

# DRAFT Alameda Active Transportation Plan

## Appendix F: Pedestrian and Bicycle Facility Types



# Pedestrian Facilities



These pedestrian facilities and improvements are used by people who walk, skate, or use wheelchairs or other mobility devices.



## ADA-COMPLIANT SIDEWALK

- Provides a continuous clear path that is a recommended width of 6 feet (minimum 4 feet wide)
- A firm, stable, and slip-resistant surface, typically concrete



## HIGH-VISIBILITY CROSSWALK/CURB RAMPS

- Improves visibility of crossing with bold, reflective striping which can increase yielding rates at intersection and midblock
- ADA-accessible curb ramps provide access and detectable warning for the physically impaired, and are useful to people pushing strollers or baskets



## CURB EXTENSION

- Reduces pedestrian crossing distances at intersections or midblock crossings
- Slows motor vehicle turning speeds
- Visually narrows the roadway which helps to reduce vehicle speeds
- Can be built with concrete or paint and posts



## IN-STREET PEDESTRIAN CROSSING SIGN (PADDLE SIGN)

- Placed in advance of marked crossings, typically in the centerline
- Warns drivers to watch for pedestrians so that they can yield appropriately
- Can reduce motor vehicle speeds if multiple signs are placed at one crossing



## RAISED CROSSING

- Reduces vehicle speeds at intersection or mid-block
- Increases visibility of pedestrians by elevating them
- Typically used on residential/low-volume streets



## MEDIAN REFUGE ISLAND

- Allows pedestrians to cross a street in two stages
- Visually narrows the roadway which helps to reduce vehicle speeds
- Used on multi-lane roadways or roadways with high traffic volume



## RECTANGULAR RAPID FLASHING BEACON (RRFB)

- RRFBs combine a crossing warning sign with a bright flashing beacon that is activated only when a pedestrian is present
- Increases motorists' yielding compliance and pedestrian visibility



## PEDESTRIAN HYBRID BEACON

- Traffic signal for major street activated on demand by bicyclists or pedestrians
- Often at midblock crossings on higher speed, multi-lane roadways



## SIGNALS

- **Pedestrian Signal Timing** - Signal head displays "Walk", countdown, and "Don't Walk"; crossing time accommodates a normal walking pace
- **Accessible Pedestrian Signals** - Communicates information audibly to accommodate the visually impaired
- **Leading Pedestrian Interval** - Walk phase begins 3-7 seconds before motor vehicles are given the green light, which increases visibility and reduces conflicts



# Pedestrian Facilities



## CROSSWALK VISIBILITY ENHANCEMENTS

- The following treatments may be used to make pedestrians easier to see and show motorists where to stop when pedestrians are crossing: advance yield markings, “yield here to pedestrians” signs, curb extensions, and high-visibility crosswalks
- Can reduce crashes where traffic in one lane stops for a pedestrian or bicyclist crossing but traffic in other lanes cannot see the pedestrian or bicyclist



## TRUCK APRON ON BULB OUT

- Functions similar to a curb extension by increasing the visibility of pedestrians and improving pedestrian safety
- Forces vehicles to slow down while making turns or traveling straight by narrowing the roadway
- A tapered increase in grade allows trucks to turn more easily



## VERTICAL TRAFFIC CALMING

- Typically used on residential/low-volume streets in mid-block locations
- More effective at reducing vehicle speeds than horizontal traffic calming
- Provides a gentle rise on the roadway to slow motor vehicle speeds
- Designed for motor vehicles to cross them comfortably when traveling at or below the speed limit
- Can be designed to accommodate emergency vehicles (e.g., speed cushions)



## HORIZONTAL TRAFFIC CALMING

- Reduces vehicle speeds by narrowing the lane and requiring drivers to horizontally alter their position
- Includes chicanes, curb extensions, mini-traffic circles, and other, similar treatments
- Typically used on residential/low-volume streets at intersection or mid-block locations



## MINI TRAFFIC CIRCLE

- Circular islands installed in the center of local street intersections
- Reduces traffic speeds
- Commonly landscaped with bushes, flowers, or grass



## PARKING PROHIBITION NEAR INTERSECTION

- Increases visibility of pedestrians at intersections
- Also called “daylighting”
- Typically extends 20 feet from the intersection



## STREETScape IMPROVEMENTS

- Streetscape improvements can include many things, such as green infrastructure (e.g., bioswales), benches, street art, lighting, bus shelters, and planters



## PEDESTRIAN SCRAMBLE

- Eliminates conflicts between pedestrians and vehicles by completely separating pedestrian crossing movements from all vehicle movements
- Typically used at intersections in downtowns or other locations with high volumes of pedestrians and high volumes of turning vehicles



# Bicycling Facilities

These bicycle facilities and improvements used by people who ride bicycles, electric bicycles, scooters, or other similar wheeled devices provided through programs like bikeshare.



## SHARED-USE PATH

- Physically separated from motor vehicle traffic
- Comfortable for a wide range of users
- Provides connectivity to on-street bicycle network
- May not serve all destinations directly
- May have separate paths designated for walking and bicycling



## SEPARATED BIKE LANE

- Provides bike-only facility physically separated from automobile travel lane and distinct from sidewalk
- Separated from traffic by curb, bollards, planters, parked cars and/or other vertical elements
- Appropriate on medium- and high-volume streets



## BUFFERED BIKE LANE

- Increases riding space and comfort by adding a painted buffer to a standard bike lane
- Buffer located either between the bike lane and automobile travel lane, or between bike lane and parking
- Appropriate on medium- to high-volume streets



## BIKE LANE

- Provides dedicated space for bicyclists on the street with pavement markings
- Appropriate on medium- or low-volume streets



## NEIGHBORHOOD GREENWAY

- Prioritizes bicycle movement and minimizes bicycle stops along low volume streets
- Pavement markings are often paired with traffic calming measures (e.g., traffic circles, speed tables...etc.)
- Appropriate on low-volume streets, usually in residential areas



## BIKE BOX

- Dedicated space between the crosswalk and vehicle stop line where bicyclists can wait during the red light at signalized intersections
- Improve visibility and motorists' awareness of bicyclists at intersections



## TWO-STAGE LEFT TURN BOX

- Designates an area without vehicle conflicts for bicyclists to wait for traffic to clear before proceeding in a different direction of travel
- Provides a way for bicyclists to make turns without having to merge across multiple lanes of traffic
- Appropriate at multi-lane intersections where bicyclists frequently turn left from a facility on the right side of the roadway, or at locations with separated bike lanes or shared-used paths where it is not possible for bicyclists to merge into motor vehicle lanes in advance of the intersection



## PAINTED CONFLICT MARKINGS

- Improves visibility of bike lanes through intersections and alerts all roadway users of expected behaviors
- Reduces conflicts with turning vehicles
- Recommended for select conflict locations



## BIKE DETECTION/PUSH BUTTON

- Bicycle push buttons are located on signal poles within reach of a bicyclist waiting in the roadway; the buttons trigger a green light for bicyclists once pushed (similar to pedestrian push buttons)
- Bicycle detectors are located in the street at intersections and trigger a green light for bicyclists who wait above the detector marking



## WAYFINDING SIGNAGE

- Helps bicyclists identify the best routes to destinations and directs bicyclists to connecting routes
- Usually includes signage and pavement markings
- Signs may indicate distances or travel times to destinations

