3. Arcade

Arcades are façades with a ground floor colonnade that supports the upper stories of the building. Arcades should typically be located within private property at the setback line. Arcades generally contain ground floor shopfronts. The covered space provides shade and shelter for pedestrians, as well as space for outdoor dining areas or other pedestrian oriented dining.

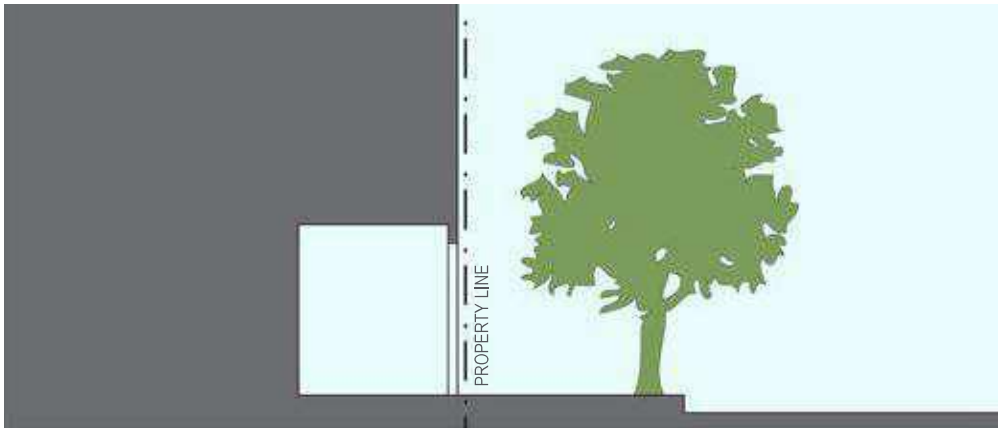


FIGURE 5.7. EXAMPLE OF AN ARCADE

Design Standards:

a. Walls without openings shall not exceed 10 feet along Primary Street frontages and 25 feet along Side Street frontages.
b. If an arcade is provided, it shall extend across at least 75% of the building façade.
c. The arcade column spacing shall be aligned with the shopfront openings. The arcade columns shall be at least 10 feet apart and no wider than two feet.
d. The sidewalk to ceiling height within the arcade shall be a minimum of 12 feet and a maximum of 16 feet.
e. The minimum depth of an arcade shall be eight feet and the maximum, 15 feet.
f. Awnings are not permitted along the arcade frontage type.
g. Design of the columns, soffits and openings shall be consistent with that of the rest of the building façade.
h. An arcade may project into the allowed street setbacks upto the property line.
i. Any projections in the public right-of-way are subject to encroachment permits from the City of Palmdale Public Works Department.

4. Gallery

A gallery is a roof or deck projecting from the façade of a building, whether cantilevered or supported by columns. Galleries generally contain ground floor shopfronts. The covered space provides shade and shelter for pedestrians, as well as space for outdoor dining or other pedestrian oriented dining.

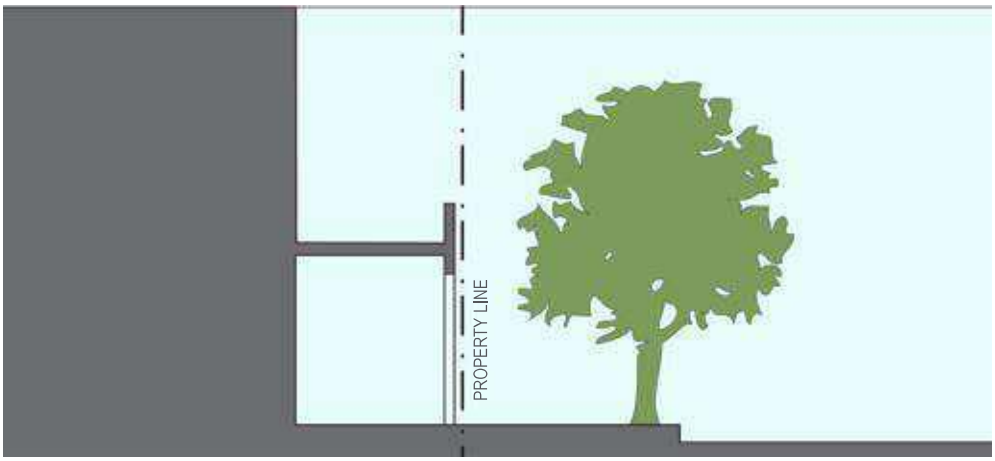


FIGURE 5.8. EXAMPLE OF A GALLERY

Design Standards:

a. Walls without openings shall not exceed 10 feet along Primary Street frontages and 25 feet along Side Street frontages.
b. If a gallery is provided, it shall extend across at least 75% of the building façade.
c. The gallery column spacing shall be aligned with the shopfront openings. The columns shall be at least 10 feet apart and no wider than two feet.
d. The sidewalk to ceiling height within the gallery shall be a minimum of 12 feet and a maximum of 16 feet.
e. The minimum depth of a gallery shall be eight feet and a maximum of 15 feet.
f. Awnings are not permitted along the gallery frontage type.
g. Design of the columns, soffits and openings shall be consistent with the rest of the building façade.
h. A gallery may project into the allowed street setbacks upto the property line.
i. Any projections in the public right-of-way is subject to encroachment permits from the City of Palmdale Public Works Department.

5. Porch

A porch is a covered area adjoining a building entrance that is setback from the front setback line, with a front yard between the sidewalk and porch. Porches can be raised or at grade and provide a physical transition from the sidewalk to the building. This frontage type is ideal for single-family residences but can be used for multi-family entrances.

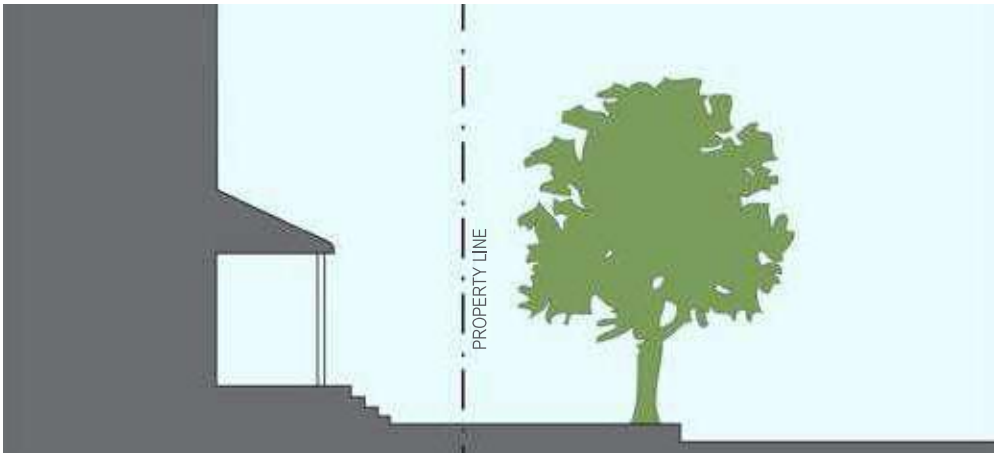


FIGURE 5.9. EXAMPLE OF A PORCH

Design Standards:

a. A porch should measure at least eight feet in depth and twelve feet in width.
b. The design of the porch should be consistent with the architectural style of the primary building.
c. Porches may be raised up to three feet from the adjacent finished grade.
d. A porch may project into the allowed street setbacks up to the property line.
e. If raised, landscaping at the base of the porch is encouraged.

6. Stoop

A stoop is a stair and landing leading directly from the sidewalk to a building entrance. The ground floor of the building is raised to provide privacy for the rooms facing the public street. This frontage type is ideal for residential uses (e.g., rowhouses, walkups, etc.) on the ground floor along streets.

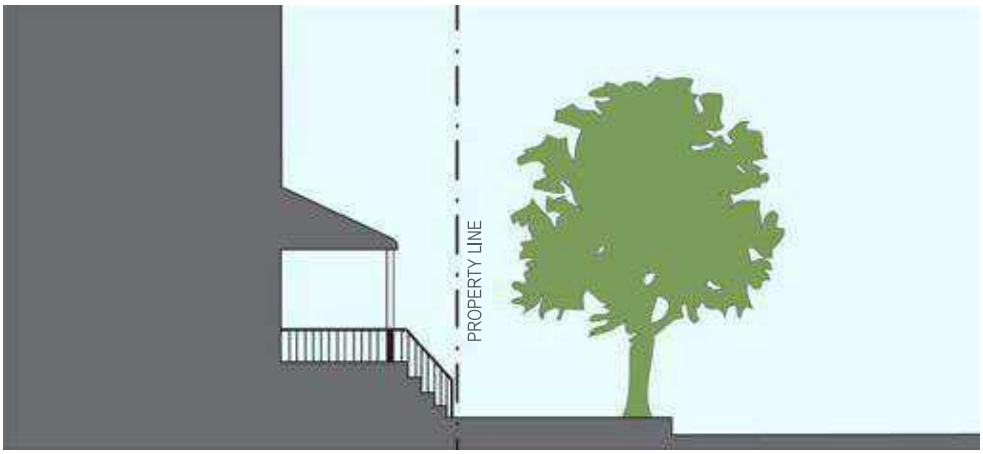


FIGURE 5.10. EXAMPLE OF A STOOP

Design Standards:

a. Stoop landings should measure at least four feet in depth.
b. Stoop floor height (and building ground floor height) shall not exceed three feet.
c. The landing may be covered or uncovered.
d. The exterior stairs may be perpendicular or parallel to the adjacent sidewalk.
e. Stoops may project into the allowed street setbacks up to property line.
f. Landscaping on both sides of the stoop is encouraged.

7. Front Yard

A front yard is an elevated or at-grade garden or terrace that is located in the required street setback areas. It may be enclosed by a low wall or fence that is located at or near the property line. The front yard frontage type may be used as front patios for residential buildings, dining or other pedestrian oriented dining and areas for commercial uses, as permitted in each zone.

