

# Chapter 4: Complete Streets Types

Complete streets are context sensitive. The intent of this chapter is to provide information on how to match relevant street elements to the existing or desired land uses along the street and the roadway users. This chapter includes a description of complete street types to provide project sponsors with a template for roadway designs that serves all users and prioritizes modes based on the land use and transportation context.

## LAND USE CONTEXT

Place types developed by AMBAG in coordination with local jurisdictions are used in the Monterey Bay Area Complete Streets Guidebook to describe the complete streets land use context. These place types were established during the development of the Sustainable Communities Strategy to create common classifications for similar land uses across the Monterey Bay Area.

Place types consider land use characteristics (ex. urban, town, neighborhood, suburban, and rural) as well as use (ex. residential, commercial, institutional). Each place type creates a distinct context for land use and transportation investments. Applying place types can help the guidebook user identify complete street features that fit the land uses being considered. A detailed description of place types adopted by AMBAG for use in developing the Sustainable Communities Strategy is included in Appendix F.



## COMPLETE STREET TYPES

The complete streets types take into consideration various user perspectives and the surrounding land use context in addition to the street function. The complete streets types described in this chapter serve as a tool for linking street functional classifications and land uses. Figure 4-1 demonstrates how complete streets types relate to traditional functional classifications.

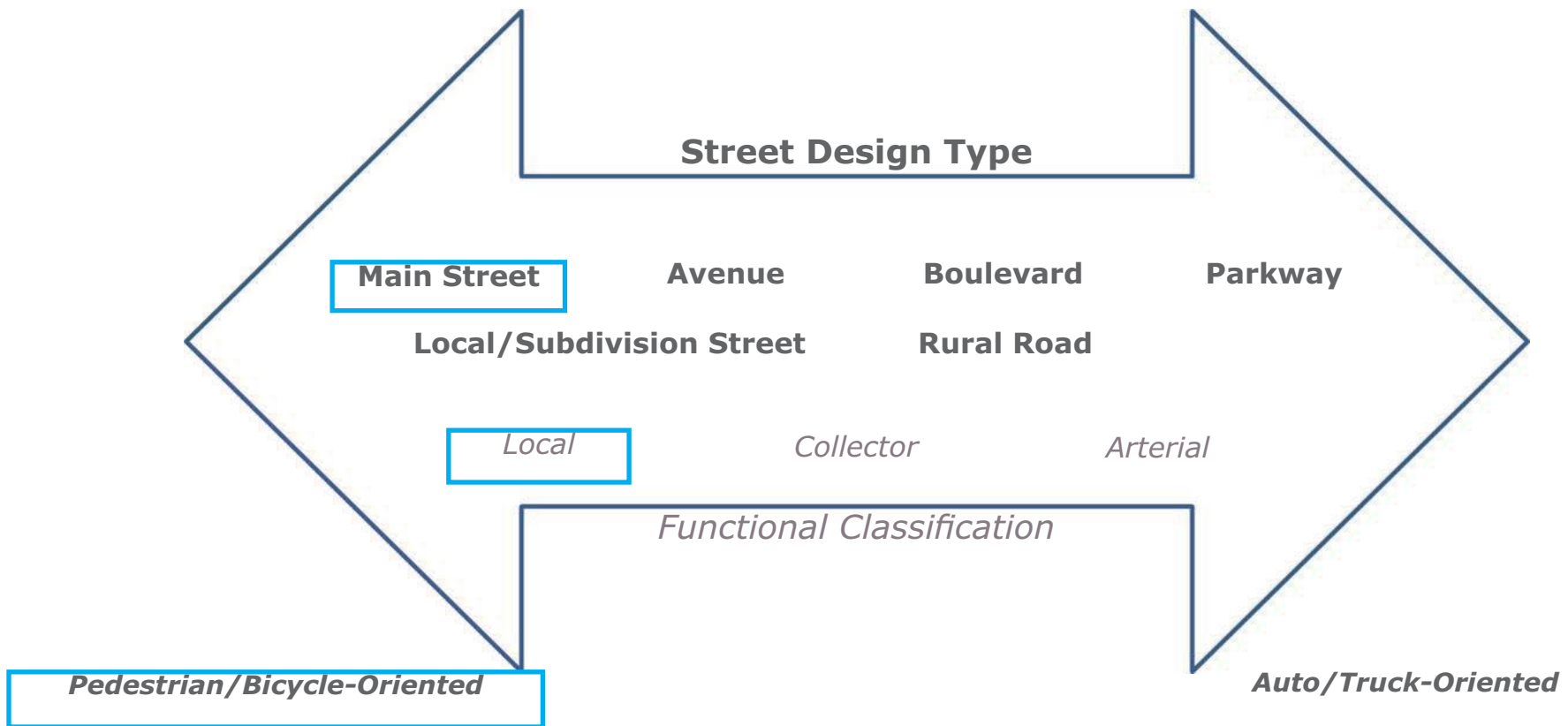


Figure 4-1 Complete Street Design Type and Functional Classification

Table 2 names complete streets types and provides a description of the transportation and land use attributes associated with each type. The land use place types developed through the Sustainable Communities Strategy planning process (**Appendix F**) are also listed. Each of complete street type indicates which roadway users should be prioritized based on land use and transportation context. Both the land use place type and complete street types should be identified early on in the process of planning and designing streets. Cross sections for each complete street type are included in Chapter 5: Complete Streets Design. Illustrative cross sections for complete streets types are based on the Charlotte Department of Transportation: Urban Street Design Guidelines, 2007.

