Class III bicycle routes should be provided on primary Ravenswood Connector streets as fits with appropriately with new development.

**Pedestrian Street Lighting**

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at key destinations, such as entrances. Street lighting should be provided at crosswalk locations and intersections.

**Street Trees**

**Tree Size (as defined by canopy diameter upon maturity):** Medium canopy trees (25- to 40-foot diameter) should be planted.

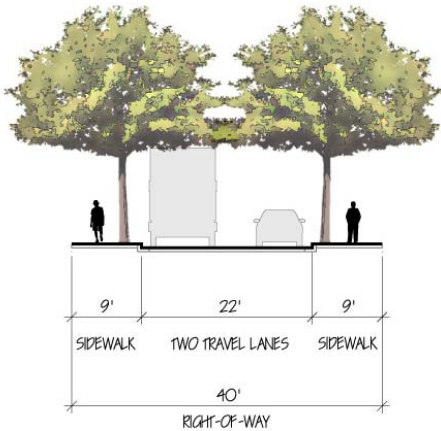
**Tree Spacing:** Cluster trees or space 15 to 20 feet apart where possible to avoid driveways and utilities.

**Planting:** Trees should be planted within planting strips between the sidewalk and roadway. Three-foot-wide planting strip minimum.

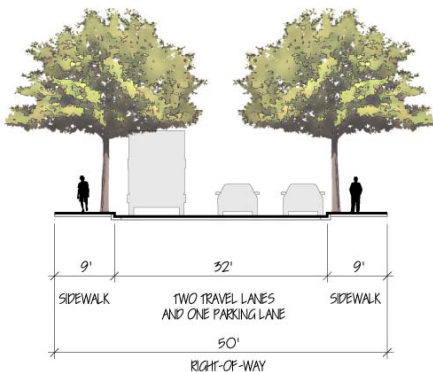
**Street Type: Ravenswood Connector (Pulgas Avenue)**

This street section shown in Figure 7-8 is envisioned for Pulgas Avenue from Bay Road north. These standards are meant to reflect the specific dimensions

**Figure 7-8: Ravenswood Connector (Pulgas Avenue)**



**Figure 7-9: Ravenswood Connector (Demeter Street)**



and right-of-way of Pulgas Avenue in the area. If future development or public improvements allow for a wider right-of-way, street design should follow the standards for the Ravenswood Connector. The following standards should apply:

**Roadway Design**

**Street Lane Width:** 10 to 12 feet.

**Pedestrian Crossing Spacing:** Minimum of every 500 to 600 feet.

**On-Street Parking:** Under the current right-of-way, on-street parking should be prohibited to provide for sidewalks.

**Pedestrian Design**

**Minimum Sidewalk Width:** 6 feet.

**Bicycle Design**

**Facilities:** Class III bicycle routes should be provided on Pulgas Avenue.

**Pedestrian Street Lighting**

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at key destinations, such as entrances. Street lighting should be provided at crosswalk locations and intersections.

**Street Trees**

**Tree Size (as defined by canopy diameter upon maturity):** Medium canopy trees (25- to 40-foot diameter) should be planted.

**Tree Spacing:** Cluster trees or space 15 to 20 feet apart where possible to avoid driveways and utilities.

**Planting:** Trees should be planted within planting strips between the sidewalk and roadway. Three-foot-wide planting strip minimum.

**Street Type: Ravenswood Connector (Demeter Street)**

This street section shown in Figure 7-9 is envisioned for Demeter Street as it runs through existing industrial areas and areas envisioned for future R&D and industrial uses. These standards are meant to reflect the specific dimensions and right-of-way of Demeter Street in the area. If future development or public improvements allow for a wider right-of-way, street design should follow the standards for the Ravenswood Connector. The following standards should apply:

**Roadway Design**

**Street Lane Widths:** 10 to 12 feet.

**Pedestrian Crossing Spacing:** Minimum of every 500 to 600 feet.

**On-Street Parking:** Where possible, provide for on-street parallel parking on one side of the street.

**Pedestrian Design**

**Minimum Sidewalk Width:** 6 feet.

**Bicycle Design**

**Facilities:** Class III bicycle routes should be provided on Demeter Street.

**Pedestrian Street Lighting**

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at key destinations, such as entrances. Street lighting should be provided at crosswalk locations and intersections.

**Street Trees**

**Tree Size (as defined by canopy diameter upon maturity):** Medium canopy trees (25- to 40-foot diameter) should be planted.