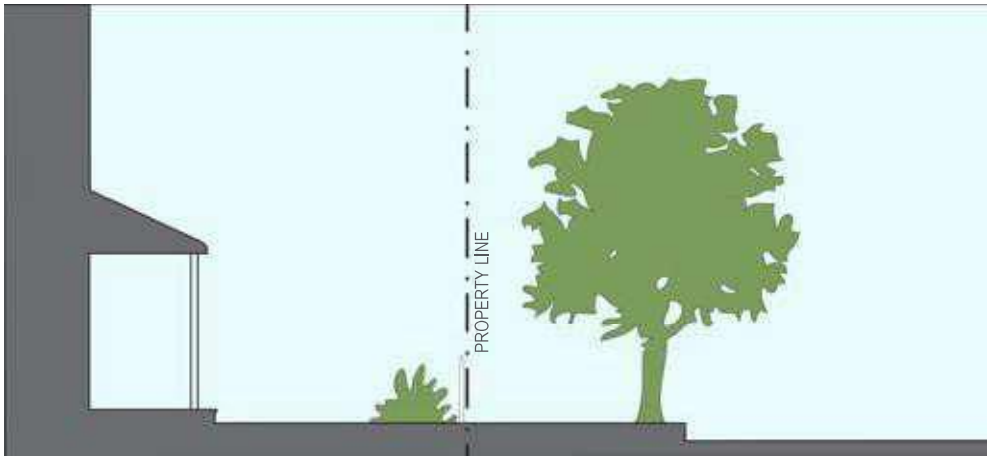


FIGURE 5.11. EXAMPLE OF A FRONT YARD

Design Standards:

a. Front yard floor height shall not exceed two feet from the adjacent sidewalk grade.
b. A solid wall height may not exceed three feet from the adjacent sidewalk grade. Substantially open fencing is permitted up to five feet from the adjacent sidewalk grade.
c. Wall and/or fence materials, designs and finishes should be consistent with the architectural style of the main building. Chainlink fences are prohibited.

5.6.4. Architectural Elements, Standards and Guidelines

Architectural elements are intended to animate building façades with human-scaled elements and spaces with depth, shade and shadow. Architectural elements include: awnings, canopies, bay windows, balconies, doors and windows. These elements provide façade articulation, as well as expressing the character and style of the building.

1. General Guidelines Applicable to All Elements

a. All architectural elements should be seamlessly integrated with the overall design of the building. This includes consistency in design character, materials, and architectural style.
b. Materials and finishes should be suitable to the scale, character and design theme of the building and further lend variety and interest to the project.

2. Doors and Windows

Doors and windows are key elements of any structure's form and should relate to the scale and proportions of the façade on which they are located. Windows and doors establish character by their rhythm and variety, and provide depth and contrast on elevation planes. Windows and doors should be used to help mitigate building mass, establish scale, and give expression to otherwise blank walls.

Design Standards:

a. All doors and windows should be related to the chosen architectural style for a building. Windows with widely varying styles are strongly discouraged.
b. All doors and window frames should be made of consistent materials. Wherever possible, window sizes should be coordinated vertically and horizontally. Window design should be consistent in terms of style and general arrangement on all building sides.
c. Window frames should appear substantial and should not be flush with the exterior finish. Recessed windows or inset glazing are encouraged. Windows shall be set in a minimum of two inches from the exterior face of a wall to create a shadow line.

3. Bay Windows

Bay windows are windows that project from the building façade.

Design Standards:

a. Bay windows shall have a maximum width of eight feet and a height that matches or exceeds the window width.
b. Bay windows shall be placed at least three feet from another bay window or from a corner.
c. Bay windows may project into the setback area.
d. At least 50% of each bay window shall have transparent glazing.

4. Awnings or Canopies

Awnings or canopies define an entry or provide shade along a building façade.

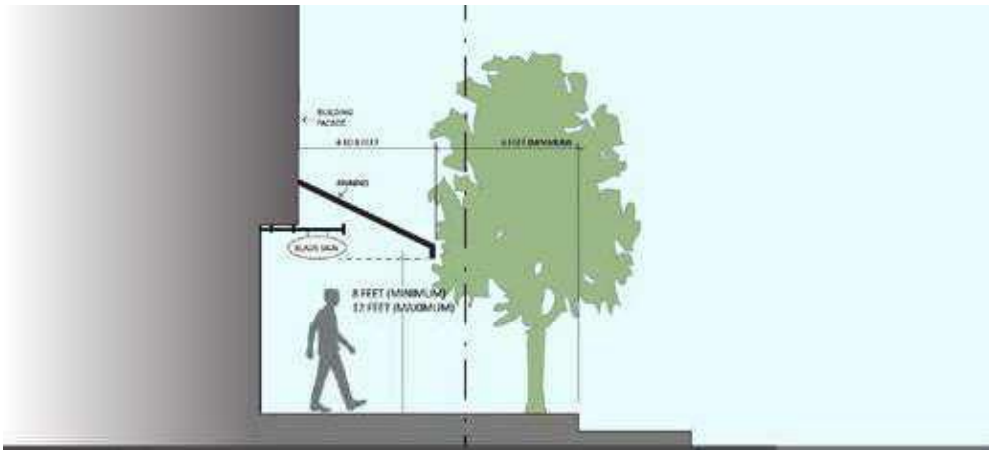


FIGURE 5.12. EXAMPLE OF AN AWNING OR CANOPY (SEE APPENDIX FOR EXPANDED IMAGE)

Design Standards:

a. Awnings shall be installed between transom windows (if provided) and display windows to allow for light to enter the storefront, while shading the display window.
b. Awnings or canopies shall be installed to provide a clear height of eight feet (minimum) and 12 feet (maximum) between the sidewalk and bottom of the awning. An Encroachment Permit is required for all awnings that encroach or overhang on the sidewalk from the City of Palmdale Public Works Department. Public Works will determine the allowed encroachment.
c. Awnings shall not extend across the entire façade. Instead, individual awnings shall be installed over each storefront opening. However, a continuous canopy may extend across the façade length.
d. Awnings shall not start at the parapet edge of the façade. The step (the highest line of contact where the awning touches the façade) of the awning shall be at least 24 inches below the parapet line.
e. Awnings shall be well-maintained, cleaned on a regular basis, and replaced when faded or torn.
f. Awnings may be permanent or retractable.
g. Awning materials include canvas or similar materials that are complementary to the architectural style. Canopies may be made of glass, plastic, other transparent materials or metal if appropriate with the architectural style.
h. Simple shed form awnings are preferred. Barrel shaped awnings are not permitted.
i. Internally lit awnings are not permitted.

5. Balconies

Balconies are intended to provide open space for occupants. These may be projecting or recessed.

Design Standards:

a. Balconies should have a minimum depth of six feet.
b. Balcony supports should be visually expressed at grade or above ground if appropriate with the architectural style.

5.6.5. Single-Family Residential Guidelines

The following design standards and guidelines apply to all single-family residential (detached or attached) uses within the PTASP area:

a. While meeting the minimum front and side yard depths established in Figure 5.4, a new dwelling's front and side yard depths should approximate that of adjacent residences. The front and side yard pattern on the block shall be identified and respected to help unify the neighborhood.

b. Dwellings shall orient themselves to the street with a clearly identifiable front door and windows that face the street. Front windows and the front door contribute to "eyes on the street," which help give a sense of neighborhood security.

c. Frontage types, such as stoops and open porches (see Figure 5.3 in section 5.6.3), are encouraged to create a street environment conducive for socializing between neighbors and provide "eyes on the street."
d. All street-facing building façades should be similar in design and quality to that of the primary façade.
e. Height and rooflines should be consistent with the style of architecture of the house and complement qualities of neighboring residential structures, such as type, slope, size, material and color.

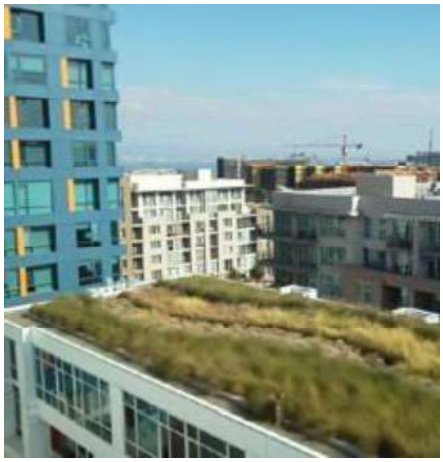
f. Additions, accessory structures and second units should maintain the look and appearance of the existing primary structure so that they do not appear as an addition or new building. They should respect the architectural style, scale, rhythm, and building elements of the existing primary structure. An addition should complement and balance the overall form, mass, and composition of the existing primary structure on the property. An addition shall maintain the same floor-to-floor height of the original structure.
g. New houses and/or accessory buildings should minimize their visual impact on adjacent properties. New windows and second floor balconies should be placed where they promote maximum privacy between properties. Windows should be offset or staggered

from neighboring windows to maintain privacy between houses. Avoid locating balconies so that they look directly overlook a neighboring patio or yard.

h. All street facing yards should be landscaped per Section 17.41.090.H. and Chapter 14.05 of the PMC.

5.6.6. Open Space Standards and Guidelines

All new development in the PTASP area is required to provide open space. Common outdoor open space and private open space are required in accordance with Figure 5.4. Common and private open space areas should be designed and oriented to take advantage of available sunlight and shelter from the noise and traffic of adjacent streets. Required setback areas or parking areas cannot be used to satisfy open space requirements.



Modifications or exceptions to the above requirements may be made by the Planning Manager, when a finding can be made that the proposed private open space meets the overall intent and purpose of this Section.

1. Common Open Space

a. Common outdoor space may be provided at grade, podium, or roof level.
b. Common outdoor space for residential uses may include: rooftop decks, tot lots, swimming pools, landscaped areas, community gardens, game courts, and courtyards. At least 10% of the open space area shall be landscaped.
c. Common outdoor space areas for non-residential uses may be designed as plazas, courtyards, parks, or forecourts.
d. Common open space areas should be secured, conveniently located to the majority of the residential units, and visible from the residential units to ensure safe use.
e. The minimum area for common outdoor open space is:
   - 1,000 sf for projects with a residential component on parcel sizes more than 10,000 sf in size, and
   - 500 sf for those on smaller parcels, and
   - In both instances, the minimum dimension of the common open space is 20 feet.

2. Private Open Space

a. Private usable open space shall be contiguous to the residential unit it serves and screened from public view for privacy.
b. Patios that front a public street shall be substantially screened.
c. Balconies that front a public street shall have a solid balcony rail for privacy.
d. The minimum dimension for private open space is six feet.
e. Private open space shall be accessed at the same level as a kitchen, dining room, family room, master bedroom, or living room within the unit.

5.6.7. Parking Placement and Standards

Onsite parking should be located and designed to provide adequate parking supply and convenient access to buildings and not encroach on public views or required on-site open spaces.

1. Private Parking Requirements

a. Private parking requirements are provided in Chapter 6.
b. For mixed use projects, shared entrances for both commercial and residential uses are encouraged. In such conditions, secure access for residential parking should be provided.
c. Off-street parking shall be located to the rear and/or interior of a site, such that its visibility from the street shall be minimized.

2. Structured Parking

a. At-grade, above-, or below-ground parking structures are permitted. At-grade parking structures shall be placed to the rear or interior of the block.
b. On-grade parking podiums and structures should be placed to the rear or interior of the block.
c. Parking structures shall be located per the Parking Placement Standards in Figure 5.4.
d. In Urban Core (T6) and Urban Center (T5), the Primary Street and Side Street ground floor frontages of on-grade parking structures shall be lined with usable commercial space for a minimum depth of 25 feet.
e. Structured parking may be partially submerged with the above-grade height not to exceed the maximum ground floor height established in Figure 5.4. Landscaping shall be used to screen exposed openings.

