

DATE ISSUED: July 31, 2002

REPORT NO. 02-184

ATTENTION: Public Safety and Neighborhood Services Committee
Agenda of August 7, 2002

SUBJECT: Pedestrian Crossing Policies

REFERENCE: Manager's Report 01-188 dated September 7, 2001
Manager's Report 01-233 dated October 26, 2001

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE OR THE CITY COUNCIL.

BACKGROUND

The Public Safety and Neighborhood Services Committee asked several questions related to pedestrian safety policies in the City of San Diego, and this report responds to those questions.

DISCUSSION

Crosswalks

Do we have a comprehensive listing of all controlled and uncontrolled marked crosswalks and school crosswalks?

No, we do not have a comprehensive listing of all controlled and uncontrolled marked crosswalks and school crosswalks. We will prepare such a list, which will take about three months, and will send the committee a copy.

Pedestrian Crossings

What are the timing standards for pedestrians crossing at traffic signals? How are these derived? Do we make special considerations for schools and other facilities?

The City of San Diego abides by national standards as outlined in the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (MUTCD) and regional standards outlined in the State of California's *CalTrans Traffic Manual* in determining pedestrian timing.

The steady WALK (walking person) indication typically lasts seven seconds. It is the time pedestrians may leave the curb and proceed across the road.

This is in direct conformity with the MUTCD, which states, "Under normal conditions, the WALK interval should be at least 4 to 7 seconds in length so that pedestrians will have adequate opportunity to leave the curb before the clearance interval is shown." WALK intervals shorter than 7 seconds but greater than 3 seconds may occasionally be used if conditions warrant it. This is in compliance with the MUTCD which also states the following: "The lower values may be appropriate where it is desired to favor the length of an opposing phase and if pedestrian volumes and characteristics do not require the longer interval..." At some locations, a longer WALK of 10 seconds duration is used. This may be necessary if a large number of pedestrians leave the curb at the same time. Finally, at most locations downtown, the WALK lasts much longer than 7 seconds, since each movement has a predetermined amount of green time. The State of California's *Traffic Manual* makes no reference to the duration of the WALK indication.

After the WALK interval terminates, the FLASHING DON'T WALK interval, indicated by a flashing red hand, begins. The length of the FLASHING DON'T WALK is determined by dividing the street width by the pedestrian walk rate. The duration of the FLASHING DON'T WALK in the City of San Diego is actually longer than that required by the MUTCD and the *CalTrans Traffic Manual* because of our method of measuring street width. The City of San Diego uses the distance from the pedestrian ramp on one side of the crossing to the pedestrian ramp at the other side of the crossing as the street width, whereas the distance specified to use by the *MUTCD* and *CalTrans Traffic Manual* is the distance as measured from the curb to the center of the farthest traveled lane. The pedestrian walk rate specified to use by both the *MUTCD* and the *CalTrans Traffic Manual* is 4 feet per second. The City of San Diego uses this walk rate or occasionally a lower walk rate of 3.5 feet per second. The lower walk rate may be used at intersections that have a high percentage of school children, elderly, or disabled pedestrians.

The pedestrian timings at all locations at traffic signals throughout the City of San Diego conform with the national standards stipulated in the MUTCD and the regional standards set forth in the *CalTrans Traffic Manual*.

Leading Pedestrian Interval Signals

How are we currently making use of Leading Pedestrian Interval signals? What are our current locations and warrants for installation of LPI?

The Leading Pedestrian Interval is a special timing feature that allows pedestrians to start crossing an intersection before conflicting vehicular moves are given the green signal. The main purpose is to give pedestrians a lead-time to step in the crosswalk in order to discourage turning vehicles from cutting off pedestrians, and hence improve pedestrian safety.

The Leading Pedestrian Interval is currently installed at six locations:

1. Ted Williams Parkway at Shoal Creek Drive
2. Friars Road at Fashion Valley Road
3. Fifth Avenue at Harbor Drive
4. La Jolla Village Drive at Torrey Pines Road
5. Clairemont Drive at Merrimac Avenue
6. Beryl Street at Noyes Street

It is evaluated and installed on a case by case basis at locations where significant conflicts exist between pedestrians and vehicles. The criteria for installation are: citizen request, accident history, pedestrian volume, vehicular volume, and intersection layout. However, it may adversely impact traffic flow and increase delay at an intersection, particularly at congested ones. We have asked the Parking Meter District Task Force to submit a list of candidate locations for LPI evaluation. A progress report on this subject will be presented along with other Parking Meter District Task Force recommendations at a future PS&NS meeting.