**Tree Spacing:** Cluster trees or space 15 to 20 feet apart where possible to avoid driveways and utilities.

**Planting:** Trees should be planted within planting strips between the sidewalk and roadway. 3 foot wide planting strip minimum.

**Street Type: Residential Streets**

This street section provides standards for residential streets in the Specific Plan Area. These standards should be referenced for new streets as well as for streetscape improvements on existing residential streets. The following standards should apply:

**Roadway Design**

**Street Lane Width:** 10 to 12 feet.

**Pedestrian Crossing Spacing:** Minimum of every 300 to 600 feet.

**On-Street Parking:** Where possible, provide for on-street parallel parking.

**Pedestrian Design**

**Minimum Sidewalk Width:** 6 feet.

**Bicycle Design**

**Facilities:** Class III bicycle routes should be provided as shown on the City's bicycle route map.

**Pedestrian Street Lighting**

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at key destinations, such as crosswalk locations and intersections.

**Street Trees**

**Tree Size (as defined by canopy diameter upon maturity):** Medium canopy trees (25- to 40-foot diameter) should be planted.

**Tree Spacing:** Trees should be planted where space allows, with a goal of one tree minimum at each residence or 20- to 30-foot spacing at multi-family residential.

**Planting:** Trees should be planted within planting strips between the sidewalk and roadway. Three-foot-wide planting strip minimum.

**Street Type: Interior Streets Allowing Public Access**

The section provides standards for new streets within private development projects that allow public access. The following standards should apply:

**Roadway Design**

**Street Lane Width:** 10 to 12 feet.

**Pedestrian Crossing Spacing:** Minimum of every 300 to 400 feet.

**On-Street Parking:** On-street parallel parking is encouraged.

**Pedestrian Design**

**Minimum Sidewalk Width:** 6 feet.

**Bicycle Design**

**Facilities:** Bicycles should share the roadways with vehicles.

**Bicycle Parking:** Provide adequate and secure bicycle parking at all new development.

**Pedestrian Street Lighting**

**Pedestrian Street Lighting Spacing:** Street lighting should be provided at key destinations, such as entrances. Street lighting should be provided at crosswalk locations and intersections.

**Street Trees**

**Tree Size (as defined by canopy diameter upon maturity):** Large canopy trees (+40-foot diameter) should be planted.

**Tree Spacing:** 20 to 30 feet.

**Planting:** Trees should be planted within planting strips between the sidewalk and roadway. Three-foot-wide planting strip minimum.

**Street Right-of-Way Standards and Guidelines**

This section provides standards and guidelines for the design of all new public street rights-of-way, as well as improvements to existing rights-of-way within the Specific Plan Area. The words “shall” or “must” refer to a mandatory design standard for new street rights-of-way. The words “should,” “may,” or

“encouraged” refer to a guideline that is recommended for all new street rights-of-way and should be followed where appropriate.

### **Roadway Design**

- a. Lane widths should be no greater than necessary to support the street’s intended speed and accommodate the anticipated through and turning movement of vehicles.
- b. Curb extensions, or “bulbouts,” at intersections are encouraged as a means of expanding the pedestrian zone where pedestrians are likely to congregate.
- c. Pedestrian refuge islands should be incorporated into crosswalk design where a center median is present.
- d. In commercial areas, on-street parking should be striped and time enforced.

### **Pedestrian Design**

- a. Sidewalks shall be continuous and meet all applicable requirements of the Americans with Disabilities Act (ADA).
- b. A minimum 4-foot width along the sidewalk shall be entirely clear of all obstacles.
- c. Sidewalk widths should be adequate to support the level of pedestrian activity that is intended and desired.
- d. Driveways and curb cuts should be minimized to limit conflicts between vehicles, pedestrians, and bicyclists. Wherever possible, driveways for adjacent uses should be consolidated.
- e. Where possible, improvements such as street furniture, street lights, tree wells, and utility vaults should be located adjacent to the curb.
- f. Sidewalks should use high-quality materials and installation to ensure long use and avoid frequent replacement. Recycled and/or locally sourced paving materials should be specified wherever feasible. Pervious materials, such as special pavers or pervious concrete, are recommended where feasible.

### **Street Furnishings and Amenities**

- a. At an area-wide scale, street furniture should be coordinated in type, color, and material to contribute to a sense of identity in the area.
- b. Street furniture, including benches, trash and recycling receptacles, should be placed along the street to encourage pedestrian activity.

