

National Committee on Uniform Traffic Control Devices

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NCUTCD Proposal for Changes to the Manual on Uniform Traffic Control Devices

TECHNICAL COMMITTEE: Signals Technical Committee
ITEM NUMBER: 19B-SIG-03
TOPIC: Pedestrian Pushbutton Locations
ORIGIN OF REQUEST: Signals Technical Committee
AFFECTED SECTIONS OF MUTCD: 4I.06 Pedestrian Detectors

DEVELOPMENT HISTORY

- Approved by Technical Committee: 06/19/2019
- Approved by NCUTCD Council:

This is a proposal for recommended changes to the MUTCD that has been developed by a technical committee of the NCUTCD. The NCUTCD is distributing it to its sponsoring organizations for review and comment. Sponsor comments will be considered in revising the proposal prior to NCUTCD Council consideration. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, or options. If approved by the NCUTCD Council, the recommended changes will be submitted to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be revised only by the FHWA through the federal rulemaking process.

SUMMARY

This proposal provides more specific guidance regarding the placement of pedestrian detection. In addition, the proposal creates a new standard regarding the amount of force required to press a pedestrian push button, which reflects a provision in the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

DISCUSSION

Provisions for pedestrian detectors were reviewed with respect to updating guidelines to better reflect accessibility needs. There are ideal locations for the placement of pedestrian detectors to serve accessibility needs. However, field conditions do not always allow for the optimal placement. Accordingly, revised language is proposed which would clarify optimal placement of pedestrian detectors while allowing for defined flexibility and latitude, where necessary, to accommodate unique conditions for a given location. These revisions are shown in a revised Figure 4I-X, formerly Figure 4E-3."

35 **RECOMMENDED MUTCD CHANGES**

36
37 The following present the proposed changes to the current MUTCD within the context of the
38 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
39 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
40 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
41 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background
42 comments may be provided with the MUTCD text. These comments are indicated by
43 **[highlighted light blue in brackets]**.

44
45 **PART 4. HIGHWAY TRAFFIC SIGNALS**

46
47 **CHAPTER ~~4E~~ 4I. ~~TRAFFIC CONTROL SIGNALS FOR FREEWAY ENTRANCE~~
48 ~~RAMPS~~ PEDESTRIAN CONTROL FEATURES**

49
50 **Section ~~4E.08~~ 4I.06 Pedestrian Detectors** **[Renumbered from Section 4E.08 to 4I.06, as per**
51 **14A-STC-01, approved June 2014. When 4I.02 as per 14A-STC-01, approved June 2014**
52 **“Application of Pedestrian Signal Heads” was deleted per 18B-SIG-02 January 2019, 4I.06 was**
53 **renumbered to 4I.05]**

54 **Standard:**

55 **01a Where pedestrian pushbuttons are used, they shall have a minimum actuation area of**
56 **three square inches and require no more than five pounds of force to actuate. The button**
57 **shall be operable with a closed fist without grasping, pinching or twisting the wrist.** **[Added**
58 **to ensure pedestrian buttons are compatible with ADAAG]**

59 **Option:**

60 **01 Pedestrian detectors may be pushbuttons or passive detection devices.**

61 **Support:**

62 **02 Passive detection devices register the presence of a pedestrian in a position indicative of a**
63 **desire to cross, without requiring the pedestrian to push a button. Some passive detection**
64 **devices are capable of tracking the progress of a pedestrian as the pedestrian crosses the roadway**
65 **for the purpose of extending or shortening the duration of certain pedestrian timing intervals.**

66 **03 The provisions in this Section place pedestrian pushbuttons within easy reach of pedestrians**
67 **who are intending to cross each crosswalk and make it obvious which pushbutton is associated**
68 **with each crosswalk. These provisions also position pushbutton poles in optimal locations for**
69 **installation of accessible pedestrian signals (see Sections 4E.09 through 4E.13). Information**
70 **regarding reach ranges can be found in the “Americans with Disabilities Act Accessibility**
71 **Guidelines for Buildings and Facilities (ADAAG)” (see Section 1A.11).**

72 **03a The provisions in this Section place pedestrian pushbuttons where pedestrians using**
73 **wheelchairs or other mobility aids can readily actuate the pushbutton and quickly reach the**
74 **access ramp. These provisions place the pedestrian push button close to the crosswalk where a**
75 **pedestrian is more likely to use the push button.** **[Added to provide more clarity to the**
76 **practitioner on how to best determine placement of pedestrian signals]**