3. Surface Parking Lots

a. Off-street surface parking shall be located to the rear and/or interior of a site, such that its visibility from the street is minimized.
b. Surface parking lots shall be placed between the building and a side or rear property line. Where a parcel fronts onto two or more streets, parking shall be located along the side street per the Parking Placement Standards in Figure 5.3.
c. A wall or fence no higher than six feet and no lower than four feet shall separate parking lots from abutting residential uses with a minimum four foot wide landscaped buffer.

4. Residential Parking

a. Garages for single-family residential uses, whether attached or detached, shall be set back at least 10 feet behind the primary front façade of the residences they serve.
b. The primary front façade shall comprise at least 50% of the overall width of the primary residence. The 10-foot setback shall be measured from the façade of the wall, which encloses the building, and not projections such as bay windows and porches.

5. Bicycle Parking

a. Convenient bicycle facilities shall be provided within the PTASP area.
b. Bicycle parking requirements are provided in Section 6.3.

5.7. Sustainability Guidelines

Building green means reducing the use of extractable resources, minimizing harmful impacts to the environment, and creating healthier environments for people. Green buildings can incorporate both passive, low-tech design, such as daylighting; and active, high-tech strategies and systems, such as photo voltaic panels. To be most effective, green building strategies should be incorporated into all phases of a project from early programming and budgeting to design and construction to commissioning, operations, maintenance and post-use demolition/recycling.

1. Site Design and Passive Solar Design

a. Buildings should be sited and designed to maximize the use of sunlight and shade for energy savings and respect the solar access of adjacent buildings.
b. Buildings should be clustered for shade and incorporate protected courtyards, recessed windows and doors, and insulated walls.
c. To reduce energy use, plant evergreen trees near the east and west walls of buildings for shading and to reduce summer heat gain. South walls should be shaded with deciduous trees.
d. Walkways and plazas should be designed to drain

to adjacent stormwater collection areas where feasible.

2. Stormwater Treatment and Water Efficiency

a. New development shall integrate stormwater catchment and treatment systems into its site. Buildings are encouraged to re-use collected rainwater.
b. To reduce water use and maintenance costs, the majority of plant materials should be drought tolerant and require relatively low maintenance.
c. New construction is encouraged to use on-site graywater systems to facilitate indoor water capture and reuse.

3. Building Design

a. New development shall achieve the mandatory elements of the CalGreen Code[1], as required by State law, but should seek opportunities to exceed, pursue, and achieve CalGreen Tier 1 or 2 voluntary measures.
b. All new buildings shall be built with solar-ready electrical systems/hardware and provided with adequate roof surface area for these systems.
c. New construction, additions, and alterations shall follow the CalGreen guidance for solar-reflective roofs to reduce heat island effect. Vegetated roofs may also be used.
d. Green building certification, such as LEED for Building Design and Construction (LEED-BD+C)[2] or GreenPoint Rated, is encouraged for new development.
e. CalGreen[3] requires new development to be EV ready, therefore, new residential development should include electric charging stations

1 For more information on CalGreen and achieving Tier 1 and Tier 2, see: http://www.bsc.ca.gov/Home/CALGreen.aspx
2 A copy of the LEED v4 for Building Design and Construction can be found here: https://www.usgbc.org/resources/leed-v4-building-design-and-construction-current-versionv
3 https://codes.iccsafe.org/content/CAGBSC2019/cover

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CHAPTER 6. | CIRCULATION PLAN

This Specific Plan is designated for active streetscapes, which are pedestrian in scale and accommodate multiple modes of travel. Residents, employees, and visitors, of all ages and abilities, will be able to live, work, learn and play. The Circulation Plan shall help create a safe and comfortable environment for pedestrians, bicyclists, vehicles and multiple transit modes by establishing a framework that provides a multi-modal transportation network and promotes connections through the following methods:

- Creating a well-connected downtown Palmdale.
- Improving neighborhood cohesiveness and livability.
- Providing more space, safety and priority to cyclists and pedestrians.
- Introducing mobility practices that support transit area design.

Images from National Association of City Transportation Officials (NACTO) included in this section are for reference only to illustrate typology and do not necessarily represent aesthetic preferences. For design standards and guidelines see section 5.6 of this report. Also refer to the recently developed ATP for the City for bicycle integration into the Circulation Plan. The ATP should be referenced for additional or superseding information related to active transportation. It is also recommended that the City work with AVTA to implement bus shelter amenities.

6.1. The Street Network - Creating Pedestrian and Bicycle-Friendly Streets

Safe and direct sidewalk connections are of key importance in creating a pedestrian and bicycle-friendly environment within the PTASP area. Street design should be ADA compliant and support activities that will occur in the area, providing a comfortable place for pedestrians to take part in various activities. Creating a high-quality pedestrian realm that supports and encourages walking and biking takes much more than simply providing sidewalks.

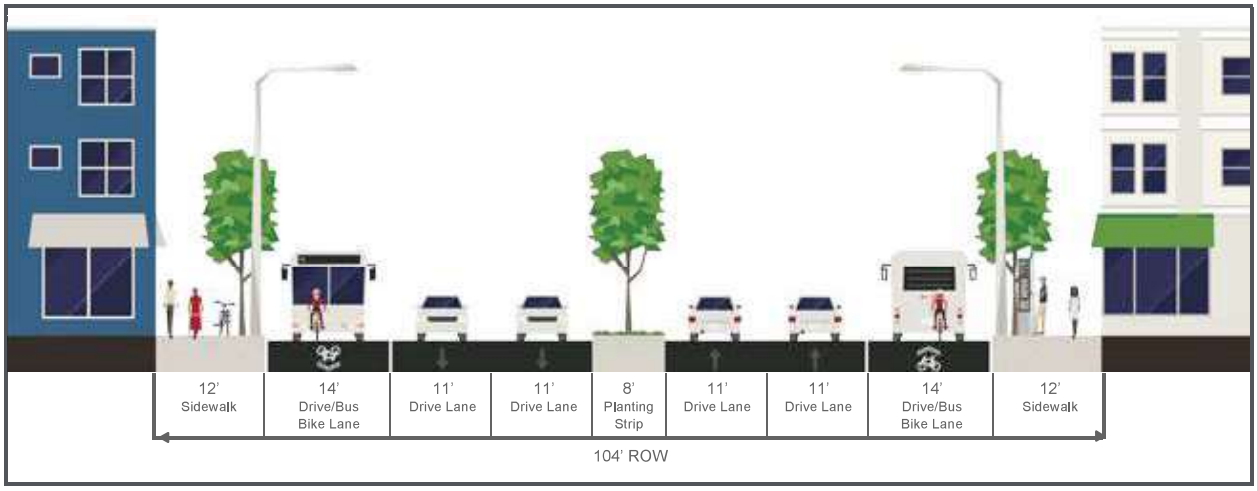
SOURCE: NACTO, 2019

FIGURE 6.1. EXAMPLE OF A WELL-DESIGNED STREET

The following are guiding principles of planning for pedestrian-supportive and bicycle friendly environments that from the basis for design guidelines:

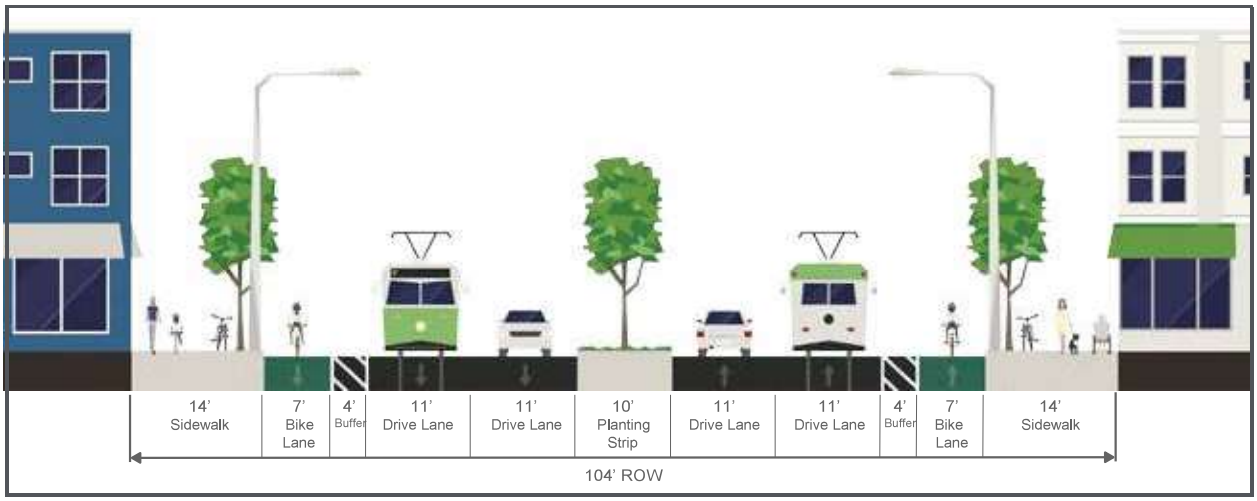
- **Improve overall circulation and connectivity.** Configuring the future HSR alignment and constructing grade separations to better connect the east and west portions of the PTASP area inadvertently separated by the Union Pacific/Metrolink (UP/ML) rail corridor.
- **Provide pedestrians more comfortable and interesting walking space.** Pedestrians need wide enough pathways to feel comfortable, ample shelter from sun and rain, and a sense of being enclosed by nearby buildings or trees, rather than exposed in a barren asphalt expanse. Pathways also need to be visually interesting, with amenities such as seating to render a walk more enjoyable.
- **Protect pedestrians from vehicular traffic.** Fast-moving traffic is both risky to pedestrians crossing streets, as well as uncomfortable for those walking along them. Traffic calming techniques in the design of streets can prompt drivers to slow down and exercise caution, while design treatments at street crossings can reduce crossing distances and make pedestrians more visible. Buffers between sidewalks and passing traffic, such as parked cars and landscaping, also increase pedestrian comfort.
- **Create great outdoor spaces.** Well-designed urban public spaces around the proposed transportation hub and high-pedestrian areas can cater to users by making outdoor spaces enjoyable destinations.
- **Shorten walking distances.** Pedestrians are particularly sensitive to circuitous routes because, at low speeds, longer distances translate into much longer travel times. Shortcuts for pedestrians such as mid-block access ways can make previously infeasible trips walkable.

The following exhibits illustrate cross-sections for major streets such as Palmdale Boulevard, Avenue Q, Sierra Hwy, 5th Street East, Division Street, East Avenue P-14 Ave and Sumac Avenue. Street segments depict the urban design framework described in Chapter 4. While the guidelines generally promote consistent design, cross-section exhibits shown below represent a desired vision around Palmdale Station and address identified needs and features from concurrent transportation and vision planning documents. The exhibits indicate minimum standards and additional variations may be required depending on the type of street. The following table indicates the different roads within the PTASP that tie with the roadway classifications of the General Plan. Please refer to the City's adopted standards for typical street sections as established in the General Plan.



