DRAFT

Version: October 15, 2024

Oregon Supplement to the

Manual on Uniform Traffic Control Devices

for Streets and Highways

11th Edition

This is a compilation of draft proposals for the Oregon Supplement to the MUTCD 11th Edition as of the version date above. This is not official Oregon Supplement content. This is provided for information only. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD.

The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD per 23 CFR 655.603(b)(1). The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005. Neither of these decisions have occurred yet on the Oregon Supplement to the MUTCD 11th Edition.

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Document Organization

This is a compilation of draft proposals for the Oregon Supplement to the MUTCD 11th Edition. Proposals are organized by MUTCD part and proposal number. Use this document's bookmarks or table of contents to navigate to specific proposals.

Each proposal has a summary box, problem statement, discussion section, and proposed content for the Oregon Supplement.

Summary Box

- **MUTCD 11th Ed. Section(s) Affected** – this is a list of the sections the proposal affects in the 11th Edition MUTCD.
- **Last Revised** – this is the date the proposal was last revised.
- **Proposal No.** – This is the proposal number. It's formatted as [MUTCD Edition] [MUTCD Part] [2-digit sequential number within that part (e.g. 01, 02, 03…)]. For example, 11204 = 11th Edition, Part 2, 4th proposal.
- **Supplement Team** – The subcommittee that originated this proposal.
- **Status** – Where this proposal is in the MUTCD adoption process.
- **Summary** – an executive summary of the proposal's content.
- **Preamble material** – this reminds the reader the proposal is not final and describes the scope for the Oregon Supplement to the MUTCD.

Problem

This states the problem the proposal intends to address.

Discussion

This states why the problem needs to be solved along with supporting materials.

Proposed Supplement Content

This shows proposed changes to the MUTCD as supported by the problem and discussion sections. This marks material proposed for removal with ~~red strikethrough~~ and addition with blue underline. This shows the entire MUTCD section where the change is proposed to give the reader context, unless noted otherwise.

This section shows the only material that will be included in the final Oregon Supplement to the MUTCD – problem statements and discussion sections will not appear in the final Oregon Supplement.

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Part 4 – Highway Traffic Signals

Proposal	Section(s)	Description
11401	4A.02	Right turn on red arrow
11402	4D.02	Edits for crosswalk closure signing in Oregon statute
11403	4F.19	Operations during emergency preemption or bus priority
11404	4I.06	Walk time with leading pedestrian interval + walk interval with FYA
11405	4J.02, 4J.03	Alternative pedestrian hybrid beacon operation
11406	4K.01	Audible pedestrian signal speech messaging

Part 5 – Traffic Control Device Considerations for Automated Vehicles

No supplements proposed for Part 5.

Part 6 – Temporary Traffic Control

Proposal	Section(s)	Description
11601	N/A	Oregon Temporary Traffic Control Handbook

The Oregon Temporary Traffic Control Handbook (OTTCH) is the only supplement element planned for Part 6. OTCDC will be able to review the OTTCH beginning in January 2025.

Part 7 – Traffic Control for School Areas

Section	Section(s)	Description
11701	7B.05	Oregon-specific materials and statutes on school speed zones
11702	7D.01	Add reference to Oregon Dept. of Education crossing guards materials
11703	7D.02	Crossing guards using SCHOOL flag instead of a STOP paddle

Part 8 – Traffic Control for Railroad and Light Rail Transit Grade Crossings

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11805	8C.03	Rail stop line
11806	8D.02	Flashing light signals + audible warning devices
11807	8D.15	Light rail transit (LRT) signals for legacy installations (e.g. PBOT/Trimet)
11808	8E.03, 8E.07	Sign and flashing light signal size for pedestrians
11809	8B.04	Correcting reporting error/oversight in Figure 8B-2
11810	8B.06, 8C.02, 8C.03	Documentation about using Fig. 8C-1 instead of legacy Fig. 8B-6(OR)

Part 9 – Traffic Control for Bicycle Facilities

Proposal	Section(s)	Description
11901	9B.01	Acknowledging Oregon's stop-as-yield law
11902	9B.12	Edits for Oregon's right-of-way statutes on sidewalks
11903	9B.15	Edits for Oregon's bicycle passing clearance law
11904	4A.05, 4H.03, 9B.22	Meaning of green bicycle signal indication, use of bicycle signal sign
11905	9D.01	Retain Oregon's bicycle destination/distance/travel time signs (OBD1-Xc)
11906	9D.06	Retain Oregon's non-numbered bicycle route signs (OBM1-8 & OBM1-8a)
11907	9E.01	Bicycle lanes – Retain 8-inch line and bicyclist symbol marking with arrow
11908	9E.02, 9E.06	Solid lines for bicycle lanes on intersection approaches, edits to provisions for bicycle lane to the right of a right turn lane/left of a left turn lane
11909	9E.12	Bicycle box alignment at intersection stop line (crosswalk)
11910	9E.13	Markings for shared use path crossings
11911	9E.15	Bicycle detector markings
11912	9E.17	Correcting known error related to raised devices

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
1C.01 & 1C.02 – Definitions	October 15, 2024	11101
Supplement Team	**Status**	
1-General	OTCDC Review – 1st round	

Summary (2-3 sentences)

FHWA modified the definition of "standard" in the 11th Edition without including the role of engineering judgement when applying standards in practice. This proposes a modification to the definition of "standard" to clarify the importance of engineering judgement in the application of MUTCD standards.

