

Recommended Guidelines to Protect the Safety of Bicyclists and Pedestrians, Including Those with Disabilities

During Road Construction, Maintenance or Encroachment



As stated in the California MUTCD 2012 Edition, “The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, or on private roads open to public travel, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA)) through a temporary traffic control (TTC) zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.”

THE PROBLEMS

There are three general situations which impact bicyclists, pedestrians, and disabled travelers:

1. Work in the *bikeway** or *walkway* that forces bicyclists or pedestrians to compete with motor vehicles in a narrow car lane.
2. Work which is not in the *bikeway* or *walkway* but which puts equipment, debris, or warning signs in the *bikeway* or *walkway*.
3. Work that blocks the direction of travel without a clear, safe, and convenient detour for cyclists, pedestrians, or wheelchair travelers.

In addition, please be aware of these specific hazards for bicyclists, pedestrians, and disabled travelers:

Hazards to Bicyclists

- Signs, equipment, or debris in the *bikeway*.
- *Bikeway* blocked without advance warning.
- Rough pavement or gravel without advance warning.
- Poor pavement transitions, especially when parallel to the line of travel (e.g. metal plate edges or pavement removal/resurface areas which are not tapered).
- Inadequate time to pass through a signalized traffic control.

Hazards to All Pedestrians (including those who are visually impaired or use mobility equipment)

- Blocked/hazardous *walkway* that is not marked in a way that is visible in advance, especially at night.
- Alternate route or detour that is not negotiable by pedestrians using wheelchairs, strollers, carts, etc.
- Blocked/hazardous *walkway* without a barrier that is solid enough to be discernible by guide dog or cane.
- Signs, equipment, or debris partially blocking the *walkway* or encroaching on minimum clearance envelope of 4 feet wide by 7 feet tall.
- Sidewalk blocked with no curb cut or ramp to exit or advance warning to exit at a prior curb cut.
- Rough pavement, grooves, or gravel without advance warning. Rocks of 3 inch diameter or greater are especially hazardous as they may cause a wheelchair to stop abruptly and eject the occupant.

* For the purposes of these guidelines, “*bikeway*” will be used to refer to the space usually used by bicyclists for travel within a given right-of-way, including painted bike lanes, paved shoulders, the right side of a wide travel lane, or the center of a narrow travel lane if there is no bike lane or shoulder. “*Walkway*” will be used to refer to sidewalks, shoulders, and paths where pedestrians, including people using wheelchairs, usually travel.

THE SOLUTIONS

The CA MUTCD follows these “fundamental principles” for bicyclists and pedestrians in TTC zones:

1. Bicycle and pedestrian “movement should be disrupted as little as practicable”
2. “Bicyclists and pedestrians, including those with disabilities, should be provided with access and reasonably safe passage through the TTC zone.”
3. “Motorists, bicyclists, and pedestrians should be guided in a clear and positive manner while approaching and traversing TTC zones and incident sites.”

In addition, please consider the following specific safety and access measures:

Detours

- When construction blocks the *bikeway*, accommodations should be made for bicyclists if they are made for motorists, including safe and well-marked detours when needed. When motorists are detoured, try finding a safe corridor that may be left open for bicyclists. If not possible, post “End Bike Lane” and “Bikes May Use Full Lane” (BMUFL) signs to encourage cyclists to merge into the travel lane. Rather than directing bicyclists to walk their bikes, try to provide a rideable alternative.
- If construction or signs must block the *walkway*, establish safe, well-signed detours for pedestrians that are accessible for pedestrians using wheelchairs, strollers, carts, etc.
- When traffic control is conducted using temporary traffic signals, timing should accommodate bicyclists, who will be slower than motor vehicles, especially in the uphill direction. Consider push button signals or special bicycle loop detectors for bicyclists, if practical.
- Barriers should have a portion low enough and solid enough to be easily discernible by a cane, guide dog, or child. If necessary, use flaggers to guide pedestrians in a clear, calm manner.
- For long-term duration projects, the chevron-style “shared roadway bicycle marking” (sharrow) may be used along detours with on-street parking and inadequate lane width.

Signs

- Whenever possible, construction warning signs should be placed out of the *bikeway* and *walkway*, so that the sign itself is not a barrier for bicyclists, pedestrians, or wheelchair travelers. Remove construction signs promptly when construction pauses or ends.
- Any construction or sign that blocks the *bikeway* should have sufficient sight distance, including nighttime visibility, to allow cyclists time to merge safely into the travel lane. Use “End Bike Lane” and “BMUFL” signs appropriately.
- Any construction or sign which blocks the *walkway* should have prior warning to allow pedestrians and wheelchair travelers time to exit the walkway at a prior curb cut.
- For all construction where the *bikeway* or *walkway* is blocked or narrows, post appropriate caution signs to warn motorists to slow down and watch for bicyclists and pedestrians.

Pavement Surface

- Temporary pavement or metal plates installed during TTC zones should have cold mix asphalt tapered at the edges for bicyclist, pedestrian and wheelchair traveler safety. Avoid placing metal plate edges in the middle of the *bikeway*. Debris in the *bikeway* or *walkway* should be cleared at the end of each workday.
- If no smooth surface is available for bicyclists, pedestrians, or wheelchair travelers, post signs warning “Rough Surface” or “Uneven Pavement” at the beginning of the work area. Keep signs posted at the end of the workday. Use reflective signage on barricades with flashers for night safety.
- Prior to “sign off” on projects, verify that the pavement in the *bikeway* and *walkway* is even. Overlay should be smoothed at drainage grates, manholes, and gutter pan, and after narrow trenching in the *bikeway*.