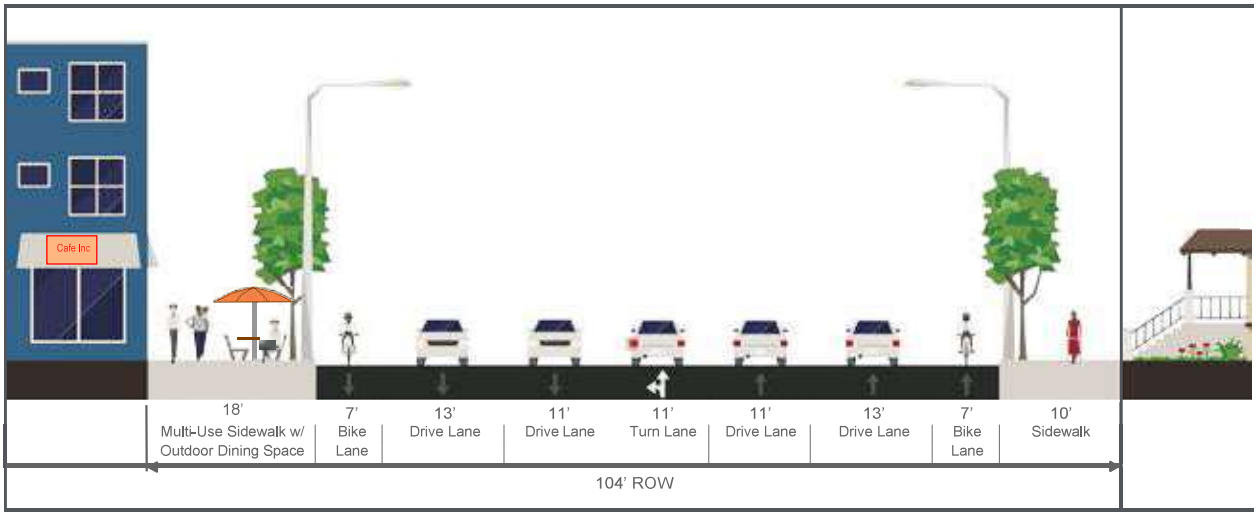
SOURCE: STREETMIX, 2019

FIGURE 6.2. PROPOSED PALMDALE BOULEVARD CROSS-SECTION - GENERAL PLAN CLASSIFICATION MAJOR ARTERIAL



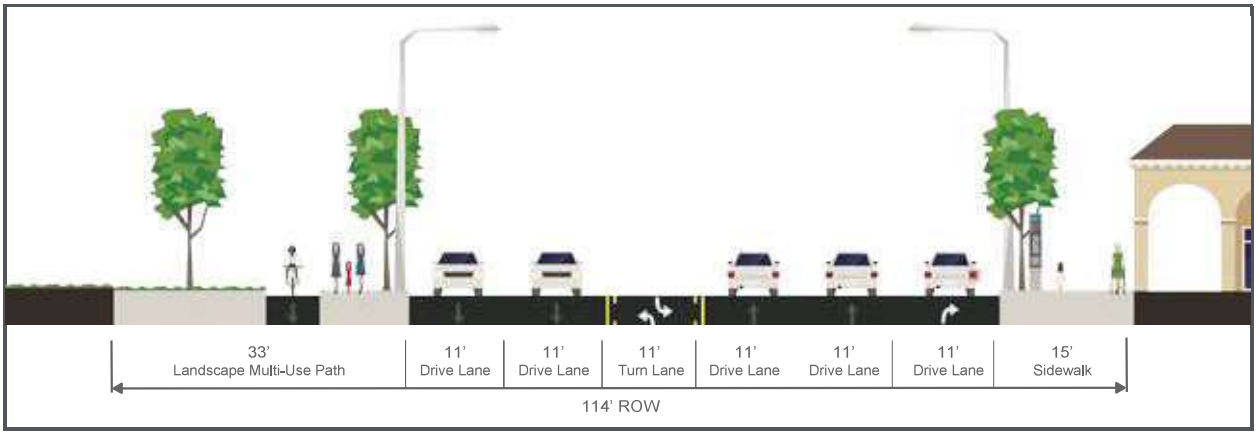
SOURCE: STREETMIX, 2019

FIGURE 6.3. PROPOSED AVENUE Q CROSS-SECTION - GENERAL PLAN CLASSIFICATION MAJOR ARTERIAL



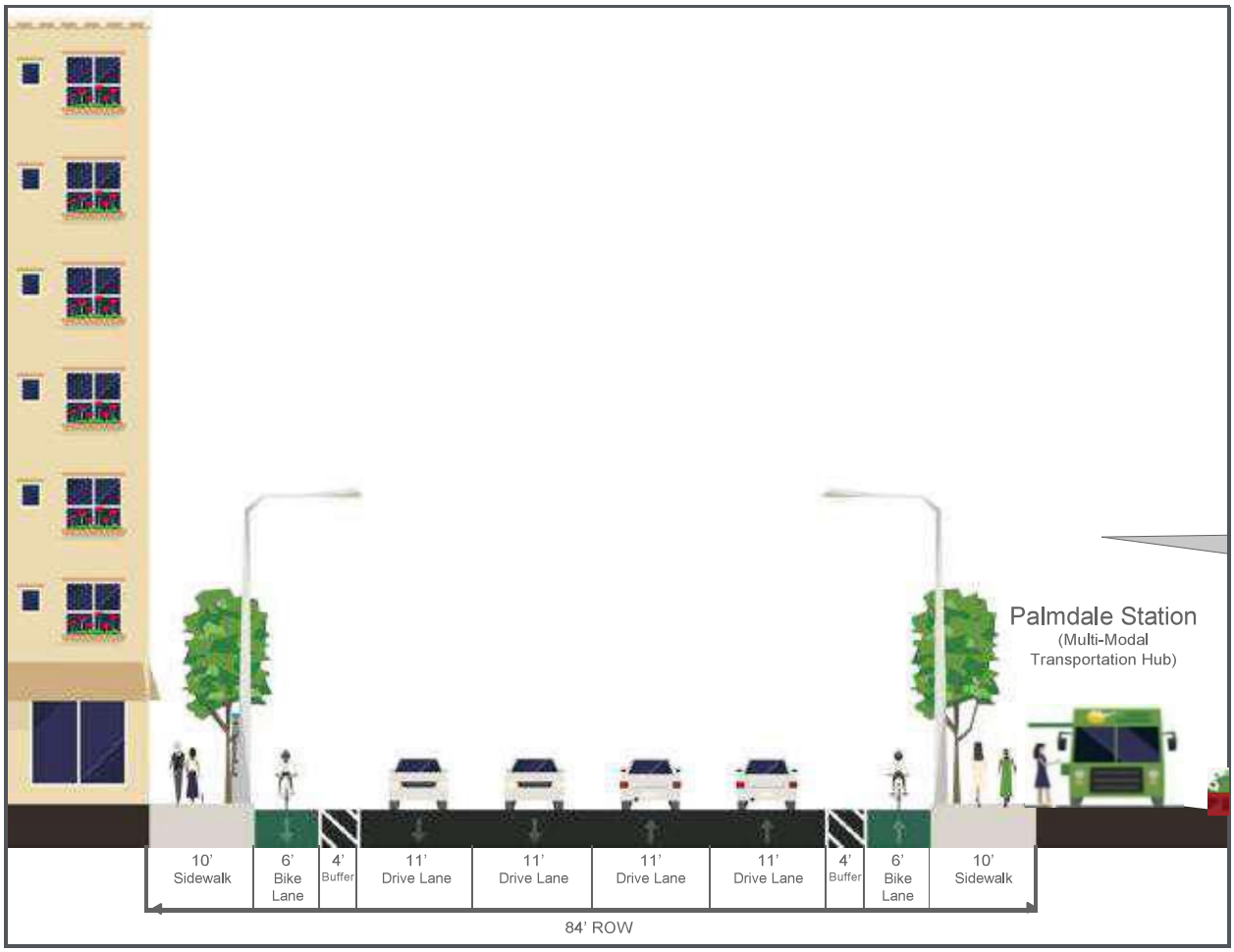
SOURCE: STREETMIX, 2019

FIGURE 6.4. PROPOSED DIVISION STREET CROSS-SECTION - GENERAL PLAN CLASSIFICATION MAJOR ARTERIAL



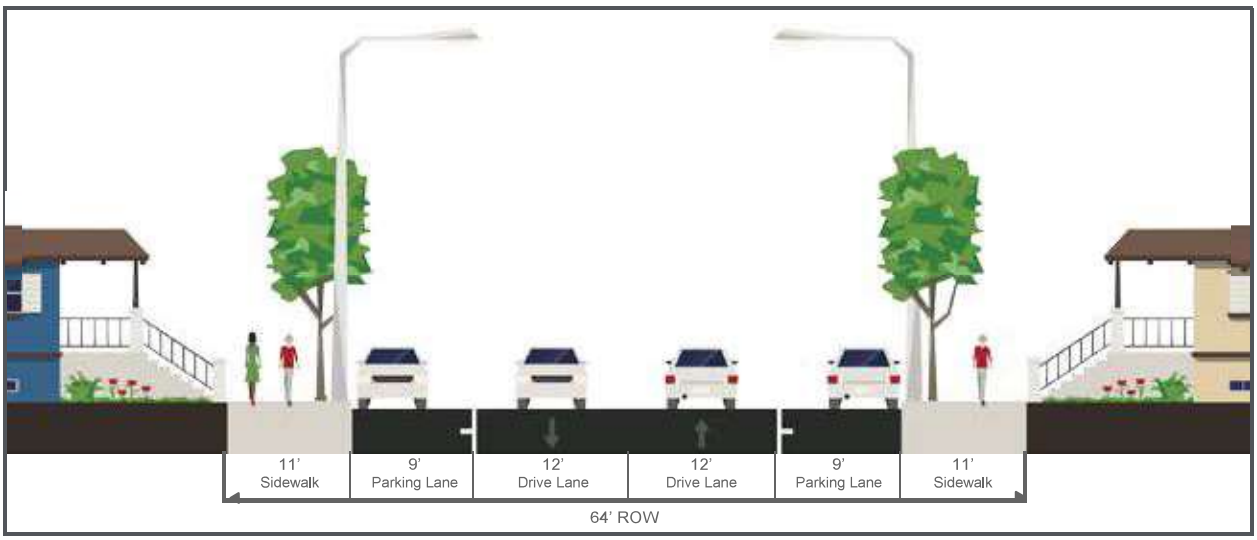
SOURCE: STREETMIX, 2019

FIGURE 6.5. PROPOSED SIERRA HIGHWAY CROSS-SECTION - GENERAL PLAN CLASSIFICATION MAJOR ARTERIAL



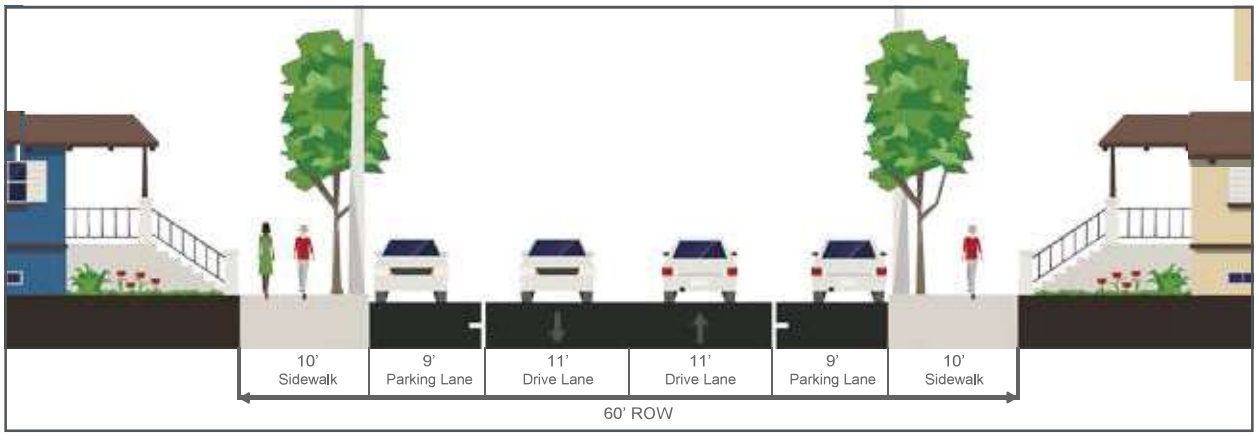
SOURCE: STREETMIX, 2019

FIGURE 6.6. PROPOSED 5TH STREET EAST CROSS-SECTION - GENERAL PLAN CLASSIFICATION SECONDARY ARTERIAL



SOURCE: STREETMIX, 2019

FIGURE 6.7. PROPOSED EAST AVENUE P-14 CROSS-SECTION - GENERAL PLAN CLASSIFICATION RESIDENTIAL ARTERIAL



SOURCE: STREETMIX, 2019

FIGURE 6.8. PROPOSED SUMAC AVENUE CROSS-SECTION - GENERAL PLAN CLASSIFICATION LOCAL INTERIOR ARTERIAL

The table below ties the roads within the PTASP to roadway classifications of the General Plan.

GP ARTERIAL CLASSIFICATION	STREET NAME	ROW
Major Arterial		
	Palmdale Boulevard	104
	Avenue Q	104
	Division Street	104
	Sierra Highway	114
Secondary Arterial		
	East Avenue Q	84
	3rd Street East	84
	5th Street East	84
	6th Street East	84
	Technology Drive	84
Residential Arterial		
	Frontage Road	64
	East Avenue Q-3	64
	East Avenue Q-4	64
	East Avenue Q-5	64
	East Avenue Q-6	64
	East Avenue Q-7	64
	East Avenue Q-9	64
	East Avenue P-12	64
	East Avenue P-14	64
Local Arterial		
	Sumac Avenue	60
	Carolside Avenue	60
	2nd Street East	60
	Glenraven Avenue	60
	Stanridge Avenue	60

SOURCE: PALMDALE GENERAL PLAN

FIGURE 6.9. GENERAL PLAN ARTERIAL CLASSIFICATION

GP ARTERIAL CLASSIFICATION	STREET NAME	ROW
	4th Street East	60
	Laskin Avenue	60
	8th Street East	60
	9th Street East	60
	10th Street East	60
	10th Place	60

SOURCE: PALMDALE GENERAL PLAN

FIGURE 6.9. (CONT'D) GENERAL PLAN ARTERIAL CLASSIFICATION

6.2. Design Guidelines

This section provides guidelines related to designing street segments and crossings. The complete pedestrian realm includes elements such as lighting, landscaping, signage, and architectural design, as provided in the guidelines in Chapter 5. The City of Palmdale completed its ATP in June, 2019. The ATP included the BTP, Safe Routes, Complete Streets and provided a Design Toolbox that will be used to inform the General Plan Circulation Element update.

6.2.1. Street and Sidewalk Design

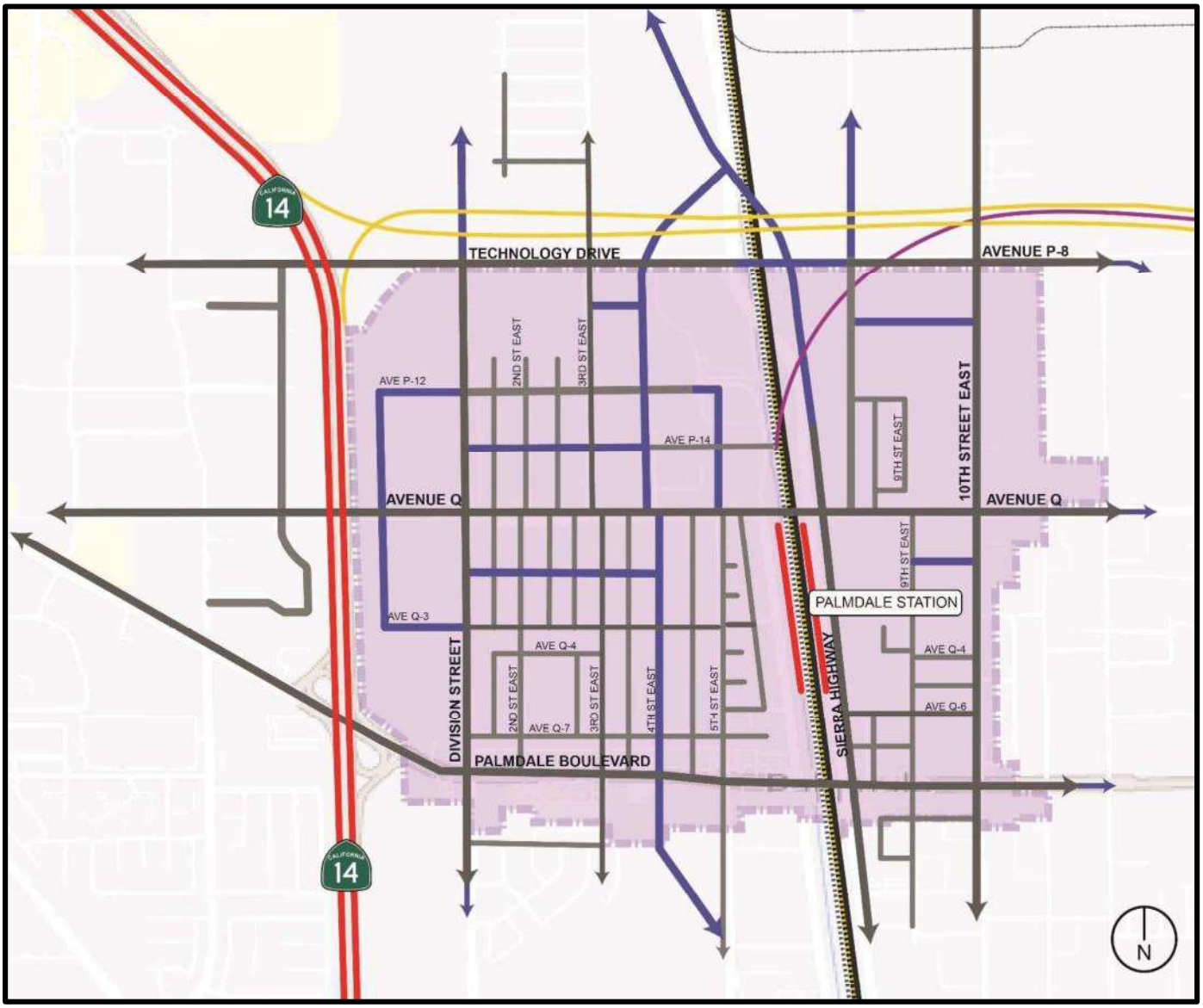
The street pattern not only creates feasible development parcels, but also ensures that the pedestrians have a shorter, safe and more direct connection between the neighborhood and the proposed transportation hub and major streets. The design of the streets themselves are also vitally important to the character of the community.