FHWA also changed the definition of "intersection" in the 11th Edition MUTCD in a way that conflicts with Oregon's statutory definition. This proposes to change subpart (c) of the MUTCD definition of "intersection" to align with ORS 801.320(4).

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

- Must conform to the Standard statements in the national MUTCD. FHWA may grant an exception because of requirements of a specific State law, provided information available and documentation provided by the state shows the non-conformance does not create a safety concern.
- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

FHWA modified the definition of "standard" in the 11th Edition without including the role of engineering judgement when applying standards in practice. FHWA also changed the definition of "intersection" in the 11th Edition MUTCD in a way that conflicts with Oregon's definition in ORS 801.320.

Discussion

Standard Definition

FHWA added to the definition of "standard" in 11th Edition Section 1C.01 that engineers can deviate from one or more requirements of a standard provision as the result of a documented engineering study, referring to Section 1D.03 (Figure 1).

Figure 1: MUTCD Changes to "Standard" from 2009 to 11th Edition

> **Section ~~1A.13~~ 1C.01 Definitions of Headings~~, Words, and Phrases~~ Used in this Manual**
>
> **Standard:**
>
> **When used in this Manual, the text headings of Standard, Guidance, Option, and Support shall be ~~as~~ defined ~~in Paragraph 1 in Section 1A.13~~ as follows:**
>
> **A. Standard—a statement of required, mandatory, or specifically prohibitive practice regarding a traffic control device. In limited, location-specific cases, the results of a documented engineering study (see Section 1D.03) might indicate a deviation from one or more requirements of a Standard provision to be appropriate. All Standard statements are labeled, and the text appears in bold type. The verb "shall" is typically used. The verbs "should" and "may" are not used in Standard statements. Standard statements are sometimes modified by Option~~s~~ statements.**

Section 1D.03 Paragraph 02 talks about the importance of engineering judgement and engineering studies in applying MUTCD standards and Paragraph 05 further provides guidance of the importance of engineering judgement.

Figure 2: MUTCD 11th Edition, Section 1D.03

> Page 32 MUTCD 11th Edition
>
> **Section 1D.03 Engineering Study and Engineering Judgment**
>
> Support:
>
> 01 Definitions of professional engineer, engineering study, and engineering judgment are provided in Section 1C.02.
>
> 02 The application of engineering study and engineering judgment is a fundamental principle of the use of traffic control devices. It is for this reason that, in most cases, the selection of a particular device is not required by a Standard provision, but is determined by engineering study or engineering judgment. Many Standard provisions in this Manual specifically require, by explicit language in the individual provisions or by implication, the application of engineering study or engineering judgment in applying those Standards. Site-specific conditions might result in the determination that it is impossible or impracticable to comply with a Standard at that location. In such a case, a deviation from the requirement of a particular Standard at that location might be the only possibility. In such limited, specific cases, the deviation is allowed, provided that the agency or official having jurisdiction fully documents, through an engineering study, the engineering basis for the deviation.

Figure 3: MUTCD 11th Edition, Section 1D.03

> *Guidance:*
>
> 05 *The decision to use a particular device at a particular location should be made on the basis of either an engineering study or the application of engineering judgment by an engineer, someone under the direct supervision of an engineer, or other individual as duly authorized by State law to engage in the practice of engineering. Thus, while this Manual provides Standards, Guidance, and Options for design and application of traffic control devices, this Manual should not be considered a substitute for engineering judgment. Engineering judgment should be exercised in the selection and application of traffic control devices, as well as in the location and design of roads and streets that the devices complement.*

According to the preamble for the MUTCD 11th Edition Final Rule, this language is meant to "clarify the application of engineering study and engineering judgement to the selection of and specification of traffic control devices for implementation." FHWA based this on their Official Ruling No. 1(09)-1(I), issued October 1, 2010, that lead to Revision 1 of the 2009 MUTCD.

Figure 4: Excerpt from October 2010 FHWA Official Interpretation "1(09)-1(I) – Definition of Standard Statement"

> The MUTCD recognizes that the use of engineering judgment and studies is a fundamental tenet of the application of traffic control devices. It is for this reason that, in most cases, the selection of a particular device is not required by a Standard but is determined by engineering study or judgment. Additionally, many Standards in the MUTCD specifically require, by explicit language in the individual Standards or by implication, the application of engineering judgment or studies in applying those Standards. The deletion of the Guidance language from Section 1A.09 of the 2009 MUTCD did not change that. Further, the added sentence of the definition of Standard in Section 1A.13 was intended as a clarification and was not intended to change the meaning of Standard or remove the application of engineering judgment or studies in applying Standards where the language of a particular Standard explicitly or implicitly requires it.