For specific design treatments to considering when developing complete street cross sections see Chapter 5: Complete Street Design.

**Main Street** (Pacific Avenue, Santa Cruz)



**Rural Road** (Blanco Road, Monterey County)



**TABLE 2: COMPLETE STREET TYPES**

SEGMENT TYPE	TRANSPORTATION & LAND USE DESCRIPTION	USER PRIORITIZATION	LAND USE PLACE TYPES	EXAMPLES
Main Streets	Pedestrian-oriented “destination” streets; land uses: mixed-use, commercial, entertainment, office, civic; short blocks, grid street pattern; can be used as a flexible space for community events (ex:// .farmers markets)	<ol style="list-style-type: none"> <li>1. Pedestrians</li> <li>2. Bicyclists</li> <li>3. Transit</li> <li>4. Autos/Trucks</li> </ol> Special accommodations for delivery trucks	Urban Commercial; Urban Mixed-Use; Town Commercial; Town Mixed-Use; Rural-Town Commercial; Institutional	Alvarado Street (Monterey); Ocean Ave (Carmel); Pacific Ave (Santa Cruz); Main St (Salinas)
Avenues (collector)	Bicycle and transit-oriented streets connect neighborhoods to job centers and commercial areas. Higher speeds than main streets; land uses: diverse mix of land uses including but not limited to residential, schools, parks, neighborhood commercial and commercial	<ol style="list-style-type: none"> <li>1. Bicyclists</li> <li>2. Pedestrians</li> <li>3. Transit</li> <li>4. Autos/Trucks</li> </ol> Special accommodations for pedestrians (children and seniors) at crossings	Urban Multi-Family Residential; Multi-Family Residential; Neighborhood Commercial; Town Multi-Family Residential; Town Mixed-Use; Institutional; Open Space/Recreation	Sloat Ave (Monterey); California St (Santa Cruz)
Boulevards (minor arterials)	Higher speeds and volumes of automobile traffic than avenues, but more pedestrian and bicycle-friendly than parkways	<ol style="list-style-type: none"> <li>1. Transit</li> <li>2. Autos/Trucks</li> <li>3. Bicyclists</li> <li>4. Pedestrians</li> </ol>	Multi-Family Residential; Neighborhood Commercial; Regional Commercial; Employment Center; Neighborhood Mixed-Use; Institutional; Open Space/Recreation	Munras Ave (Monterey); Capitola Rd (Live Oak/Capitola Branciforte Ave (Santa Cruz)
Parkways (major arterials)	Auto-oriented designed to move high volumes of vehicular traffic quickly; land uses: major destinations such as regional commercial, academic institutions and visitor-serving uses	<ol style="list-style-type: none"> <li>1. Autos/Trucks</li> <li>2. Transit (BRT/Rail)</li> <li>3. Bicyclists</li> <li>4. Pedestrians</li> </ol>	Regional Commercial; Employment Center; Airport; Institutional; Open Space/Recreation	Imjin Parkway/Rd (Marina); Soquel Drive (Aptos); Canyon Del Rey (Del Rey Oaks); Ocean Street (Santa Cruz)