In the PTASP area, the street system is laid out on a grid. Each lettered east–west avenue is one mile from the next letter. By way of example, Avenue P is one mile north from Avenue Q. In between each whole letter avenue, there are 15 sub-avenues labeled -1 through -15, sometimes the -8 avenues are renamed as they are also major thoroughfares. Avenue Q-8 is renamed Palmdale Boulevard and Avenue P-8 is renamed Technology Drive. The road network is nearly a perfect grid. Major streets which run north to south are numbered inside their direction, i.e., 10th Street West and 10th Street East. Each 0 and 5 street is a major thoroughfare with each 0 street being 1 mile from the previous 0 street. The street network for the Palmdale Transit Area as illustrated in Figure 6.10 maintains an interconnected street pattern.

The existing conditions described in Chapter 2 earlier indicates that both regional and local roadways and transit services are operating with volumes lower than estimated by the 1993 General Plan for 2010 as well as build out conditions. Improvements are nevertheless being designed or planned for key roadway segments and intersections exhibiting peak period congestion. Notable improvements in the PTASP area include:

- Widening Palmdale Boulevard between 5th Street East and 10th Street East.
- Constructing a grade separation over the Metrolink and Union Pacific (UP) railroad tracks at Rancho Vista Boulevard (Avenue P).
- Constructing grade separations of Metrolink, Union Pacific, and future High-Speed Rail (HSR) tracks at Technology Drive, Sierra Highway, Avenue Q, and Palmdale Boulevard.
- Extending Technology Drive East to 20th Street East, to connect with a future interchange at this location with the High Desert Corridor freeway.
- Widening Sierra Highway to six lanes from Avenue Q to Avenue R.

Per the Federal Highway Administration (FHWA) guidelines, all urban sidewalks require the following basic elements: adequate width of travel lanes, a buffer from the travel lane, curbing, minimum width, gentle cross-slope (2 percent or less), a buffer to private properties, adequate sight distances around corners and at driveways, shy distances to walls and other structures, a clear path of travel free of street furniture, continuity, a well-maintained condition, ramps at corners, and flat areas across driveways. Per National Association of City Transportation Official (NACTO), sidewalks require a minimum width of 5.0 feet exclusive of other amenities to be wide enough for two people walking side by side. However, the desirable width for a sidewalk is often much greater. Developers of new property must pay close attention to sidewalk widths, and use variations based on the type of use, volume of pedestrian traffic, location of bus stop, bike stands, trash receptacles etc.