However, the updated definition of "standard" in Section 1D.01 did not include the importance of engineering judgement in application of standards, as Section 1D.03 explains. The definition only focuses on documented engineering studies when deviating from a standard.

The primary difference between engineering judgement and engineering study is documentation – engineering studies must be documented in writing, but engineering judgement does not need to be documented.

Figure 5: MUTCD 11th Edition Definitions of "Engineering Judgement" and "Engineering Study"

> **76. Engineering Judgment—the evaluation of available pertinent information including, but not limited to, the safety and operational efficiency of all road users, and the application of appropriate principles, provisions, and practices as contained in this Manual and other sources, for the purpose of deciding upon the design (see Section 1D.03), use, installation, or operation of a traffic control device. Engineering judgment shall be exercised by a professional engineer (see definition in this Section) with appropriate traffic engineering expertise, or by an individual working under the supervision of such an engineer, through the application of procedures and criteria established by the engineer. Documentation of engineering judgment is not required.**
>
> **77. Engineering Study—the analysis and evaluation of available pertinent information including, but not limited to, the safety and operational efficiency of all road users, and the application of appropriate principles, provisions, and practices as contained in this Manual and other sources, for the purpose of deciding upon the design (see Section 1D.03), use, installation, or operation of a traffic control device. An engineering study shall be performed by a professional engineer (see definition in this Section) with appropriate traffic engineering expertise, or by an individual working under the supervision of such an engineer, through the application of procedures and criteria established by the engineer. An engineering study shall be documented in writing.**

This proposes a modification to the definition of "standard" to clarify the importance of engineering judgement in the application of MUTCD standards, as was the intent of the update to the definition itself and as discussed in Section 1D.03 (which the definition refers to) and Official Ruling No. 1(09)-1(I) which the 11th Edition changes were based on.

Intersection Definition

Oregon did not change the definition of "intersection" in the Oregon Supplement to the 2009 MUTCD because it did not conflict with the definition in ORS 801.320.

In the 11th Edition, FHWA changed the part of the definition of intersection related to divided highways. While the changes make intuitive sense, Oregon's definition in ORS 801.320(4) is closer to the 2009 Edition's definition. This makes a difference when considering where crosswalks are located and obligations under ADA to make those crosswalks accessible.

This proposes to change subpart (c) of the MUTCD definition of "intersection" to align with ORS 801.320(4).

Figure 6: MUTCD Changes to "Intersection" Definition from 2009 to 11th Edition

94113.Intersection—intersection is defined as follows:

(a) The area embraced within the prolongation or connection of the lateral curb lines, or if none, the lateral boundary lines of the roadways of two highways that join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways that join at any other angle might come into conflict.

(b) The junction of an alley, ~~or~~ driveway, or site roadway with a public roadway or highway shall not constitute an intersection, unless the public roadway or highway at said junction is controlled by a traffic control device.

(c) If a highway includes two roadways separated by a median, then every crossing of each roadway of such divided highway by an intersecting highway shall be a separate intersection if the opposing left-turn paths cross and there is sufficient interior storage for the design vehicle. (see Figure 2A-5).~~If a highway includes two roadways that are 30 feet or more apart (see definition of Median), then every crossing of each roadway of such divided highway by an intersecting highway shall be a separate intersection.~~

~~(d) If both intersecting highways include two roadways that are 30 feet or more apart, then every crossing of any two roadways of such highways shall be a separate intersection.~~

(ed) At a location controlled by a traffic control signal, regardless of the distance between the separate intersections as defined in (c) ~~and (d)~~ above:

(1) If a stop line, yield line, or crosswalk has not been designated on the roadway (within the median) between the separate intersections, the two intersections and the roadway (median) between them shall be considered as one intersection;

(2) Where a stop line, yield line, or crosswalk is designated on the roadway on the intersection approach, the area within the crosswalk and/or beyond the designated stop line or yield line shall be part of the intersection; and

(3) Where a crosswalk is designated on a roadway on the departure from the intersection, the intersection shall include the area extending to the far side of such crosswalk.

801.320 "Intersection."

"Intersection" means the area of a roadway created when two or more roadways join together at any angle, as described in one of the following:

(1) If the roadways have curbs, the intersection is the area embraced within the prolongation or connection of the lateral curb lines.

(2) If the roadways do not have curbs, the intersection is the area embraced within the prolongation or connection of the lateral boundary lines of the roadways.

(3) The junction of an alley with a roadway does not constitute an intersection.

