

for consistency with Section 6F.55 Portable Changeable Message Signs. The NCUTCD suggested eliminating redundant references to the changeable message signs. Based on this comment, the FHWA creates a new OPTION statement after the second STANDARD and moves what was previously the first paragraph of the OPTION statement to this new OPTION and revises the wording to include references to Section 2A.07 and 6F.55. The FHWA deletes the remaining repetitious wording from the second OPTION.

The FHWA adds new paragraphs to the last OPTION statement indicating that fluorescent yellow-green pixels may be used when school-related messages are shown on a changeable message sign and that changeable message signs that display the speed of approaching drivers may be used in a school speed zone. There were no comments on this change.

The FHWA also adds information on the use of the FINES HIGHER (R2-6) sign to advise road users when increased fines are imposed for traffic violations in school zones. One commenter from the Wisconsin DOT felt that this sign was not necessary because these laws are already in the State statutes and the State generally does not make it a practice to sign all statutory requirements. Because this is an OPTION statement, any State can decide whether or not to use this sign. The FHWA adopts the language as proposed in the NPA.

306. In Section 7B.12 Reduced Speed School Zone Ahead Sign (S4-5, S4-5a) (referred to as Section 7B.12 School Reduced Speed Ahead Sign (S4-5, S4-5a) in the NPA), the FHWA received several comments from the NCUTCD and State DOTs regarding the use of S4-5 and S4-5a signs. The Illinois, Oregon, and Wisconsin DOTs and the NCUTCD opposed the use of these signs in place of the rectangular "School/Reduced Speed Ahead" signs, stating that these signs are not needed and do not add much benefit for the impact they would have on the States. The State DOTs stated that the S4-5 and S4-5a warning signs may not be as effective as the rectangular signs.

The FHWA disagrees and adds the S4-5 and S4-5a signs in this final rule for Part 7 to avoid conflicting sign applications within the MUTCD. The FHWA establishes a phase-in target compliance date of 15 years from the effective date of this final rule for replacement of existing regulatory signs in good condition with these warning signs to minimize any impact on State or local governments.

This is consistent with the decisions in Chapter 2C to add the W3-5 Speed Reduced Ahead signs in symbol and legend designs for English units and the legend design for metric units. In response to the NCUTCD's suggestions to enhance the perception and legibility, the FHWA modifies the design of the W3-5 symbol sign to reduce the height of the legend "SPEED" and "LIMIT" while increasing the height of the numbers of the speed limit. This will provide enhanced perception and legibility distance.

307. In Section 7C.03 Crosswalk Markings, the FHWA adds a new SUPPORT statement at the beginning of the section to provide information on the use of crosswalk markings. The FHWA received one comment from the City of Tucson supporting all of the changes to this section as proposed in the NPA.

Additionally, the FHWA revises the second paragraph of the GUIDANCE statement to include extending crosswalk lines to the edge of the intersecting crosswalk to discourage diagonal walking between crosswalks. The FHWA adds this additional wording to be consistent with changes in Section 3B.17 Crosswalk Markings, and because school children are pedestrians. To be consistent with Section 3B.17, the FHWA also adds additional text at the end of the first GUIDANCE statement to indicate that crosswalks should not be used indiscriminately and that an engineering study should be performed before placing crosswalks at locations away from traffic control signals or STOP signs.

308. In Section 7C.04 Stop and Yield Lines, the FHWA revises the title from "Stop Line Markings" to "Stop and Yield Lines" and revises the entire section to appropriately mirror the STANDARD, GUIDANCE, OPTION, and SUPPORT statements contained in Part 3. The FHWA received one comment from the City of Tucson, Arizona, in support of all of the changes. The Oregon DOT suggested adding an OPTION to allow the use of a stop line with STOP HERE FOR PEDESTRIANS signs at both intersection and midblock locations at crosswalks not controlled by a signal, stop sign, or yield sign, in order to help enforce State law requiring drivers to stop. The FHWA disagrees because STOP HERE FOR PEDESTRIAN signs with stop lines are not adopted in Section 2B.11 Yield Here to Pedestrians Signs (R1-5, R1-5a) or Part 3 Markings.

309. In Section 7E.04 Uniform of Adult Crossing Guards and Student Patrols (referred to as Section 7E.04 Uniform of Adult Guards and Student

Patrols in the NPA), the FHWA adds a STANDARD statement that adult guards shall wear high-visibility safety apparel labeled as ANSI 107-1999 standard performance for Class 2, and that student patrols shall wear high-visibility safety apparel labeled as ANSI 107-1999 standard performance for Class 1. This safety apparel will make the guards and patrols (and the students they are managing) far more visible to approaching road users. The adopted language in this final rule includes a slight revision from the NPA that changes the phrase "high-visibility retroreflective clothing" to "high-visibility safety apparel." The FHWA incorporates this change in this final rule for consistency with terminology used in Part 6 and to avoid any possible misinterpretation that all clothing worn must meet the ANSI standard. The FHWA adopts a phase-in target compliance date for these changes of five years from the effective date of this final rule in order to minimize any impact on State or local agencies.

310. In Section 7E.05 Operating Procedures for Adult Crossing Guards (referred to as Section 7E.05 Operating Procedures for Adult Guards in the NPA), the FHWA received seven comments from the NCUTCD, State and local DOTs, traffic control device manufacturers, and private citizens regarding the proposal to add an OPTION statement at the end of the section to allow the STOP paddle to be modified to enhance the conspicuity of the paddle by adding white flashing lights. All of the commenters suggested that the use of red lights also be allowed. The FHWA agrees and adds the use of red lights to the OPTION.

The FHWA also adds item E to the OPTION statement to indicate that a series of white lights forming the shapes of the letters in the legend of a STOP paddle may be used. This is consistent with adopted changes to Parts 2 and 6 of the MUTCD.

Additionally, the FHWA adds a STANDARD statement following the new OPTION statement to define the acceptable flashing rate of the optional flashing lights on STOP paddles. This change is consistent with the flashing rate in other parts of the MUTCD. A traffic control device manufacturer and private citizen suggested increasing the flash rate to three times the normal rate. The FHWA disagrees with allowing an increased flash rate because such a flash rate would be close to the range of flash rates that may cause epileptic seizures.⁵⁹ The FHWA adopts the flash

⁵⁹ The website of the National Society for Epilepsy, a professional society in the United