

4-4-3 Applications/Warrants

August 2011

GENERAL

Reference is made to the MUTCD, Sections <u>4C.05</u>, <u>4C.06</u>, <u>4D.03</u>, and <u>4E</u>.

The design and operation of traffic control signals **shall** take into consideration the needs of pedestrian as well as vehicular traffic. The decision to signalize pedestrian movements *should* be a collaborative decision between the regional signal engineer and the regional bicycle/pedestrian safety coordinator and *should* be based upon the warrants and other criteria provided hereafter.

POLICY

Sidewalk and curb ramps shall be provided at locations where pedestrian signal heads are to be installed.

Per MUTCD Section <u>4E.03</u>:

- "Pedestrian signal heads **shall** be used in conjunction with vehicular traffic control signals under any of the following conditions:
- A. If a traffic control signal is justified by an engineering study and meets either Warrant 4, Pedestrian Volume or Warrant 5, School Crossing (see MUTCD, Sections <u>4C.05</u> and <u>4C.06</u>);
- B. If an exclusive signal phase is provided or made available for pedestrian movements in one or more directions, with all conflicting vehicular movements being stopped;
- C. At an established school crossing at any signalized location; or
- D. Where engineering judgment determines that multi-phase signal indications (as with split-phase timing) would tend to confuse or cause conflicts with pedestrians using a crosswalk guided only by vehicular signal indications."

"Pedestrian signal heads *should* be used in conjunction with vehicular traffic control signals under any of the following conditions:

- A. If it is necessary to assist pedestrians in deciding when to begin crossing the roadway in the chosen direction or if engineering judgment determines that pedestrian signal heads are justified to minimize vehicle-pedestrian conflicts;
- B. If pedestrians are permitted to cross a portion of a street, such as to or from a median of sufficient width for pedestrians to wait, during a particular interval but are not permitted to cross the remainder of the street during any part of the same interval; and/or
- C. If no vehicular signal indications are visible to pedestrians, or if the vehicular signal indications that are visible to pedestrians starting a crossing provide insufficient guidance for them to decide when to begin crossing the roadway in the chosen direction, such as on one-way streets, at T-intersections, or at multiphase signal operations."

In addition to the guidance provided above, there are a few other items to consider when deciding whether or not to install pedestrian signal indications:

- 1. Is a blind pedestrian requesting the accommodation? (It is WisDOT's policy to accommodate blind pedestrians by installing pedestrian heads and APS devices, so long as the blind are the ones requesting it).
- 2. What is the land use adjacent to the intersection? Does the intersection serve as a connection between businesses? To a school? To a parking lot? To a transit/bus stop?

At locations where pedestrian heads and push buttons are not initially installed, the designer *should* locate all signal poles with future pedestrian accommodations in mind. This way the intersection can be easily retrofitted with pedestrian heads and push buttons once the sidewalk and curb ramps have been installed.

SUPPORT

In Wisconsin, pedestrians can legally cross a roadway at a traffic signal even if that traffic signal does not have

pedestrian signal heads.

Wisconsin State Statute <u>346.37 (1)(a)2</u>: "Pedestrians, and persons who are riding bicycles or electric personal assistive mobility devices in a manner which is consistent with the safe use of the crosswalk by pedestrians, facing the (green) signal *may* proceed across the roadway within any marked or unmarked crosswalk."

Wisconsin State Statute <u>346.37 (1)(c)2</u>: "No pedestrian, bicyclist, or rider of an electric personal assistive mobility device facing such signal (red) **shall** enter the roadway unless he or she can do so safely and without interfering with any vehicular traffic.

Also, Wisconsin State Statute <u>346.23</u> addresses motorists' responsibility at intersections relative to pedestrians:

(1) At an intersection or crosswalk where traffic is controlled by traffic control signals or by a traffic officer, the operator of a vehicle **shall** yield the right-of-way to a pedestrian, or to a person who is riding a bicycle or electric personal assistive mobility device in a manner which is consistent with the safe use of the crosswalk by pedestrians, who has started to cross the highway on a green or "Walk" signal and in all other cases pedestrians, bicyclists, and riders of electric personal assistive mobility devices **shall** yield the right-of-way to vehicles lawfully proceeding directly ahead on a green signal. No operator of a vehicle proceeding ahead on a green signal *may* begin a turn at a controlled intersection or crosswalk when a pedestrian, bicyclist, or rider of an electric personal assistive mobility device crossing in the crosswalk on a green or "Walk" signal would be endangered or interfered with in any way. The rules stated in this subsection are modified t intersections or crosswalks on divided highways or highways provided with safety zones in the manner and to the extent stated in sub. (2).

(2) At intersections or crosswalks on divided highways or highways provided with safety zones where traffic is controlled by traffic control signals or by a traffic officer, the operator of a vehicle **shall** yield the right-of-way to a pedestrian, bicyclist, or rider of an electric personal assistive mobility device who has started to cross the roadway either from the near curb or shoulder or from the center dividing strip or a safety zone with the green or "Walk" signal in the favor of the pedestrian, bicyclist, or rider of an electric personal assistive mobility device.

4-4-7 Animated Eyes Symbol

December 2004

GENERAL

Reference is made to the MUTCD Section <u>4E.04</u>.

The animated eyes symbol is a dynamic display that supplements standard pedestrian signal indications within the same section. This symbol consists of illuminated eyes that scan from side to side and is meant to prompt pedestrians to be aware of approaching vehicles.

POLICY

Pedestrian signal heads **shall** not incorporate the animated eyes symbol at state-owned signal installations.

SUPPORT

WisDOT supports the use of technologies that address a distinct need related to highway safety & traffic operations. Animated eyes are expected to have a limited effect on improving intersection safety but would require an increase in capital, operations, and maintenance costs. Benefits are not expected to outweigh additional resource expenditures.