

the NPA, such a change is outside the scope of this rulemaking and would need to be addressed in a future rulemaking.

The FHWA received eleven comments from the NCUTCD, State and local DOTs and a private citizen regarding the proposal to increase the maximum allowable distance for 300 mm (12 inch) far side signal heads (without a supplemental near-side signal head) from the stop line to 55 m (180 ft) based on local engineering judgment. Eight commenters, representing the North Carolina DOT, Palm Beach, Pinellas, Miami-Dade, Sarasota, and Broward counties in Florida, the City of Boca Raton, Florida, and a private citizen strongly supported the change. Three commenters from the NCUTCD, the Minnesota DOT, and the City of Plano, Texas, were opposed to it, stating concerns about older drivers, poor weather conditions, and need for additional research data. The FHWA disagrees with those opposed because experience has shown that 12 inch signals are adequately visible from 180 feet away in most circumstances, and this change will provide considerable cost savings for State and local agencies. If an agency does not want to place signal heads more than the previous 150-foot distance, they are not required to do so. The FHWA adopts the language as proposed in the NPA.

187. In Section 4D.18 Design, Illumination, and Color of Signal Sections, the FHWA removes the GUIDANCE statement concerning the color of signal housings because there is no consensus that yellow signal housings are universally best in all of the various environments. In actual practice, far fewer than 50 percent of the signal heads in the United States are highway yellow. California, New York, and many other very large jurisdictions require signal heads to be other colors, such as green, black, gray, or brown. Some states require the front surfaces of the housings to be black while painting the back surfaces of the housing yellow. The FHWA received one comment from the City of Tucson, Arizona, supporting the removal of this GUIDANCE. The FHWA adopts the removal in the final rule.

188. In Section 4E.02 Meaning of Pedestrian Signal Head Indications, the FHWA received several comments from the U.S. Access Board and organizations representing the blind community opposed to the revision of item A of the STANDARD statement to indicate that a pedestrian does not automatically have the right of way when starting to cross when a WALK signal is first shown. These comments were identical to those

received for Section 4D.04 Meaning of Vehicular Signal Indications suggesting that the change was in conflict with State laws that require vehicles to yield to pedestrians. Some slower drivers who enter the intersection during the last moments of the yellow change interval or red clearance interval may not clear the intersection before the start of the next movement's green interval. Pedestrians should let this traffic exit the intersection before stepping into the path of an oncoming vehicle. The FHWA received one comment from the City of Tucson, Arizona, in support of the proposed change. The FHWA adopts the text as proposed in the NPA, which corresponds with recent changes in the Uniform Vehicle Code.

189. In Section 4E.03 Application of Pedestrian Signal Heads, the FHWA received one comment from Caltrans opposing the proposal to delete item D of the STANDARD statement. The commenter cited potential safety reasons for objecting to the change in this section. The FHWA agrees and revises the statement to clarify that that pedestrian signal heads are required at locations where engineering judgment determines that multiphase signal indications would confuse pedestrians using a crosswalk guided only by vehicular signal indications. The language in the 2000 MUTCD implied that all multiphase signals needed pedestrian signals, even in the absence of any pedestrian activity.

190. In Section 4E.04 Size, Design, and Illumination of Pedestrian Signal Head Indications, the FHWA received several comments from NCUTCD, organizations representing the blind community as well as State and local DOTs regarding the proposal in the first paragraph of the STANDARD statement that symbolized messages for pedestrian signal heads are required to be solid and not allowing the use of "outline style" symbols. Five commenters representing NCUTCD and organizations associated with the blind were in favor of the proposed language, while four commenters representing the New York DOT, the cities of Kennewick, Washington, Salt Lake City, Utah, and Tucson, Arizona, and a private citizen opposed the language. Those opposed to the language expressed concern that countdown style pedestrian signals would not be permitted, because many of those that are currently available commercially are of the outline style, and that new light emitting diode (LED) style outline symbol pedestrian signal heads that have recently been installed in cities such as Salt Lake City, Utah have been favorably received. To address these comments, the FHWA

revises the language to state that all new pedestrian signal head installations shall consist of solid symbolized messages and that existing pedestrian signal head indications with lettered or outline style symbol messages may be retained for the remainder of their useful service life.

The FHWA received several comments from representatives of the blind community requesting the addition of a new statement indicating that the intensity of LED pedestrian signal indications should respond to ambient light. The concern is that during daytime conditions, persons with low vision benefit from pedestrian signal indications displayed at their maximum intensity, and at night signals at maximum intensity create glare conditions for people with low vision, making it difficult for them to see crosswalk lines and other features that aid crossing. The addition of a statement regarding ambient light could have potentially significant impacts on agencies and thus must be addressed in a future rulemaking. This would require inclusion in a future NPA for public review and comment. Accordingly, the FHWA declines to address this comment at this time.

The FHWA adds a seventh paragraph to the STANDARD statement to specify the flash rate for the flashing upraised hand pedestrian signal head indication to be consistent with flash rates specified in other sections of Part 4. There were no comments on this change and the FHWA adopts this change.

Additionally, the FHWA adds an OPTION statement and a STANDARD statement at the end of the section to allow and describe the use of an animated eyes symbol on pedestrian signal heads. Three commenters from the Kansas and Minnesota DOTs opposed these additions, stating that the animated eyes might be confusing to pedestrians and questioning their effectiveness. The FHWA disagrees with the comments because research<sup>37, 38</sup> has documented benefits to alerting pedestrians to look both ways for approaching vehicles. Because use of these symbols in an option, jurisdictions can decide not to use this device.

<sup>37</sup> *Use of Animation in LED Pedestrian Signals to Improve Pedestrian Safety*, Ron VanHouten, et al., ITE Journal, February 1999. This issue of ITE Journal is available for purchase from the Institute of Transportation Engineers at <http://www.ite.org> and click on "Bookstore".

<sup>38</sup> *Use of Animated LED 'Eyes' Pedestrian Signals to Improve Pedestrian Safety*, Florida Department of Transportation, January 2000. It is available at the following URL: [http://www11.myflorida.com/safety/ped\\_bike/handbooks\\_and\\_research/research/led\\_eyes.pdf](http://www11.myflorida.com/safety/ped_bike/handbooks_and_research/research/led_eyes.pdf).