ORIGINATOR Director, Bureau of Traffic Operations		6-1-9
CHAPTER 6	Signal Infrastructure Design	
SECTION 1	Permanent Signals	
SUBJECT 9	Pedestrian/Bicyclist Crossings	

Refer to TSDM 3-4-3 Pedestrian Phasing and TEOpS 4-4-3 to determine when signalized pedestrian crossings *should* be installed.

Once the determination to install pedestrian signals is made, the next step is to determine where to install the pedestrian signal faces and detection (push buttons) if applicable. The designer **shall** consult the *WisMUTCD*, Section 4E for Pedestrian Control Features and Chapter 9, Traffic Controls for Bicycle Facilities.

As stated in TSDM 3-4-3, the operation of the pedestrian phases *should* have been addressed and the need for detection (push buttons) *should* have been determined. The advantages of minimizing the number of pedestrian detectors (i.e. operating in pedestrian recall), are as follows:

- Reduces or eliminates confusion as to which button to actuate if active detection is used
- Eliminates the need for maintenance of the push buttons and accompanying signs
- Allows the signal to always stay in coordination by recalling the pedestrian phase(s)

The disadvantage of not installing detectors is as follows:

- Longer cycle lengths required which leads to increased user delay

Pedestrian pushbuttons **shall** be shown on the plan mounted approximately perpendicular and in advance of the crossing (see the sample plan at the end of this section). If necessary, an enlarged detail *should* be included to show the proper orientation of the pushbutton and pedestrian heads. Refer to the final revision example in TSDM 5-5-1.

All pedestrian detectors **shall** be accessible from the sidewalk, so as to be able to be reached by walkers or people in a wheel chair. This *may* require the installation of a separate pedestrian pushbutton standard.

The R10-3 series pedestrian sign **shall** be used to accompany the detector and shown on the traffic signal plan showing which pole or standard they **shall** be mounted on. These signs are shown in the *WisMUTCD,* Section 2B.52.

All pedestrian signal faces *should* be conspicuous and recognizable to pedestrians at all distances from the beginning of the controlled crosswalk to a point 10 feet from the end of the controlled crosswalk during both day and night. Sometimes this can be accomplished by attaching the pedestrians signal faces to the traffic signal poles or standards. But, to meet the above requirement, a 10-foot pedestrian signal standard *may* need to be installed with just the pedestrian signal face and detector if required. If the pedestrian signal face can be installed on the traffic signal pole or standard, a 3.5-foot standard *may* still need to be installed to comply with the accessible pedestrian pushbutton.

To accommodate bicyclists who want to cross a highway, a push button accessible to the bicyclist and sign stating “Push Button for Green Light” (R10-3) *may* be installed. In this case, pedestrian signal faces are not installed; activation of the push button will call and time the pedestrian phase intervals.

Figure 2. R10-3 Series Sign for Bicyclist

Animated Eyes Symbol **shall not** be incorporated into the design of the pedestrian signal phasing, per the TEOpS 4-4-7.

Countdown Pedestrian Signals **shall** be used on state-maintained highways where the pedestrian change interval is more than 7 seconds, per the *WisMUTCD,* Section 4E.07.

The pedestrian phasing *should* be shown adjacent the vehicular phasing on the sequence of operations sheet, shown by a double half arrow on the appropriate side of the vehicular phase arrow.

Refer to TSDM 5-5-1 for plan development practice when providing pedestrian facilities.