77 Guidance:

78 04 If pedestrian pushbuttons are used, they should be capable of easy activation and
79 conveniently located near each end of the crosswalks. Except as provided in Paragraphs 5 and
80 6, pedestrian pushbuttons should be located to meet all of the following criteria (see ~~Figure 4E-3~~
81 Figure 4I-X):

- 82 A. Unobstructed and adjacent to a level all-weather surface to provide access from a
83 wheelchair;
- 84 B. Where there is an all-weather surface, a wheelchair accessible route from the pushbutton
85 to the ramp;
- 86 ~~C. Between the edge of the crosswalk line (extended) farthest from the center of the~~
87 ~~intersection and the side of a curb ramp (if present), but not greater than 5 feet from said~~
88 ~~crosswalk line;~~ [Removed because it is often better for blind pedestrians to stand at the
89 edge of the access ramp farthest from the intersection nearer the tangent section of the
90 curb so as to provide clearer delineation of the edge of the roadway. The removed
91 language does not allow this.]
- 92 C. On the side of the curb ramp which is farthest from the center of the intersection; [Added
93 language attempts to provide more uniformity as well as greater separation between
94 buttons on a corner]
- 95 D. Not greater than 10 feet from the edge of the curb ramp which is farthest from the center
96 of the intersection; [Added language clarifies that the button should not be greater than
97 10 feet from the ramp]
- 98 E. Not farther than 5 feet from the outside edge of the marked crosswalk farthest from the
99 center of the intersection, and not farther from the curb ramp than the stop line, if
100 present; [Added language clarifies how close to the ramp the buttons should be placed]
- 101 ~~F.D.~~ F. Between 1.5 and 6 feet from the edge of the curb, shoulder, or pavement;
- 102 G.E. With the face of the pushbutton parallel to the crosswalk to be used; and
- 103 H.F. At a mounting height of approximately 3.5 feet, but no more than 4 feet, above the
104 sidewalk.
- 105 I. Pushbutton location should allow a 4 foot continuous clear width for a pedestrian access
106 route. [Added language ensures there is enough space for wheelchairs to maneuver.]

107

108 05 Where there are physical constraints that make it impractical to place the pedestrian
109 pushbutton adjacent to a level all-weather surface, the surface should be as level as feasible.

110 06 Where there are physical constraints that make it impractical to place the pedestrian
111 pushbutton between 1.5 and 6 feet from the edge of the curb, shoulder, or pavement, it should not
112 be farther than 10 feet from the edge of curb, shoulder, or pavement.

113 07 Except as provided in Paragraph 8, where two pedestrian pushbuttons are provided on the
114 same corner of a signalized location, the pushbuttons should be separated by a distance of at
115 least 10 feet.

116 Option:

117 08 Where there are physical constraints on a particular corner that make it impractical to provide
118 the 10-foot separation between the two pedestrian pushbuttons, ~~the pushbuttons may be placed~~
119 ~~closer together~~ or when an exclusive pedestrian phase is used at an intersection, and the
120 pedestrian signals controlling the crosswalks on a given corner of the intersection both operate
121 together such that the "Walk" indication is always simultaneous for both crosswalks, the

122 pushbuttons may be placed closer together or on the same pole. [Revised as per 14A-STC-01
123 approved in June 2014]

124 Support:

125 09 Figure 4E-4 shows typical pedestrian pushbutton locations for a variety of situations.

126 **Standard:**

127 10 **Signs (see Section 2B.52) shall be mounted adjacent to or integral with pedestrian
128 pushbuttons, explaining their purpose and use.**

129 Option:

130 11 At certain locations, a supplemental sign in a more visible location may be used to call
131 attention to the pedestrian pushbutton.

132 **Standard:**

133 12 **The positioning of pedestrian pushbuttons and the legends on the pedestrian
134 pushbutton signs shall clearly indicate which crosswalk signal is actuated by each
135 pedestrian pushbutton.**

136 13 **If the pedestrian clearance time is sufficient only to cross from the curb or shoulder to a
137 median of sufficient width for pedestrians to wait and the signals are pedestrian actuated,
138 an additional pedestrian detector shall be provided in the median.**

139 *Guidance:*

140 14 *The use of additional pedestrian detectors on islands or medians where a pedestrian might
141 become stranded should be considered.*