Legend

PTASP Boundary

Existing Transportation Network

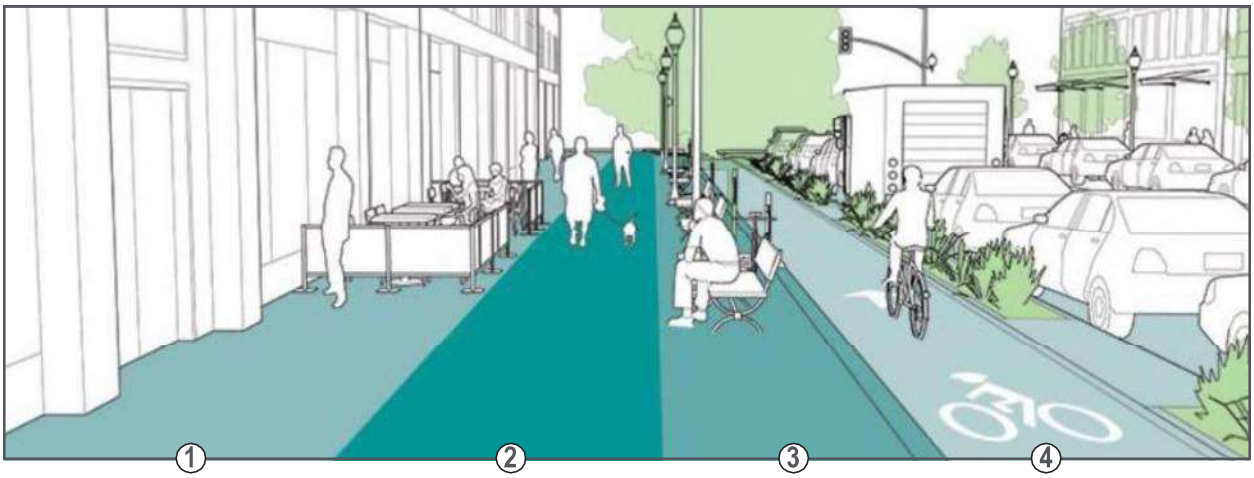
- Freeway
- Metrolink Rail
- Union Pacific Railroad
- Existing Major Street
- Existing Minor Street

Proposed Transportation Network

- Proposed Streets
- California High Speed Rail
- Virgin USA
- High Desert Corridor

FIGURE 6.10. PROPOSED ROAD NETWORK

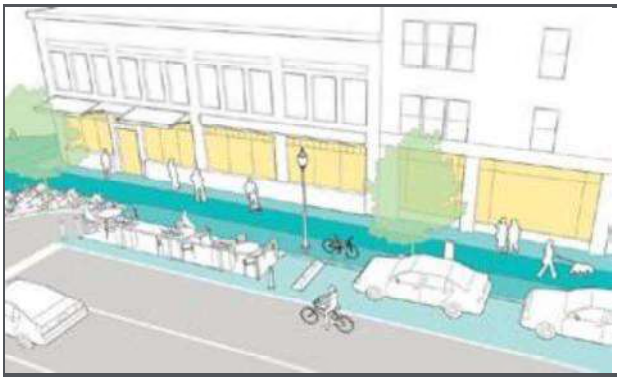
The sidewalk should be considered to be composed of four distinct zones: the Frontage Zone, the Pedestrian through Zone, the Street Furniture/Curb Zone and the Enhancement/Buffer Zone (see Figure 6.11):

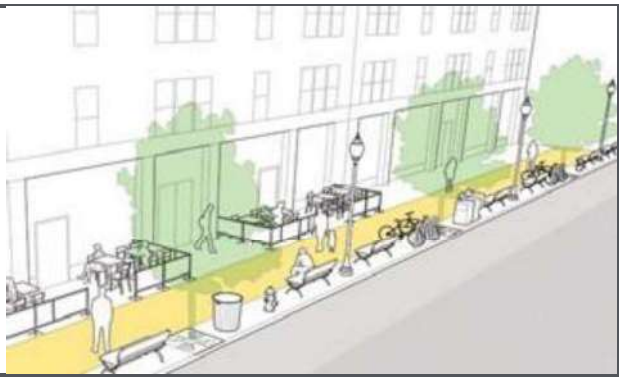


SOURCE: NACTO, 2019

FIGURE 6.11. AN EXAMPLE OF A "WELL-ZONED" SIDEWALK

1. **Frontage Zone:** The frontage zone describes the section of the sidewalk that functions as an extension of the building, whether through entryways and doors or sidewalk cafes and sandwich boards. The frontage zone consists of both the structure and the façade of the building fronting the street, as well as the space immediately adjacent to the building.
2. **Pedestrian Through Zone:** The pedestrian through zone is the primary, accessible pathway that runs parallel to the street. The through zone ensures that pedestrians have a safe and adequate place to walk and should be 5–7 feet wide in residential settings and 8–12 feet wide in downtown or commercial areas.
3. **Street Furniture/Curb Zone:** The street furniture zone is defined as the section of the sidewalk between the curb and the through zone in which street furniture and amenities, such as lighting, benches, newspaper kiosks, utility poles, street trees and tree pits, and bicycle parking are provided. The street furniture zone may also consist of green infrastructure elements, such as rain gardens or flow-through planters.
4. **Enhancement/Buffer Zone:** The enhancement/buffer zone is the space immediately next to the sidewalk that may consist of a variety of different elements. These include curb extensions, parklets, stormwater management features, parking, bike racks, bike share stations, and curbside bike lanes or cycle tracks.





SOURCE: NACTO, 2019

FIGURE 6.12. AN EXAMPLE OF A "WELL-ZONED" SIDEWALK

FIGURE 6.13. AN EXAMPLE OF A CONVENTIONAL DOWNTOWN

In residential areas, sidewalks should be at least five feet wide and be separated from the street by a planting strip featuring street trees with a minimum five foot width. Along commercial and mixed-use streets where storefronts are located close to the street, the preferred width of a sidewalk is 10 to 15 feet. This allows for pedestrian circulation and window-shopping. The minimum possible width for new development should be 10 feet. Widths over 13 feet provide space for pedestrian amenities, for local business activity to spill out onto the sidewalk, and for a leisurely walking pace without vehicle traffic dominating the pedestrian realm.

Sidewalks should be designed with materials that are stable, firm and slip-resistant; preferably PCC. The surface of the sidewalk should remain continuous even at driveways and maintain a continuous cross slope of no greater than two percent. To avoid the possibility of cars parking on sidewalks and impeding the pedestrian, box curbs should be used rather than rolled curbs.

6.2.2. Street Crossings

Intersections are often the most vital and vibrant areas along a street, but they are also the areas where the paths of people and vehicles conflict, making them a challenging part of the pedestrian network. Intersections must therefore be designed with pedestrian safety and accessibility in mind. A crosswalk creates a visible indication for both motorists and pedestrians as to where pedestrians may be expected to cross a roadway.

- Curb radii at intersections within pedestrian areas should be 10 to 15 feet where curb bulb-outs are not used.
- Pedestrian bulb-outs should be considered at intersections to reduce pedestrian crossing distances and make pedestrians more visible to drivers. The extensions often occupy space formerly used as a parking lane.
- Where used, sidewalk bulb-outs should extend into the street for the width of a parking lane (or a minimum of six feet) in order to provide for a shorter crossing width, increased pedestrian visibility, more space for pedestrian queuing, and a place for sidewalk amenities and planting. Bulb-outs should be designed such that 14 feet of the travel lane width remains for bicycles and cars to safely pass.
- The use of additional traffic calming devices such as traffic circles tells drivers that the area is not designed for rapid through movement, but rather it is an area where pedestrians can be expected.

SOURCE: NACTO, 2019

FIGURE 6.14. AN EXAMPLE OF A PEDESTRIAN BULB-OUT

6.2.3. Pedestrian Amenities

The placement of pedestrian amenities within urban areas, such as trash receptacles and benches, should not be "regimented" (i.e. "placed every 40 feet" etc.), but rather have a relationship to the needs of a specific location. This is particularly important given that funds for installing and maintaining such amenities are generally limited.

- Sidewalk amenities should be located within the Furniture/Curb or Frontage Zones, or within bulb-outs where sidewalk widths are extended into the parking lane (see Figure 6.15).
- Seating should be provided adjacent to destination points, such as shops and restaurants, and community and senior facilities.
- Seating and other amenities should be made of durable, high-quality materials which visually reinforce community identity and the design of nearby buildings.
- Seating may be incorporated as part of building form or landscape features, such as seat-walls as an option to free-standing benches.
- No sidewalk amenity should reduce the clear width of a sidewalk or walkway path to less than four feet and all amenities should comply with ADA requirements.

SOURCE: NACTO, 2019

FIGURE 6.15. BULB-OUTS AND PEDESTRIAN AMENITIES

6.2.4. Landscape

For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. Urban street conditions are a harsher environment to plants in general. Reflective heat off the pavement, limited soil volumes, poor soil conditions, inadequate irrigation, heat radiating from cars (engines and radiators), various automotive fluids seeping into the soil, and vandalism give plant life on streets a tougher environment in which to grow. If the plant species selection, soil conditions, and irrigation system have been well designed and installed, landscape maintenance should be fairly easy.

- Vegetation should reflect the identity of the Antelope Valley region and must be on the City of Palmdale approved plant list or approved tree list provided in Chapter 4.
- Landscape practices should follow xeriscape principles, meaning that native, drought-tolerant species should be used.
- The use of canopy trees for shading and cooling is encouraged to mitigate the urban heat island effect.
- Sufficiently sized tree pits or planting beds and appropriate planting media to provide for healthy tree growth should be provided.
- Where a landscaped parkway (the landscaped area between the street and the sidewalk) is provided, it should be a minimum of five feet.

6.2.5. Traffic Calming Techniques

The objectives of traffic calming measures are to:

- Reduce the number of accidents involving pedestrians and bicycles;
- Reduce the severity of all accidents;
- Decrease traffic noise;
- Provide more space and priority to cyclists and pedestrians;
- Improve neighborhood cohesiveness and livability;
- Slow traffic speeds to less than 25 mph for residential streets and less than 30 mph for commercial streets;
- Separate pedestrian pathways from vehicle traffic; and,
- Encourage better driver discipline.

Traffic calming features must take all aspects of ADA into consideration, as the resulting streets and pedestrian circulation may not be “typical,” which can make them particularly confusing to those with visual impairments. Prior to implementing traffic calming, effort must be spent on establishing neighborhood consensus to ensure an equitable strategy that benefits all street users. Where speeds of less than 25 mph are desired, such as within residential neighborhoods, traffic calming features may need to be continuous (in the case of landscaping or narrowed lanes) or positioned as close as every 200-300 feet (in the case of speed undulations or horizontal deflections) in order to deter unnecessary acceleration and braking. Signage should be used to remind drivers that they are entering a traffic-calming zone and an overall posted low speed limit should be maintained in residential areas. Traffic calming features should be integrated with aesthetic improvements, such as landscaping, that will make the street more attractive and be more inviting for pedestrians and cyclists.

Sidewalk Bulb-outs

Sidewalks and/or the landscaped areas on one or both sides of the road are extended into the street to narrow the travel lanes and reduce the radius of corners at intersections which reduces vehicular speeds. The resultant tightened radii ensure that vehicles negotiating the intersection do so at slow speeds. Narrowing the street also reduces pedestrian crossing distances, making pedestrian movement easier and safer.