**TABLE 2: COMPLETE STREET TYPES**

SEGMENT TYPE	TRANSPORTATION & LAND USE DESCRIPTION	USER PRIORITIZATION	LAND USE PLACE TYPES	EXAMPLES
Local Streets	Low-speed and low-traffic volume shared streets (bicycle, pedestrian & auto) with on-street parking; land uses primarily residential, neighborhood commercial, office, mixed-use, schools and parks	<ol style="list-style-type: none"> <li>1. Pedestrians</li> <li>2. Bicyclists</li> <li>3. Autos/Trucks</li> <li>4. Transit</li> </ol>	Urban Single-Family Residential; Urban Multi-Family Residential; Urban Mixed-Use; Single-Family Residential; Multi-Family Residential; Town Single-Family Residential; Town Multi-Family Residential; Rural Town Residential; Institutional; Open Space/Recreation	Cayuga (Santa Cruz); Riverview Drive, Capitola; San Miguel Ave, Salinas;
Rural Roads	Mostly auto-oriented with few bicycle facilities for agricultural workers and long-distance cyclists	<ol style="list-style-type: none"> <li>1. Autos/Trucks</li> <li>2. Transit</li> <li>3. Special accommodations for school buses Bicyclists</li> <li>4. Pedestrians</li> </ol>	Agriculture and Rural Residential; Exurban Residential; Industrial and Manufacturing; Open Space/Recreation	Corralitos Road (Santa Cruz); West Beach St, Santa Cruz County; Old Stage Rd, Monterey County;
Scenic Roads	Mostly auto-oriented with bicycle facilities, some pedestrian facilities and access to natural resources	<ol style="list-style-type: none"> <li>1. Autos</li> <li>2. Bicyclists</li> <li>3. Pedestrians</li> <li>4. Transit</li> <li>5. Accommodations for recreational cyclists and hikers</li> </ol>	Exurban Residential; Agriculture and Rural Residential; Open Space/Recreation	Old San Jose Road (Santa Cruz); Sunset Drive, Pacific Grove; San Andreas Rd, La Selva Beach; Carmel Valley Rd, Monterey County;



## USER NEEDS

New roads and road improvements should be designed to provide safe and convenient routes for all applicable users and purposes including, but not limited to:



***Pedestrians (all ages and abilities)***



***Bicyclists (all ages and abilities)***



***Transit (riders and operators)***



***Motorists***



***Commercial/agricultural large vehicle drivers***



***Commuters***



***Tourists***



***Active/recreational users***



***Emergency responders***

Each user group has different needs and group-specific priorities for any given roadway. These needs and priorities should be considered when designing or rehabilitating a roadway in order to accommodate all users. Table 3 illustrates the needs specific to each user group and examples of design solutions. One of the greatest challenges of planning for and designing complete streets is balancing the often conflicting needs of different roadway users in a limited space. For example, motorists generally want uninterrupted quick travel, wide lanes and large turning radii whereas pedestrians prefer to travel along streets with low volumes of slow traffic, small turning radii and frequent crossings.

### TABLE 3: ROADWAY USER NEEDS

USER GROUP	PROBLEMS ENCOUNTERED	DESIGN SOLUTIONS/APPLICATIONS
Pedestrians – Commuters/Residents	Crossing delayed, few crossings, little separation from moving vehicles, high traffic volumes, few access points to destination, inadequate ADA access, little/no shade or shelter, poorly-lit walkways and crossings, slippery surface materials, obstructed routes, inefficient drainage, indirect routes	Pedestrian signal actuation and adequate crossing time, traffic calming, continuous sidewalk network, short blocks, ample width, planting strip/on-street parking, ADA ramps, street trees and pedestrian-scale lighting appropriately designed storm drains
Pedestrians – Seniors, disabled and children	Small gaps in traffic, long crossing distances, few crossings, inadequate ADA access, shade or shelter, poorly-lit walkways and crossings, slippery surface materials, obstructed routes, inefficient drainage	Adequate crossing time at signalized intersections, curb extensions, high-contrast markings, two-stage actuated crossings, medians, audible countdown pedestrian phase (signalized) and ADA ramps, street trees, pedestrian-scale lighting
Pedestrians – Visitors/Tourists	Few/no pedestrian destinations, limited/no way-finding, unmarked crossings, narrow sidewalks, little/no shade or shelter, few/no pedestrian amenities, poorly-lit walkways and crossings	Pedestrian plaza, way-finding signage, high-contrast marked crossings, wide sidewalks, on-street parking, street trees, outdoor seating, public art, public toilets, pedestrian-scale lighting
Bicyclists – Intermediate to Advanced; Commuters	Little separation from motorized vehicles (moving and/or parked), indirect routes/limited access to job centers, shopping and major destinations, bicycle detection at few/no signalized intersections, insufficient short-term and long-term bicycle parking, few/no commuter facilities	On-road facilities ( Class II lanes/Class III shared roadway), well-connected bikeway network, marked bicycle detection, bicycle racks and covered/indoor bicycle parking, public or employer-provided shower facilities,