142 15 *If used, special purpose pushbuttons (to be operated only by authorized persons) should
143 include a housing capable of being locked to prevent access by the general public and do not
144 need an instructional sign.*

145 **Standard:**

146 16 **If used, a pilot light or other means of indication installed with a pedestrian pushbutton
147 shall not be illuminated until actuation. Once it is actuated, the pilot light shall remain
148 illuminated until the pedestrian's green or WALKING PERSON (symbolizing WALK)
149 signal indication is displayed.**

150 ~~17 **If a pilot light is used at an accessible pedestrian signal location (see Sections 4E.09
151 through 4E.13), each actuation shall be accompanied by the speech message "wait."**~~

152 **[Repeat of Paragraph 23 in Section 4E.11.]**

153 Option:

154 17 ~~18~~ At signalized locations with a demonstrated need and subject to equipment capabilities,
155 pedestrians with special needs may be provided with additional crossing time by means of an
156 extended pushbutton press.

157 **Standard:**

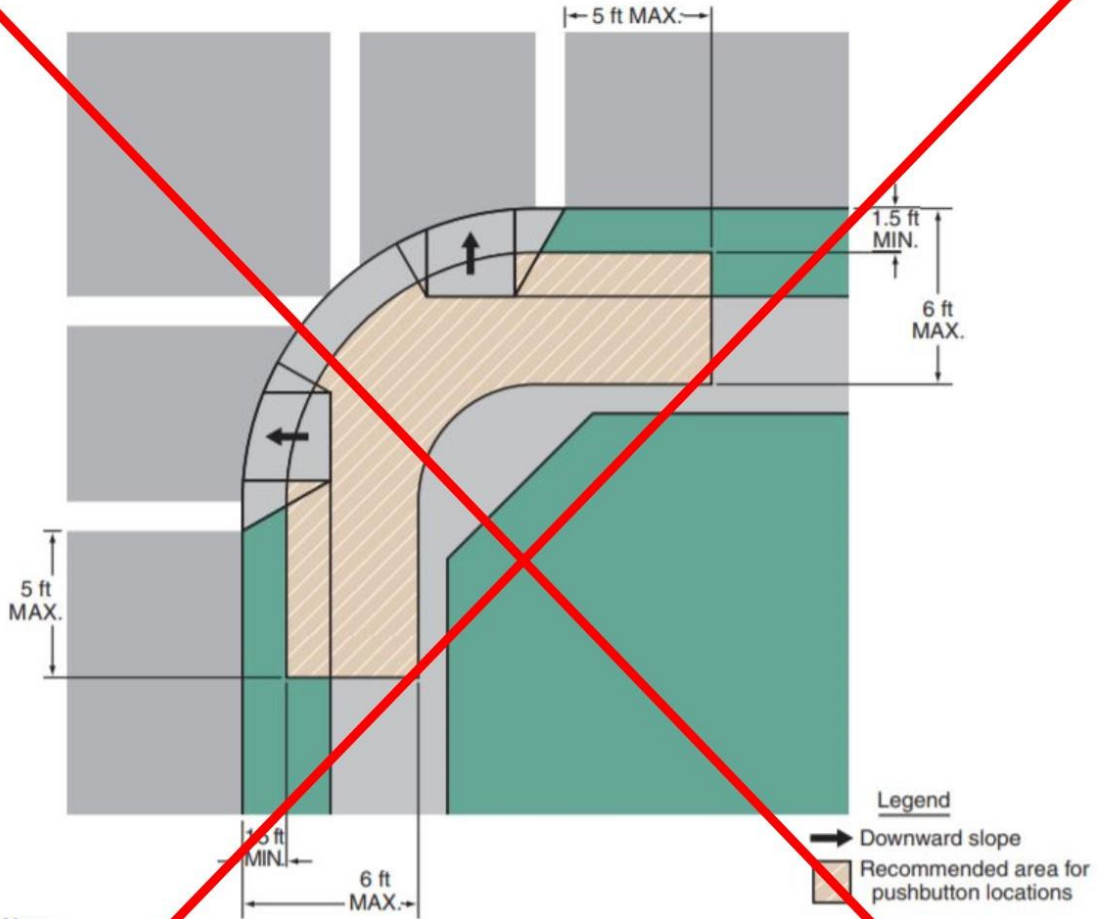
158 18 ~~19~~ **If additional crossing time is provided by means of an extended pushbutton press, a
159 PUSH BUTTON FOR 2 SECONDS FOR EXTRA CROSSING TIME (R10-32P) plaque
160 (see Figure 2B-26) shall be mounted adjacent to or integral with the pedestrian pushbutton.**