Bulb-outs can be installed either at intersections or midblock.

- They may be used in conjunction with other traffic-calming devices.
- They are limited only to the degree that they extend into the travelway, but they cannot impede or restrict the operations of the roadway.
- Successful bicycle facilities need a clear separation from sidewalk and street pavement, with adequate distances from parked cars to avoid conflict with opening vehicles doors. Cross traffic should be slowed to allow bicyclists better continuity and safety.
- Narrowing certain streets can, at the same time, create safer bicycle facilities, but care should be taken that bicyclists are not squeezed by overtaking vehicles where the roadway narrows. Encouraging motorists to let bicyclists through first by using complementary traffic-calming techniques such as traffic circles and cautionary signing or by leaving sufficient room for both to pass safely at the narrowing would be appropriate measures.

Construction note: If it is expected that a motorist should be able to pass a bicyclist, the minimum desirable width of the travel lane is 11.5 feet.

SOURCE: NACTO, 2019

Pedestrian Refuge Islands


SOURCE: NACTO, 2019

Pedestrian refuges in wide or busy streets improve safety for pedestrians and vehicles. They are defined as areas within an intersection or between lanes of traffic where pedestrians may safely wait until vehicular traffic clears, allowing them to complete a street crossing. These islands are particularly helpful for older and disabled pedestrians unable to cross the street during the available signal time. The minimum central refuge width for safe use by those with wheelchairs, bicycles, baby strollers, and other slower pedestrian is 5.2 - 6.6 feet. Where medians are used as pedestrian and bicyclist refuges, internally illuminated bollards are suggested on the medians to facilitate quick and easy identification. Used in isolation, roadway medians do not have a significant impact in reducing vehicle speeds. For the purpose of slowing traffic, pedestrian refuge islands are generally used in conjunction with other devices such as curb extensions or roadway lane narrowing. Providing refuges should be considered as an important part of future street improvements or retrofit projects.

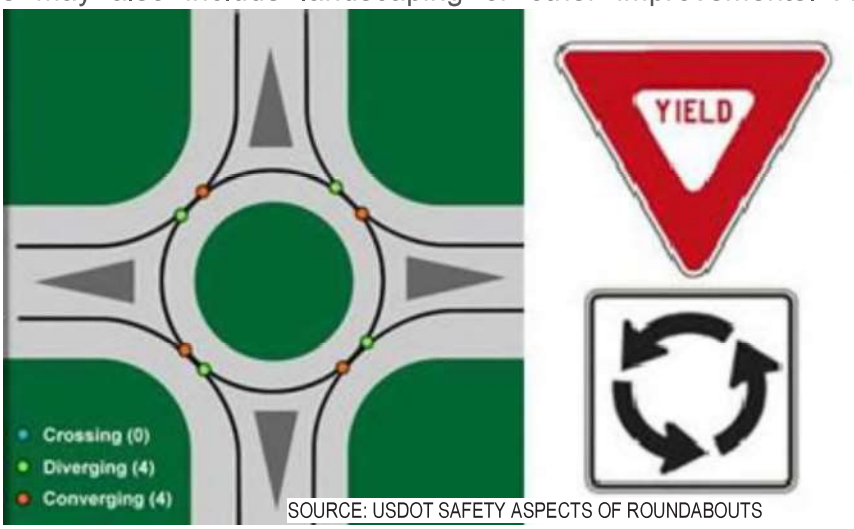
Traffic Calming Circles


SOURCE: NACTO, 2019

Located at street intersections, traffic calming circles are generally between 10 and 20 feet in diameter and are used to slow traffic by forcing cars to drive around them. Smaller traffic circles, with center islands approximately 13 feet in diameter, can be safe for both pedestrians and vehicles. Traffic circles can reduce crashes by 50 to 90 percent (when compared to two-way and four-way stop-controlled intersections and other traffic signs according to NACTO) by reducing the number of potential conflict points at intersections. Success, however, depends on the central island being sufficiently visible and the approach lanes engineered to deflect vehicles, preventing overrun of the island. The circles have a raised curb edge and landscaping to provide visual interest and reduce the length of vistas down streets, which can also help to slow traffic. In areas with high truck or bus traffic volumes, mountable curbs can help with large-vehicle navigation while maintaining the traffic calming effect.

Roundabouts

A roundabout is a channelized intersection at which all traffic moves counterclockwise around a central traffic island. This raised center island slows traffic and provides a visually interesting gateway element. The island may be painted or domed, mountable elements may be curbed, and islands may also include landscaping or other improvements. A roundabout's more formal system of traffic control, and subsequently higher traffic through-put, distinguish it from a neighborhood traffic circle. Yield control is used on all entries since the circular roadway has no control. Pedestrian access is allowed only across the legs of the roundabout, behind the yield line. No parking is allowed within the circular roadway or the entries.

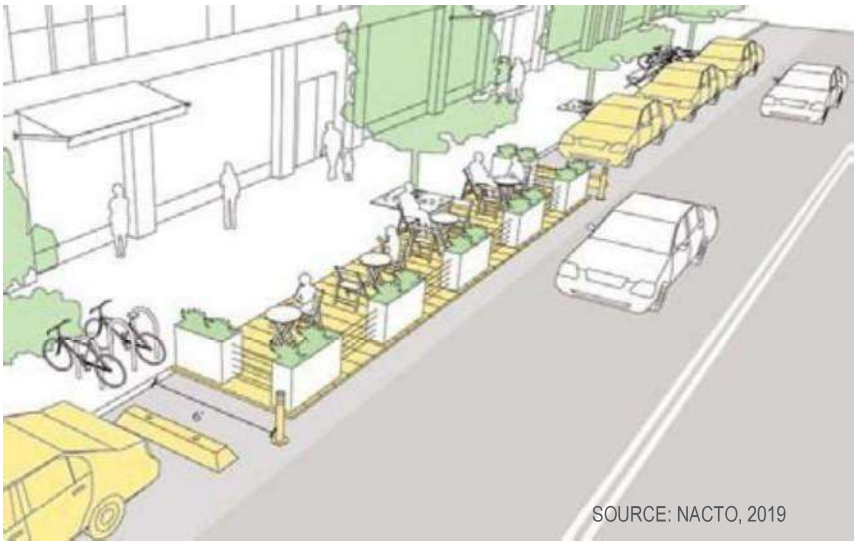


SOURCE: USDOT SAFETY ASPECTS OF ROUNDABOUTS

- There are a reduced number of conflict points at roundabouts compared to uncontrolled intersections.
- Lower operational speeds and intersection geometry yield less severe and fewer crashes.
- Traffic yields rather than stops, often resulting in the acceptance of smaller gaps.
- Right-of-way depends on the location, although generally less is required.
- Maintenance costs are much lower than signalized intersections (landscape maintenance, illumination and occasional sign replacement as opposed to electricity, maintenance of loops, signal heads, controller, and timing plans).
- A splitter island (placed within the legs of at the roundabout the separate entering and exiting traffic) provides a refuge for pedestrians that increase safety and should be raised and landscaped to prevent left-turning vehicles from taking a shortcut across the island.
- With low speeds and low traffic volumes, roundabouts also improve safety for bicyclists.
- Roundabouts should have sufficiently raised and highly visible centers to ensure motorists use them, rather than overrunning the center island.
- Clear signage is essential.
- The design of roundabouts must ensure that bicyclists are not squeezed by other vehicles negotiating the feature.

On-Street Parking

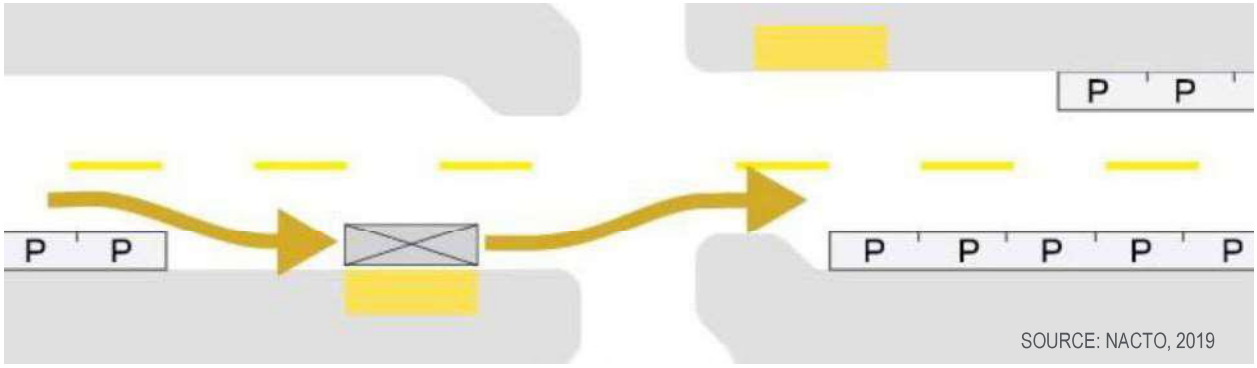
On-street parking has been shown to help moderate traffic speeds. Data collected by the NACTO reveals that on-street parking density significantly affects the speed of vehicular traffic. Wide streets with low parking density have a wide effective width (effective width is defined based on on-street parking on both sides of the street) and virtually no calming effect on traffic. Without the influence of other moving or parked vehicles, the wide width of the street promotes speed. Wide streets with high on-street parking densities provide a narrower effective width, resulting in a low calming effect. Narrow streets with a low parking density have an effective width similar to wide streets with high parking density but produce a moderate calming because the off-set parked vehicles create a serpentine-curve effect. Pedestrians also tend to feel safer walking on sidewalks adjacent to parked vehicles, as the solid buffer created between the sidewalks and moving traffic on the street provides a sense of security. Where possible, it is also desirable to have additional clearance between the edge of curb and primary sidewalk area to accommodate opening and closing vehicle doors.



SOURCE: NACTO, 2019

6.2.6. Transit Integration

As the circulation plan around the Palmdale Station is developed, transit stops along Palmdale Boulevard and Avenue Q will be enhanced in coordination with AVTA's RTP to benefit passenger on all modes. The stop design that are comfortable (with shade trees, shelter, bike racks, places to sit or lean, and nearby retail/commercial activity) can anchor an improved local pedestrian realm and improve rider perceptions of transit service. Bus pop-outs can reduce crossing distances and turn speeds at street intersections. Branding and distinctive stations with clear information will bolster ridership. The design of transit shelter will improve overall street character in alignment with the goals of the ATP, making them safe, accessible part of the overall integration of bus-bike and other vehicle interactions. For detailed bicycle design guidelines refer to the ATP's Bicycle Transportation Plan.