Pedestrian Countdown Signals

Have we evaluated pedestrian countdown signals?

We have not yet evaluated pedestrian countdown signals; however, we will evaluate pedestrian countdown signals and provide a follow-up report at a future PS&NS meeting. These devices have been, or will be, installed in some agencies in California on a trial basis including the City of San Jose, the City of Poway, and the City of Chula Vista. Because the California Traffic Control Device Committee (CTCDC) has not yet approved the pedestrian countdown signals for use, permission for using the devices must be obtained from the CTCDC prior to installation. However, data gathered by the City of San Jose indicates that the pedestrian countdown signals may encourage the pedestrians to enter the intersection during the FLASHING DON'T WALK interval.

Pedestrian Crossing Safety

What other equipment have we evaluated to enhance pedestrian crossing safety?

Audible pedestrian signals:

These devices can generate the ‘cuckoo’ or ‘peep’ sounds when a pedestrian walk symbol is displayed to allow visually impaired pedestrians to cross the intersection. They have been installed in the City at locations where they are needed based upon community request and staff evaluation. Staff evaluates these locations in coordination with the SCRAB Committee. Attachment 1 is a list of signalized locations having audible pedestrian signals.

Special Audible pedestrian signals:

Staff in coordination with SCRAB has evaluated these devices extensively. They are intended to improve safety for visually impaired pedestrians. They can be programmed to provide either the ‘cuckoo’ or ‘peep’ sounds, or ‘voice messages’. Audio messages indicating street names and directions can be generated when the pedestrian push button is pushed and when the WALK indication comes up. The volume is automatically compensated for background ambient noise level at the intersection to reduce voice pollution. Special features may include tactile buttons and locator tones for easy access to visually impaired pedestrians. The first location in the City to use such devices will be a pedestrian scramble crossing to be constructed at 5th Avenue and Market Street.

Pedestrian scrambles:

This type of crossing allows pedestrians to cross simultaneously at all legs of the intersection including crossing diagonally while vehicles on all approaches are stopped. It improves pedestrian safety by separating pedestrian movements from vehicular movements. The first location in the City to use such device is at 5th Avenue and Market Street, which will be constructed in the near future.

In-pavement Flashing Lights system at crosswalks:

These devices are mounted in the street pavement adjacent to the outside of the crosswalk markings. They are normally dark, but they are actuated to provide a flashing yellow light while the pedestrian crossing is in use. These types of lights are used primarily at uncontrolled intersections to alert drivers of crossing pedestrians. Some studies indicate that In-pavement Flashing Lights have the effect of slowing down drivers at locations where they are installed. However, similar results have been demonstrated with the use of other traffic control devices such as signs, striping, other pavement markings, traffic calming devices (such as chokers and traffic circles), and flashing beacons. Compared with other devices, the greatest disadvantage of an in-pavement flashing light system is its

high cost of installation and cost of on-going maintenance due to wear and tear from passing vehicles and weather conditions.

Staff is currently considering the request from the Peninsula Community Planning Group to install this type of device at a school crosswalk at the intersection of Catalina Boulevard and Orchard Avenue. Staff's recommendation is to install flashing beacons and study their impact on vehicular speeds and safety conditions. Flashing beacons are less than half the cost of an in-pavement flashing lights system and are probably just as effective. The effectiveness of the flashing beacons will be observed and evaluated at this location. The in-pavement flashing lights system may be considered following the observation period if the impacts of the beacons are not satisfactory.

Respectfully submitted,

Allen Holden, Jr.
Deputy Director, Traffic Engineering

D. Cruz Gonzalez
Director, Transportation Department

Approved: George I. Loveland
Senior Deputy City Manager

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Attachment: [Audible Pedestrian Signals Locations](#)