



TRAFFIC TIPS

VOLUME 11, ISSUE 3 - JULY 2001



COMPREHENSIVE SERVICES

Hubbell, Roth & Clark, Inc. is a

professional organization providing comprehensive engineering

services. Our Transportation and Traffic Engineering expertise allow us to address problems of urban traffic congestion, traffic safety, and highway design. We provide assistance in transportation planning, design, operations and Intelligent Transportation Systems. Other services of the firm include:

- ◆ Municipal Engineering
- ◆ Civil & Site Engineering
- ◆ Wastewater Treatment
- ◆ Underground Storage Tank Replacement Engineering
- ◆ Water Treatment & Distribution
- ◆ Industrial Waste Treatment
- ◆ Industrial Engineering
- ◆ Storm Water Control
- ◆ Surveying & Mapping
- ◆ Electrical Engineering



PEDESTRIAN SIGNALS - MYSTERY REVEALED

Pedestrian signals are installed to allow pedestrians to cross roads safely at signalized intersections. Normally, pedestrian signals are installed anywhere that pedestrians are present. They are also installed where there may be pedestrians and

CROSSING the street. This is the ONLY time when a pedestrian may legally begin crossing where there are pedestrian signals. The WALK time is NOT intended to be long enough for the pedestrian to completely cross, even though this is the case at some intersections.

Pedestrian Signals

		Steady Walk — Pedestrians can cross the street.
		Flashing Don't Walk — Pedestrians in the street can proceed across the street; others should wait to cross.
		Steady Don't Walk — Pedestrians should not attempt to cross the street.

Following the WALK is a period of FLASHING DON'T WALK (FDW). The FDW is designed to allow a pedestrian who has legally entered the crosswalk on the WALK to safely cross the street before the cross street receives a green. Under normal circumstances, this is calculated by assuming that the average pedestrian

walks at a speed of 4 feet per second. Most pedestrians can safely cross in this time - probably with time to spare. However, there are those crossings where there are a large number of senior citizens and/or small children. People in these age categories do not walk as fast as the average person. At these crossings, we normally use a crossing time based on a speed of 2.8 feet

the operation of the traffic signal may be confusing to the pedestrian. Some people are confused about the way pedestrian signals are timed. First, a WALK signal is displayed for a minimum of 5 or 6 seconds. It could be longer, depending on how much green time is given to the vehicular traffic. This period of WALK is designed to allow the pedestrian to BEGIN

crossing the street. This is the ONLY time when a pedestrian may legally begin crossing where there are pedestrian signals. The WALK time is NOT intended to be long enough for the pedestrian to completely cross, even though this is the case at some intersections.

per second. This gives more crossing time during the FDW.

The most familiar operation to most people is that the pedestrian signals operate every time the green signal is on. This is a satisfactory operation at most intersections. At minor intersections, it is not as satisfactory, especially when the side street green is on. Because the main street is wide, the amount of time to cross it is long. This usually means that it takes more green time than vehicles require for the pedestrian signal timing to be adequate. This can cause unusual and unwarranted delays for the main street traffic. A cure for this is to use pushbuttons for the pedestrian to push in order to cross. This allows shorter greens when no pedestrians are present.



At traffic adaptive signals, traffic engineers usually install pedestrian pushbuttons, even at major intersections. Traffic adaptive signals detect the volume of vehicular traffic and apportion the green times accordingly. This

sometimes means that there is not enough time for pedestrians based on vehicle flow. The pushbuttons allow pedestrians to cross safely during these times by guaranteeing enough green time for them to cross. Adaptive traffic signals also adjust the cycle lengths. During periods of light traffic, the cycle lengths can get quite low. This minimizes vehicle delay. The pushbuttons let the controller know when to lengthen the green times for safe pedestrian crossing.

There are times when there is heavy pedestrian traffic. This is especially true during the day in downtown areas. In order to accommodate this heavy pedes-

trian traffic, engineers put a permanent pedestrian “call” on the intersection if it is in the traffic adaptive system. This allows the pedestrian signals to operate every cycle. This is usually not a problem for vehicle traffic because it is usually heavy enough to use the extra time efficiently. When the stores and businesses close, engineers remove the permanent call and allow the pushbuttons to be used during those cycles that have pedestrian demand. This feature is also used around schools where there are designated school crossings.

Speed Zone Misconceptions

When traffic problems occur, concerned citizens frequently ask why road agencies don't lower the speed limit. There are widely held misconceptions that speed limit signs will slow the speed of traffic, reduce accidents and increase safety. Most drivers drive at a speed that they consider to be comfortable, regardless of the posted speed limit. “Before and after” studies have shown that there are no significant changes in average vehicle speeds following the posting of new or revised speed limits. Furthermore, research has found no direct relationship between posted speed limits and accident frequency.

H R C

Hubbell, Roth & Clark, Inc.
P.O. Box 824
555 Hulet Drive
Bloomfield Hills, MI 48303-0824