SOURCE: NACTO, 2019

6.3. Bicycle Access and Circulation

Bicycling conditions throughout Palmdale vary significantly due to land use patterns and roadway conditions. Within the PTASP area, bicycle lanes tend to be inconsistent and non-continuous. In the north–south direction, Class II bike lanes are provided along 6th Street East/Clock Tower Plaza Drive, between the PTC and East Avenue R. In the east–west direction, bike lanes are provided along East Avenue Q, but only between 4th Street East and 6th Street East. There is also an east–west bike lane alongAvenue R, between 5th Street East and 6th Street East.

The City of Palmdale recently completed its ATP that includes the BTP, safe routes, Complete Streets, and a Design Toolbox. The ATP will update the suggested Route to School Plan for schools located in the City. This ATP will be used to inform this Specific Plan.

The BTP recommends over 170 miles of bikeways that include bike paths, bike lanes, bike routes, buffered bike lanes, protected bike lanes, and bike routes with greenback sharrows. Double buffered bike lanes have been recommended on street segments where on-street parking is present.

Please refer to the BTP and Design Toolbox for specific guidelines related to Bicycle integration into the Circulation Plan.

Policies recommended by previous studies that support the City's Active Transportation Plan, and are embraced by the Palmdale Transit Area Specific Plan that pertain to bicycle circulation are as follows.

- Increase development within walking and biking distance of transit, jobs, and shopping to support affordable, healthy and sustainable lifestyles.
- Develop walkable, transit-oriented mixed-use districts within a 1/4 mile of the Palmdale Station and along Avenue Q.
- Enhance the design of existing streets, generally following the street system diagram and street spacing and block size requirements provided in the Multi-modal, Access, and Connectivity Plan as part of the Palmdale HSR Station Area Plan study.
- Include streetscape enhancements such as climate appropriate, shade-providing trees, shade structures, pedestrian amenities, rain gardens, drought-tolerant landscaping, and special paving.
- Ensure good access to the future Palmdale Station from both the east and west by all modes of travel, including walking, biking, bus, BRT or other high-capacity transit, rental and private vehicles.
- Require active ground-floor uses for all public parking facilities.
- Facilitate the development of mixed-use buildings with active, sidewalk-oriented uses on the ground floor and apartments and condominiums above.
- Redesign Avenue Q as a transit-oriented corridor with wide sidewalks, landscaping, and pedestrian amenities, providing a link between the future Palmdale Station and regional destinations.

- Provide on-site pedestrian circulation and access that connects public sidewalks and bike lanes with building entrances, and building entrances with each other.
- Limit driveways and curb cuts on lots less than 100 feet in width to one per frontage. Limit driveways and curb cuts on wider lots to one per 100 feet of frontage. Locate driveways and curb cuts on corner lots on the street with the least pedestrian activity.
- Provide short-term bicycle parking facilities at a rate of 10 percent of the number of normally required automobile parking spaces. Locate the bicycle parking so that it is visible from the street or from the main building entrance and situated within 50 feet of the main building entrance.

Some of the criteria for an efficient Bicycle Plan for the Palmdale PTASP area are as follows:

- **Minimize bicycle delay.** Good alternatives, particularly those routes intended for commuter cyclists, allow cyclists to maintain a high average speed: they minimize stop signs (as each stop is equivalent to approximately 500 additional feet of cycling distance); provide signalized crossings or equivalent assistance where cyclists need to cross a high-traffic cross-street; and provide signal timing that accommodates cyclists.
- **Provide bike lanes on higher-volume routes.** While the presumption should be that all streets need to accommodate bicycles, dedicated provision is only necessary on higher-volume, higher-speed routes. On two lane (one in each direction) residential streets in the plan area, bike lanes are not required. A good rule of thumb is that streets with more than 2,000 vehicles per day should be considered for a bike lane or striped shoulder. A five-foot bike lane adjacent to an eight-foot parking lane, or a six-foot bike lane with a seven-foot parking lane will generally suffice. Where ROW is sufficient, bike lanes should be separated from the parking lane by a three foot buffer.
- **Consider the wide functions of bicycle lanes.** Bicycle facilities do not only benefit bicyclists. On streets in the PTASP area, providing a bike lane would narrow the perceived width of the roadway for motorists, helping to keep vehicle speeds to within the posted limit and creating a safer environment for pedestrians.
- **Provide continuous and direct routes to major destinations,** continuous and direct bike routes carry cyclists over barriers like creeks and train tracks, with an absence of stop signs and favorable signal timing. The preferred alternative should offer fast, direct connections to residential neighborhoods, downtown Palmdale and other destinations.
- **Avoid extremely wide streets.** 10th Street East and Palmdale Boulevard are exceptions to this general statement. A large number of travel lanes typically reduces cycling comfort: left turns and U-turns are made more difficult because cyclists must merge across multiple lanes of traffic; and traffic moves at higher speeds because passing is enabled. All else being equal, therefore, a preferred alternative will minimize the number of travel lanes on streets that serve as bikeways.

The largest barrier to east-west pedestrian/bicycle accessibility is the railroad tracks running north-south, parallel to Sierra Highway. Improvements such as street widening and grade separation recommended as part of the HSR project will largely address connectivity across this barrier. Sidewalks in the vicinity are generally in good condition and include ADA-compliant curb ramps at intersections.

The City's BTP places the emphasis on Class I facilities, i.e. multi-use trails. These are valuable in many instances, particularly where the route follows a creek or railroad right-of-way or has few potential conflicts at intersections. A parallel network of Class I routes will also benefit recreational cyclists and children as it creates a visible barrier for users. For most commuting cyclists, however, on-street bike lanes provide the most direct, fastest and safest routes.

Most bicycle/vehicle conflicts and collisions occur at intersections, and therefore design features that allow high speeds at intersections, including exclusive right turn lanes, free right turn lanes with high-speed geometries, large curb radii and/or high-speed merge lanes, will reduce cycling comfort and safety. Changing intersection geometries or installing traffic calming measures (such as roundabouts) can both increase the likelihood that turning drivers will properly yield to cyclists, and reduce the number and severity of any accidents.

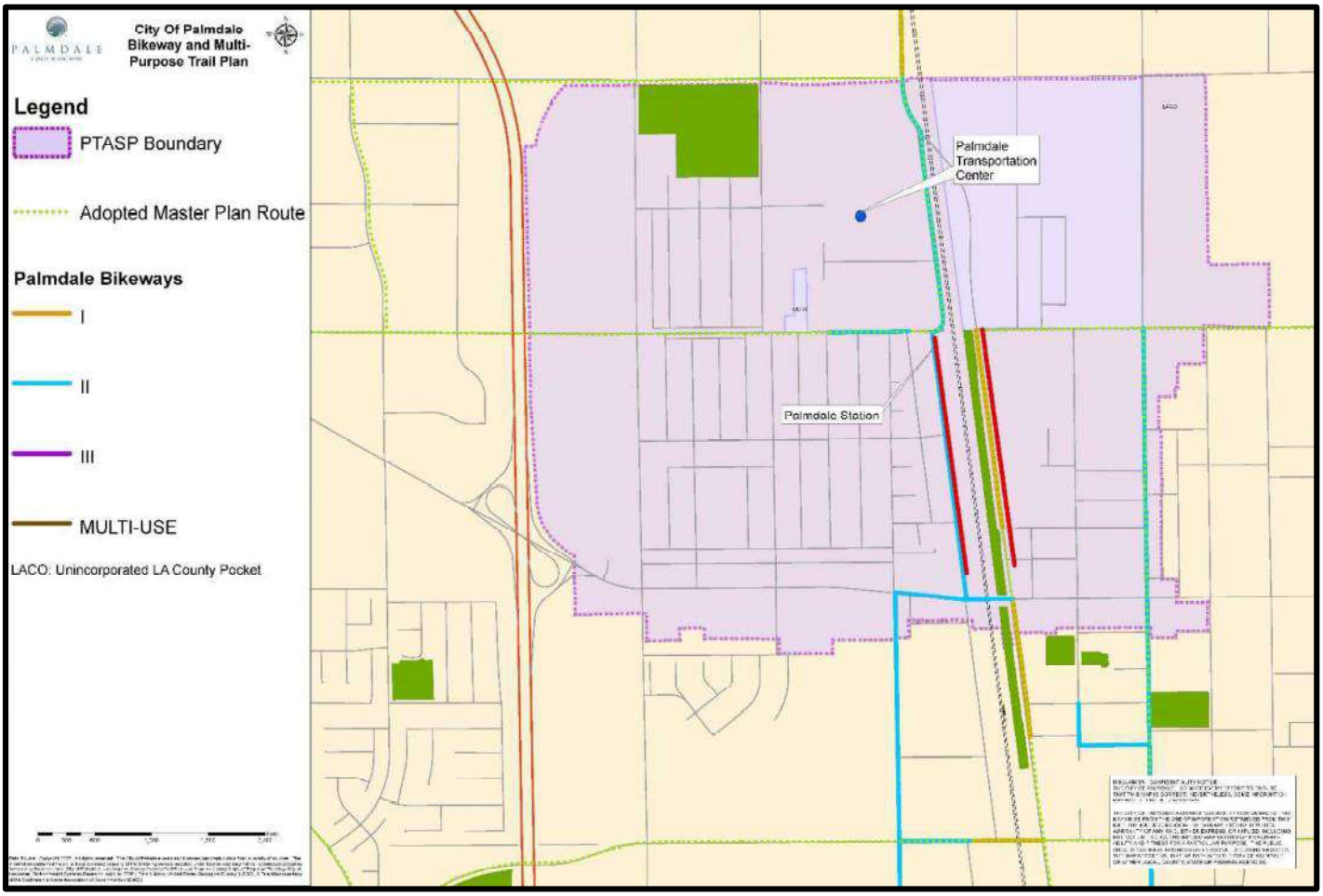


FIGURE 6.16. PALMDALE BICYCLE ROUTES AND MULTI-PURPOSE TRAIL

6.3.1. Existing Bicycle Provision and Gaps

There are various existing facilities which serve the PTASP area, and which will form the backbone of the future bicycle network:

- Sierra Highway Bike Path is a 6-mile Class I bikeway which parallels Sierra Highway from the City of Lancaster and other points to north of the Palmdale Transportation Center. There is a gap in the trail between East Avenue P-8 (Technology Drive) and Avenue Q, where the route crosses the Union Pacific Railroad Tracks.
- There is a Class I path adjacent to Sierra Highway between Avenue Q and 300 feet south of Avenue Q-12.
- There are Class II lanes along portions of 5th Street East, 6th Street East, 10th Street East, Avenue Q, and Palmdale Boulevard.

Planned improvements would connect the PTASP area to the rest of the City's existing bicycle network, facilitating trips to/from the Palmdale Station and between various other activity centers including retail/employment centers along Palmdale Boulevard, employment centers west of SR-14, and Desert Sands Park.

SOURCE: NACTO, 2019

FIGURE 6.17. BICYCLE LANES REQUIRED ON HIGHER-VOLUME STREETS - 2,000 VEHICLES PER DAY IS A USEFUL THRESHOLD.