(4) Where a highway includes two roadways 30 feet or more apart, then every crossing of each roadway of the divided highway by an intersection highway is a separate intersection. In the event the intersection highway also includes two roadways 30 feet or more apart, then every crossing of two roadways of such highways is a separate intersection.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 1C. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS USED IN THIS MANUAL

Section 1C.01 Definitions of Headings Used in this Manual

Standard:

01 **When used in this Manual, the text headings of Standard, Guidance, Option, and Support shall be defined as follows:**

A. Standard—a statement of required, mandatory, or specifically prohibitive practice regarding a traffic control device. In limited, location-specific cases, the application of engineering judgement and the results of a documented engineering study (see Section 1D.03) might indicate a deviation from one or more requirements of a Standard provision to be appropriate. All Standard statements are labeled, and the text appears in bold type. The verb "shall" is typically used. The verbs "should" and "may" are not used in Standard statements. Standard statements are sometimes modified by Option statements.

B. Guidance—a statement of recommended practice in typical situations, with deviations allowed if engineering judgment or engineering study (see Section 1D.03) indicates the deviation to be appropriate. All Guidance statements are labeled, and the text appears in unbold italic type. The verb "should" is typically used. The verbs "shall" and "may" are not used in Guidance statements. Guidance statements are sometimes modified by Option statements.

C. Option—a statement of practice that is a permissive condition and carries no requirement or recommendation. Option statements sometimes contain allowable modifications to a Standard or Guidance statement. All Option statements are labeled, and the text appears in unbold type. The verb "may" is typically used. The verbs "shall" and "should" are not used in Option statements.

D. Support—an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements are labeled, and the text appears in unbold type. The verbs "shall," "should," and "may" are not used in Support statements.

Section 1C.02 Definitions of Words and Phrases Used in this Manual

Standard:

01 **Unless otherwise defined in this Section, or in other Parts of this Manual, words or phrases shall have the meaning(s) as defined in the "Uniform Vehicle Code," "AASHTO Transportation Glossary (Highway Definitions)," or other appropriate publications.**

02 **Where a term that is defined in this Section or elsewhere in this Manual has a different definition in another resource or in common use, the definition herein shall govern for purposes of the applicability of the provisions of this Manual.**

03 **The following words and phrases, when used in this Manual, shall have the following meanings:**

[No modifications proposed for definitions 1 through 112.]

113. Intersection—intersection is defined as follows:

(a) The area embraced within the prolongation or connection of the lateral curb lines, or if none, the lateral boundary lines of the roadways of two highways that join one another at, or approximately at, right angles, or the area within which vehicles traveling on different highways that join at any other angle might come into conflict.

(b) The junction of an alley, driveway, or site roadway with a public roadway or highway shall not constitute an intersection, unless the public roadway or highway at said junction is controlled by a traffic control device.

(c) If a highway includes two roadways separated by a median that is 30 feet wide or wider, then every crossing of each roadway of such divided highway by an intersecting highway shall be a separate intersection ~~if the opposing left-turn paths cross and there is sufficient interior storage for the design vehicle (see Figure 2A-5)~~. If both intersecting highways include two roadways separated by a median that is 30 feet wide or wider, then every crossing of any two roadways of such highways shall be a separate intersection.

(d) At a location controlled by a traffic control signal, regardless of the distance between the separate intersections as defined in (c) above:

(1) If a stop line, yield line, or crosswalk has not been designated on the roadway (within the median) between the separate intersections, the two intersections and the roadway (median) between them shall be considered as one intersection;

(2) Where a stop line, yield line, or crosswalk is designated on the roadway on the intersection approach, the area within the crosswalk and/or beyond the designated stop line or yield line shall be part of the intersection; and

(3) Where a crosswalk is designated on a roadway on the departure from the intersection, the intersection shall include the area extending to the far side of such crosswalk.

[No modifications proposed for definitions 114 through 295 (end of Section 1C.02).]

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
2B.19 – Yield Here to Pedestrians Signs and Stop Here For Pedestrians Signs, 2B.59 – Traffic Signal Signs and Plaques	October 15, 2024	11201
Supplement Team	**Status**	
2-Signs-R&W	OTCDC Review – 1st round	

Summary (2-3 sentences)

Drivers must stop for pedestrians in Oregon. The MUTCD 11th Edition gives the option of using either yield or stop control for crosswalks. However, it says you can only use stop if that is the law. Confusion may arise from this statement – it would be clearer to say you have to use stop if that is the law.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

The MUTCD 11th Edition shows both yielding and stopping for pedestrians for traffic control and signs. Oregon is a stop for pedestrian state.

Discussion

ORS 811.028 requires drivers to stop for pedestrians crossing a roadway within a marked or unmarked crosswalk. This proposes to clear confusion by removing "yield to pedestrian" language.