**TABLE 3: ROADWAY USER NEEDS**

USER GROUP	PROBLEMS ENCOUNTERED	DESIGN SOLUTIONS/APPLICATIONS
Bicyclists – Novice; Children	Little separation from motor vehicle traffic, disjointed/incomplete bikeway network, narrow right-of-way, insufficient/no bicycle parking	Off-road facilities (Class I paths), complete bikeway network, bicycle racks, marked bike detection
Bicyclists – Recreational/Touring	Little separation from motorized vehicles, insufficient/no way-finding	Wide paved shoulders, way-finding signage and distance markers, bike racks
Transit – Riders	Limited access to and from transit stop, poorly-lit stop, poor visibility, no/insufficient transit route and schedule information, no/insufficient seating, no/insufficient shelter, no/small buffer from moving traffic	Marked pedestrian crossing, curb extensions, ADA ramps, pedestrian-scale lighting, transit shelter facing out to street, real-time traveler information, transit shelter/station
Transit - Operators	Limited space to operate transit vehicles, numerous conflicts, long delays	Large turning radius, wide travel lanes, generous merging distance, signal prioritization, street furniture setback from curb



## Levels of Traffic Stress- Low Stress Users

Within each roadway user group are individuals with varying abilities and levels of experience. Ability and experience both factor into how comfortable an individual is travelling by a certain mode or on different types of transportation facilities. User ability, experience, comfort, and traffic stress tolerance should be taken into consideration with designing complete streets. Research focused on bicycling has shown that roadway users have varying levels of tolerance for traffic stress. For instance, adults who commute by bicycle to work are more likely to feel comfortable riding in a bike lane on a busy street next to fast moving motor vehicles than those who have less experience bike riding or are unfamiliar with the street network.



Traffic stress may include a combination of perceived danger and other stresses such as noise and exhaust fumes associated with motor traffic. Several recent research efforts, including those at the Mineta Transportation Institute, have classified streets according to the stress they impose on cyclists. Although some of the classifications for level of traffic stress vary, the general concepts are the same. Roads with the lowest level of traffic stress can be accepted by most children (who are less capable of negotiating traffic and more prone to irrational and sudden movements), and the highest level of stress is tolerated by advanced cyclists whose skill enables them to share road with motor traffic. In order to accommodate the majority of roadway users, complete street design should strive to create routes and features that support “low stress users”.

## NEIGHBORHOOD SHARED STREETS

Neighborhood shared streets, or “greenways”, can be an important characteristic of the complete street network. Neighborhood shared streets are located on local streets and emphasize slow speeds and lower volumes. To achieve lower speeds and volumes, neighborhood shared streets employ some or all of the following features:

- Traffic calming features to slow vehicle speeds
- Pavement markings that signal drivers and bicyclists to share the road and show where pedestrians should cross
- Bicycle and pedestrian scale way finding signs to provide information about nearby amenities, such as business districts and parks
- Partial street closures that limit the number of vehicles on the
- Public spaces and amenities to encourage pedestrian and bicycle activity.

A list of Quality Criteria (Appendix G) for greenways has been developed by the City of Seattle and is included in this packet for use by project sponsors to evaluate greenway designs and locations and to facilitate public dialogue about greenways.

Neighborhood shared streets may be a helpful tool for developing “low stress” routes for bicyclists and pedestrians in the Monterey Bay Area. Neighborhood shared streets are often less costly than dedicated bicycle and pedestrian facilities, which also serve “low stress” users. Like other types of complete street type investments, impacts of neighborhood shared streets, particularly the potential for diverting traffic to nearby neighborhood streets, should be evaluated as part of the discussion about tradeoffs. See the discussion regarding low stress users under Levels of Traffic Stress-Low Stress Users earlier in this chapter.