- c. Trash and recycling receptacles should be placed regularly at major intersections, near major building entrances, near bus stops, and adjacent to outdoor seating areas.
- d. Wayfinding signage should be provided to direct pedestrians to nearby destinations and attractions.
- e. Public art should be provided within the street right-of-way where possible to encourage pedestrian activity and provide an overall community benefit.
- f. Public art should be installed along roadways at visible locations, such as gateways, entryways to projects, and public and semi-public plazas.
- g. Trash and recycling receptacles should be provided to prevent littering.

**Bicycle Design**

- a. Class II on-street bicycle lanes should have a minimum width of 5 feet. Where possible, the gutter should not be included as part of the bicycle lane’s width. Four-foot-wide Class II bicycle lanes may be appropriate in cases where the adjacent parallel parking space is at least 9 feet wide to achieve a total width of at least 13 feet.
- b. Bicycle racks should be located in prominent locations that are clearly visible to cyclists from the street and from adjacent buildings and public spaces.
- c. Bicycle racks should be designed so that a bicycle can be securely locked to the rack at two separate points.
- d. Placement of bicycle racks should consider ease of entry and exit and should not conflict with the pedestrian path of travel.
- e. Class II bicycle lanes should be designed and striped so as to minimize potential conflicts with opening vehicle doors.

**Transit Design**

- a. Where feasible, bus stops should be located at the far side of the intersections they serve.
- b. All bus stops should provide at least one bench, along with a bus shelter at high-volume bus stops.
- c. All transit stops should be prominently signed, and all pertinent route and schedule information, including major connecting services, should be posted.
- d. Maps and wayfinding information should be provided at high-volume bus stops.

- e. Bus bulbouts are encouraged at high-volume transit stops where on-street parallel parking exists.
- f. Bus shelters should be constructed with concrete pads to the extent feasible in order to reduce maintenance needs and costs.

### **Lighting**

- a. Roadway lighting and pedestrian-scaled lighting should be designed in conjunction with one another to create a safe and attractive environment for pedestrians, bicyclists, and drivers.
- b. Greater amounts of lighting should be provided in areas where there are safety concerns and where there is potential for conflict between pedestrian and vehicles, such as at intersections.
- c. Sidewalks should be illuminated through the use of pedestrian-scaled lighting, typically 10 to 16 feet in height, in high intensity pedestrian areas such as Bay Road.
- d. Street lamps shall be oriented toward the ground and shall include cutoffs to minimize illumination of the night sky.

### **Street Trees**

- a. Street trees should be provided along roadways to provide shade for pedestrians, assist in stormwater management, buffer pedestrians from traffic, and provide visual interest on the street.
- b. A small palette of species should be repeated regularly over the length of a block or throughout the Plan Area to provide visual continuity.
- c. Deciduous or semi-deciduous tree species are preferred.
- d. Existing mature trees should be maintained and protected wherever possible, including by notching or stepping back buildings where trees are deemed to be of significance.
- e. Street trees should be provided with the best possible growing environment, including ample soil planting depth, subsurface preparation, aeration, root protection, irrigation, and drainage.
- f. Tree wells should be used in higher-intensity areas with high levels of pedestrian activity, particularly where there is cross-traffic between on-street parking and adjoining buildings.
- g. As a general rule, street trees should be spaced on center as follows:
  - Large canopy trees : 20 to 30 feet
  - Medium canopy trees: 15 to 20 feet
  - Small canopy trees: 12 to 15 feet

- h. Strive to provide street trees of varying species to increase visual interest and avoid monotony.
- i. Encourage the planting of street trees that thrive in urban conditions, meaning they do not require large amounts of water and do not have root growth patterns that disturb sidewalks.
- j. Consider increasing the percentages of female street trees planted to respond to potential allergy impacts.

### **Landscaping**

- a. Landscaping should be used to contribute to the quality of the pedestrian experience by adding visual interest, providing scale and shade, and contributing to a sense of comfort.
- b. Planting strips should be 3-foot minimum. Throughout the Specific Plan Area, consider use of planting strips to help manage and treat stormwater.
- c. Plant materials should be in scale with the adjacent land uses and buildings.
- d. In order to provide added variety and visual interest, landscaping in commercial areas may include permanent above-grade planters, movable pots and planters, and hanging planters, in addition to tree wells and planting strips.
- e. California native and drought-tolerant species should be used where possible to minimize maintenance and water consumption.
- f. A plant palette should be chosen to provide visual continuity throughout the street.