811.028 Failure to stop and remain stopped for pedestrian; penalty.

(1) The driver of a vehicle commits the offense of failure to stop and remain stopped for a pedestrian if the driver does not stop and remain stopped for a pedestrian when the pedestrian is:

(a) Proceeding in accordance with a traffic control device as provided under ORS 814.010 or crossing the roadway in a crosswalk; and

(b) In any of the following locations:

(A) In the lane in which the driver's vehicle is traveling;

(B) In a lane adjacent to the lane in which the driver's vehicle is traveling;

(C) In the lane into which the driver's vehicle is turning;

(D) In a lane adjacent to the lane into which the driver's vehicle is turning, if the driver is making a turn at an intersection that does not have a traffic control device under which a pedestrian may proceed as provided under ORS 814.010; or

(E) Less than six feet from the lane into which the driver's vehicle is turning, if the driver is making a turn at an intersection that has a traffic control device under which a pedestrian may proceed as provided under ORS 814.010.

(2) For the purpose of this section, a bicycle lane or the part of a roadway where a vehicle stops, stands or parks that is adjacent to a lane of travel is considered to be part of that adjacent lane of travel.

(3) This section does not require a driver to stop and remain stopped for a pedestrian under any of the following circumstances:

(a) Upon a roadway with a safety island, if the driver is proceeding along the half of the roadway on the far side of the safety island from the pedestrian; or

(b) Where a pedestrian tunnel or overhead crossing has been provided at or near a crosswalk.

(4) For the purposes of this section, a pedestrian is crossing the roadway in a crosswalk when any part or extension of the pedestrian, including but not limited to any part of the pedestrian's body, wheelchair, cane, crutch or bicycle, moves onto the roadway in a crosswalk with the intent to proceed.

(5) The offense described in this section, failure to stop and remain stopped for a pedestrian, is a Class B traffic violation. [2005 c.746 §2; 2011 c.507 §1]

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

Section 2B.19 ~~Yield Here To Pedestrians Signs and~~ Stop Here For Pedestrians Signs (R1-5 Series)

Support:

01 The R1-5 series signs are intended to mitigate the scenario that can place pedestrians at risk by blocking other drivers' view of pedestrians and by blocking the pedestrians' view of the vehicles approaching in the adjacent lanes.

Standard:

02 **~~Yield Here to (~~Stop Here for~~)~~ Pedestrians (~~R1-5, R1-5a,~~ R1-5b, R1-5c, ~~R1-5d,~~ and R1-5e) signs (see Figure 2B-2) shall be used if ~~yield (~~stop~~)~~ lines are used in advance of a marked crosswalk only where it crosses an uncontrolled multi-lane approach. The Stop Here for Pedestrians signs shall only be used where the law specifically requires that a driver must stop for a pedestrian in a crosswalk. The legend STATE LAW shall not be displayed on the R1-5 series signs.**

Guidance:

03 *If ~~yield (~~stop~~)~~ lines and ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians signs are used in advance of a crosswalk that crosses an uncontrolled multi-lane approach, the signs should be placed 20 to 50 feet in advance of the nearest edge of the crosswalk (see Section 3B.19 and Figure 3B-16).*

Standard:

04 **When used with a School Crossing assembly within school zones (see Part 7), the ~~R1-5a and~~ R1-5c sign~~s~~ shall be used in place of the R1-5 and R1-5b signs in accordance with Paragraph 2 of this Section.**

05 **When used with a Trail Crossing assembly (see Section 2C.54), the ~~R1-5d and~~ R1-5e sign~~s~~ shall be used in place of the ~~R1-5 and~~ R1-5b sign~~s~~ in accordance with Paragraph 2 of this Section.**

Guidance:

06 *When ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians signs are provided in advance of a crosswalk across a~~n~~ multi-lane approach, parking should be prohibited in the area between the yield (stop) line and the crosswalk.*

07 *Yield (stop) lines and Yield Here to (Stop Here for) Pedestrians signs should not be used in advance of crosswalks that cross an approach to or departure from a roundabout.*

Option:

08 ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians signs may be used in accordance with Paragraphs 2 through 4 of this Section even if ~~yield (~~stop~~)~~ lines are not used.

09 A Pedestrian Crossing (W11-2) warning sign may be placed overhead or may be post-mounted with a diagonal downward-pointing arrow (W16-7P) plaque at the crosswalk location where ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians signs have been installed in advance of the crosswalk.

Standard:

10 **If a W11-2 sign is post-mounted at the crosswalk location where a ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians sign is used on the approach, the ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians sign shall not be placed on the same post as the W11-2 sign.**

Option:

11 An advance Pedestrian Crossing (W11-2) warning sign with an AHEAD or a distance supplemental plaque may be used in conjunction with a ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians sign on the approach to the same crosswalk.

12 In-Street Pedestrian Crossing signs and ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians signs may be used together at the same crosswalk.

Section 2B.59 Traffic Signal Signs and Plaques (R10-5 through R10-30)

Option:

01 To supplement traffic signal control, traffic signal (R10-5 through R10-30) signs (see Figure 2B-28) may be used to regulate road users.