161

162

[Figure 4E-3 to be replaced with Figure 4I-X]

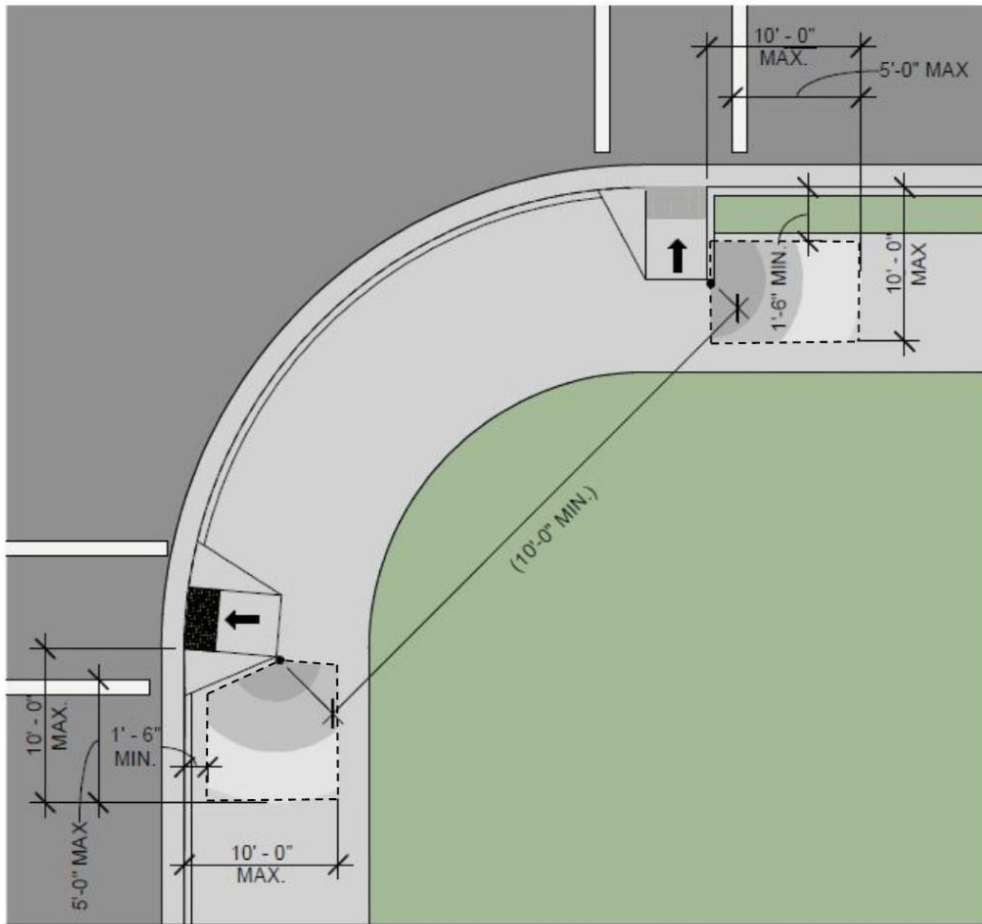
Figure 4E-3. Pushbutton Location Area



Notes:

1. Where there are constraints that make it impractical to place the pedestrian pushbutton between 1.5 feet and 6 feet from the edge of the curb, shoulder, or pavement, it should not be further than 10 feet from the edge of curb, shoulder, or pavement.
2. Two pedestrian pushbuttons on a corner should be separated by 10 feet.
3. This figure is not drawn to scale.
4. Figure 4E-4 shows typical pushbutton locations.


Figure 4I-X. Pushbutton Location Area



NOTES:

1. The pushbutton should not be farther than 5 feet from the outside edge of a marked crosswalk farthest from the center of the intersection, and not be farther from the curb ramp than the stop line, if present (Stop line not shown in figure)
2. Any maximum (MAX) or minimum (MIN) dimensions shown are based on Guidance Statements
3. Two pedestrian pushbuttons on a corner should be separated by at least 10 feet. The 10 foot dimension shown in this figure is in reference to the near points of the recommended area.
4. Figure 4E-4 shows typical pushbutton locations.

LEGEND

- ← DOWNWARD SLOPE
- 
 PREFERRED AREA FOR PUSH BUTTON, DARKER IS MORE DESIRABLE