

Pedestrian Crossings

Types of Improvements

Refuge Island



A Pedestrian Refuge Island is a raised island placed in the street at an intersection or midblock to separate crossing pedestrians from motor vehicles. Providing raised medians or pedestrian refuge areas at pedestrian crossings at marked crosswalks has demonstrated a 46% reduction in pedestrian crashes. Installing such raised channelization on approaches to multi-lane intersections has been shown to be particularly effective. At unmarked crosswalk locations, medians have demonstrated a 39% reduction in pedestrian crashes. Medians are especially important in areas where pedestrians access a transit stop or other clear origin/destinations across from each other. Midblock locations account for over 70% of pedestrian fatalities. Also it is where vehicle travel speeds are higher which contributes to the injury and fatality rate at this location. Over 80% of pedestrians die when hit by vehicles traveling at 40 mph or faster while less than 20% die when hit at 20 mph. The FHWA recommends pedestrian refuge areas be considered in curbed sections of multi-lane urban roadways, particularly where pedestrians, high traffic volumes (exceeding 12,000 average daily trips per day), and intermediate or high travel speeds occur together. Medians/refuge islands should be at least 4 feet wide, but preferably 8 feet for pedestrian comfort and safety. They should also be of adequate length to allow the anticipated number of pedestrians to stand and wait for gaps in traffic before crossing the second half of the street.

Curb Extension



Curb extensions are extensions of the curb line into the street, reallocating a portion of street space to pedestrians or ancillary uses. Curb extensions are one of the most effective [traffic calming](#) tools, and can be used in a variety of ways, both at corners and mid-block. They can mostly be found in residential neighborhoods and downtown commercial areas. Curb extensions increase drivers' awareness of pedestrians, decrease crossing distance, reduce pedestrian exposure to traffic, and reduce traffic speeds.

Studies show curb extensions combined with a marked crosswalk increases yielding of vehicles to pedestrians waiting to cross the street. Curb extensions also have a number of other purposes: Providing a prominent area for landscaping, public art, lighting fixtures, or freestanding A-frame signs. Providing an area for newspaper vending boxes. Cities or merchants sometimes want to remove vending boxes to de-clutter the sidewalk, but newspaper boxes are protected by the First Amendment to the U.S. Constitution, and must be accommodated. A large bulbout can provide a good compromise location. Providing protection for vehicles parked behind the bulbout. Providing an area for street trees, other landscaping, or a groundwater recharge area, also known as a bioswale.

Rapid Flash Beacon



Traffic Signals

Leading Pedestrian Interval

Leading pedestrian intervals are designed to reduce conflicts between pedestrians and cars. The additional seconds—generally three or four—give pedestrians slightly more time to cross an intersection. Because pedestrians can start across before the cars begin moving, they are already well into the cross walk when the signal changes to green. Drivers are therefore able to see pedestrians more easily than if they were standing on the curb.

Leading pedestrian intervals are relatively simple and inexpensive to set up in intersections that already have traffic signals. A change in the phasing of the lights is made at an average cost of a few hundred dollars, plus a couple hours of work for the installation [1]. Compared to the cost of installing a traffic signal, which can range from \$30,000 to \$140,000, setting up an LPI is a reasonable modification.

Hawk Signal



A Hawk signal (High Intensity Activated Crosswalk) assists pedestrians in crossing major streets. The HAWK beacon signal consists of two RED signal indications above a YELLOW signal indication forming a beacon signal that remains dark until activated by a pedestrian. Once activated the signal initiates a flashing yellow indication to warn approaching drivers, followed by a solid yellow identical to a normal signal to warn of impending requirement to stop. The solid yellow is followed by a brief solid red indication, which is followed by flashing red signal requiring drivers to stop before proceeding.

Traditional Signal



Pedestrian Safety

Central Northeast Neighbors

1. Suggestions for how we can best implement pedestrian safety projects in your neighborhood.
2. How could you see your community partnering with this program?
3. What information or help do you need from the city to better connect your community to this program?