02 Traffic signal signs may be installed at certain locations to clarify signal control. Among the legends that may be used for this purpose are:

A. LEFT (RIGHT) ON GREEN ARROW ONLY (R10-5),
B. STOP HERE ON RED (R10-6 or R10-6a) for observance of stop lines,
C. DO NOT BLOCK INTERSECTION (R10-7) for avoidance of traffic obstructions,
D. USE LANE(S) WITH GREEN ARROW (R10-8) for obedience to lane-use control signals (see Chapter 4T),
E. LEFT (RIGHT) TURN SIGNAL (R10-10),
F. U TURN SIGNAL (R10-10a) for exclusive control of a U-turn movement,
G. U TURN YIELD TO RIGHT TURN (R10-16),
H. LEFT (RIGHT) TURN YIELD ON GREEN (symbolic circular green) (R10-12),
I. LEFT (RIGHT) TURN YIELD ON FLASHING YELLOW ARROW (R10-12a), and
J. LEFT (RIGHT) TURN YIELD ON FLASHING RED ARROW AFTER STOP (R10-27).

Guidance:

03 *If used, the LEFT ON GREEN ARROW ONLY sign, the LEFT TURN SIGNAL sign, the LEFT TURN YIELD ON GREEN (symbolic circular green)) sign, the LEFT TURN YIELD ON FLASHING YELLOW ARROW sign, or the LEFT TURN YIELD ON FLASHING RED ARROW AFTER STOP) sign should be located adjacent to the left-turn signal face.*

04 *If used, the RIGHT ON GREEN ARROW ONLY sign, the RIGHT TURN SIGNAL sign, the RIGHT TURN YIELD ON FLASHING YELLOW ARROW sign, or the RIGHT TURN YIELD ON FLASHING RED ARROW AFTER STOP sign should be located adjacent to the right-turn signal face.*

05 *A U TURN YIELD TO RIGHT TURN (R10-16) sign should be installed near the left-turn signal face if U-turns are allowed on a protected left-turn movement on an approach from which a right-turn GREEN ARROW signal indication is simultaneously being displayed to drivers making a right turn from the conflicting approach to their left.*

Option:

06 If used, a U TURN SIGNAL (R10-10a) sign may be installed adjacent to the signal face that exclusively controls a U-turn movement.

07 If needed for additional emphasis, an additional LEFT TURN YIELD ON GREEN (symbolic circular green) (R10-12) sign with an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-28) may be installed in advance of the intersection.

08 In situations where traffic control signals are coordinated for progressive timing, the Traffic Signal Speed (I1-1) sign may be used (see Section 2H.04).

Standard:

09 **The CROSSWALK—STOP ON RED (symbolic circular red) (R10-23) and STOP ON STEADY RED YIELD ON FLASHING RED AFTER STOP (R10-23a) signs (see Figure 2B-28) shall only be used in conjunction with pedestrian hybrid beacons (see Section 4J.02).**

10 **The EMERGENCY SIGNAL (R10-13) sign (see Figure 2B-28) shall be used in conjunction with emergency-vehicle traffic control signals (see Section 4M.02).**

11 **The EMERGENCY SIGNAL—STOP ON FLASHING RED (R10-14 or R10-14a) sign (see Figure 2B-28) shall be used in conjunction with emergency-vehicle hybrid beacons (see Section 4N.02).**

Option:

12 If needed for extra emphasis, a STOP HERE ON FLASHING RED (R10-14b) sign may be installed with an emergency-vehicle hybrid beacon.

Standard:

13 **The Left Turn Yield to Bicycles (R10-12b) sign shall be limited to applications where the conflicting bicyclist movement would be unexpected in direction, location, or similar condition that would tend to violate the expectation of a turning motorist.**

Guidance:

14 *The Left Turn Yield to Bicycles sign should be located adjacent to the left-turn signal face.*

Option:

15 If needed for additional emphasis, an additional Left Turn Yield to Bicycles sign with an AT SIGNAL (R10-31P) supplemental plaque (see Figure 2B-28) may be installed in advance of the intersection for motor vehicles.

16 Where conditions might warrant additional emphasis to drivers turning at a signalized intersection where potential pedestrian conflicts might not be readily apparent, a Turning Vehicles ~~Yield to (~~Stop for~~)~~ Pedestrians (~~R10-15,~~ R10-15a) sign (see Figure 2B-28) may be used.

Standard:

17 **The Turning Vehicles Stop for Pedestrians (R10-15a) sign shall only be used in jurisdictions where laws, ordinances or resolutions specifically require that a driver must stop for a pedestrian.**

Guidance:

18 *The R10-15 series signs, where used, should be placed as follows:*

A. On the near right corner of the signalized intersection for right-turning vehicles.

B. On the far left corner of the signalized intersection for the left-turning vehicles onto a two-way street.

C. On the near left corner of the signalized intersection for left-turning vehicles from a one-way street onto a one-way street.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
2B.21 Speed Limit Sign (R2-1)	October 15, 2024	11202
Supplement Team	**Status**	
2-Signs-R&W	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 2B.21 sets guidelines for engineering studies for speed zones. Speed zones are designated in Oregon under ORS 810.180 through OAR 734-020-0013 to 734-020-0019. These administrative rules detail what to consider in the engineering study and an allowable range for the speed limit based on the study's results. This proposes to align the language of the 11th Edition of the MUTCD with Oregon's existing statutes and administrative rules.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

- Must conform to the Standard statements in the national MUTCD. FHWA may grant an exception because of requirements of a specific State law, provided information available and documentation provided by the state shows the non-conformance does not create a safety concern.
- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Section 2B.21 sets guidelines for engineering studies for speed zones (speed limits set by engineering study, not set by statute). These guidelines include what to consider in the engineering study, and what the speed limit should be based on the study's results. These guidelines are like, but different from, Oregon's statutes and administrative rules for speed zoning.

Oregon's road authorities designate speed limits under ORS 810.180 through OAR 734-020-0013 to 734-020-0019. These administrative rules detail what to consider in the engineering study and an allowable range for the speed limit based on the study's results.

Discussion

FHWA made several changes to MUTCD's recommendations for speed zones (designated speed limits) through the 11th Edition. Those include:

- A new standard that the engineering study shall consider roadway context.

- Updated guidance on what the study should include, such as context (urban district, rural town center, non-urbanized rural area, suburban area) and multi-modal trip generation.
- New guidance that when the 85th percentile speed is greater than the existing posted speed, and context doesn't support a higher limit, to consider other changes to improve compliance with the existing posted speed.
- Added new guidance that the 85th percentile speed should not be used to set speed limits on urban/suburban arterials, and rural arterials through communities, without considering the updated factors in the engineering study.
- Updated guidance that speed limits should be set within 5 mph of the 85th percentile speed for freeways, expressways, and rural highways outside urbanized locations/conditions, instead of within 5 mph of the 85th percentile regardless of context.

According to the Final Rule for the 11th Edition, FHWA made these changes based on the recommendation of the NTSB (Report NTSB/SS-17/01) to review how speed limits are determined. FHWA believes these changes will result in improved safety through setting speed limits that more appropriately reflect their environment and mix of road users.

When NTSB published their recommendation, NCHRP Project 17-76 was investigating factors that influence operating speed and safety to develop guidelines for setting speed limits (ODOT participated on the project's panel). That project resulted in NCHRP Report 966. While FHWA did not cite Report 966 in the Final Rule for the 11th Edition, the guidance FHWA put into the 11th Edition for setting speed limits is consistent with the NCHRP project's recommendations. This includes use of roadway context and less reliance on 85th percentile speed for urban and suburban settings.

In April 2020, the Oregon Transportation Commission (HWD 3-2020) adopted updated administrative rules for speed limits based on collaborative work with road authorities from cities and counties, the Speed Zone Review Panel, and ODOT's participation on the panel for NCHRP Project 17-76. The updated rules include provisions for engineering studies that are consistent with the recommended considerations in Section 2B.21 Paragraph 07. This includes roadway environment, functional classification, roadway characteristics, land use context, crash history, and speed distribution of free-flowing vehicles. The updated administrative rules set ranges for the speed limit that the engineering study may recommend based on considerations in the study. ODOT Research Project SPR 854 is currently in process evaluating the speed compliance and safety outcomes of Oregon's updated speed zoning method.

This proposes supplement language to align Section 2B.21 with Oregon's speed zoning rules. Supporting information for changes include:

- The geographic contexts described in Section 2B.21 Paragraph 7(C) correlate to Oregon's speed zoning contexts defined in OAR 734-020-0014 and further detailed in ODOT's Speed Zone Manual.

- OAR 734-020-0015 requires engineering studies to include the most recent three years of crash history (instead of 1 year as recommended in the MUTCD), including noting any fatal or serious injury crash.
- Under ORS 810.180, the speed limit posted in a speed zone is required to follow the methods in OAR 734-020-0010, -0015, -0016, -0017, and -0018.

810.180 Designation of maximum speeds; rules.

(1) As used in this section:

(a) "Designated speed" means the speed that is designated by a road authority as the maximum permissible speed for a highway and that may be different from the statutory speed for the highway.

(b) "Statutory speed" means the speed that is established as a speed limit under ORS 811.111, or is established as the speed the exceeding of which is prima facie evidence of violation of the basic speed rule under ORS 811.105.

(2) [Section is blank in statute.]

(a) A designated speed established under this section is a speed limit if the highway for which the speed is designated is subject to a statutory speed limit under ORS 811.111 that is in addition to the speed limit established under ORS 811.111 (1)(b).

(b) A speed greater than a designated speed established under this section is prima facie evidence of violation of the basic speed rule if the designated speed is established for a highway on which there is no speed limit other than the limit established under ORS 811.111 (1)(b).

(3) The Department of Transportation may establish by rule designated speeds on any specified section of interstate highway if the department determines that speed limits established under ORS 811.111 (1) are greater or less than is reasonable or safe under the conditions that exist with respect to that section of the interstate highway. Designated speeds established under this subsection are subject to all of the following:

(a) The department may not establish a designated speed under this subsection of more than:

(A) Sixty-five miles per hour for vehicles described in ORS 811.111 (1)(b); and

(B) Seventy miles per hour for all other vehicles.

(b) If the department establishes designated speeds under this subsection that are greater than 65 miles per hour, the designated speed for vehicles described in ORS 811.111 (1)(b) must be at least five miles per hour lower than the designated speed for all other vehicles on the specified section of interstate highway.

(c) The department may establish a designated speed under this subsection only if an engineering and traffic investigation indicates that the statutory speed for the interstate highway is greater or less than is reasonable or safe under conditions the department finds to exist.

(d) A designated speed established under this subsection is effective when appropriate signs giving notice of the designated speed are posted on the section of interstate highway where the designated speed is imposed.

(4) [Section is blank in statute.]

(a) The department may establish, pursuant to a process established by rule, a designated speed on a state highway outside of a city. The authority granted under this subsection includes, but is not limited to, the authority to establish different designated speeds for different kinds or classes of vehicles as the department determines reasonable and safe. A designated speed established under this subsection for any kind or class of vehicles may not exceed the speed limit for the highway for that kind or class of vehicles as established in ORS 811.111 or, if there is no speed limit for the highway other than the limit established in ORS 811.111 (1)(b), may not exceed 55 miles per hour.

(b) The department may establish a designated speed under this subsection only if an engineering and traffic investigation indicates that the statutory speed for the highway is greater or less than is reasonable or safe under conditions the department finds to exist.

(c) A designated speed established under this subsection is effective when appropriate signs giving notice of the designated speed are posted on the portion of highway where the designated speed is imposed.

(5) After a written request is received from a road authority for a highway other than a highway described in subsection (3) or (4) of this section, the department, pursuant to a process established by rule, may establish a designated speed for the highway. The authority granted under this subsection includes, but is not limited to, the authority to establish different designated speeds for different kinds or classes of vehicles as the department determines reasonable and safe. The authority granted under this subsection is subject to all of the following:

(a) The written request from the road authority must state a recommended designated speed.

(b) The department may establish a designated speed under this subsection only if an engineering and traffic investigation indicates that the statutory speed for the highway is greater or less than is reasonable or safe under conditions the department finds to exist.

(c) The department may not make a final decision to establish a designated speed under this subsection without providing the affected road authorities with notice and opportunity for a hearing.

(d) A road authority may file a written objection to a designated speed that is proposed by the department under this subsection and that affects the road authority.

(e) A designated speed established under this subsection is effective when appropriate signs giving notice of the designated speed are posted on the portion of the highway where the designated speed is imposed. The expense of erecting any sign under this subsection shall be borne by the road authority having jurisdiction over the portion of the highway where the designated speed is imposed.

(f) The department, pursuant to a process established by rule, may delegate its authority under this subsection with respect to highways that are low volume or unpaved to a city or county with jurisdiction over the highway. The department shall delegate authority under this paragraph only if it determines that the city or county will exercise the authority according to criteria adopted by the department.

(g) The department, pursuant to a process established by rule, may delegate its authority under this subsection to Clackamas County, Marion County, Multnomah County or a city with jurisdiction over the highway. The department shall delegate authority under this paragraph only if it determines that Clackamas County, Marion County, Multnomah County or the city will exercise the authority according to criteria adopted by the department. When Clackamas County, Marion County, Multnomah County or a city establishes a designated speed under this paragraph, the county or city shall provide written notice to the department. The designated speed established under this paragraph is effective 30 days after the department receives the notice.

(6) The department may override the speed limit established for ocean shores under ORS 811.111 (1)(c) and establish a designated speed of less than 25 miles per hour on any specified section of ocean shore if the department determines that the speed limit established under ORS 811.111 (1)(c) is greater than is reasonable or safe under the conditions that exist with respect to that part of the ocean shore. The authority granted under this subsection is subject to all of the following:

(a) The department may make the determination required under this subsection only on the basis of an investigation.

(b) A designated speed established under this subsection is effective when posted upon appropriate fixed or variable signs on the portion of ocean shore where the designated speed is imposed.

(7) A road authority may adopt a designated speed to regulate the speed of vehicles in parks under the jurisdiction of the road authority. A road authority regulating the speed of vehicles under this subsection shall post and maintain signs at all park entrances to give notice of any designated speed.

(8) A road authority may establish by ordinance or order a temporary designated speed for highways in its jurisdiction that is lower than the statutory speed. A temporary designated speed may be established under this subsection if, in the judgment of the road authority, the temporary designated speed is necessary to protect any portion of the highway from being unduly damaged, or to protect the safety of the public and workers when temporary conditions such as construction or maintenance activities constitute a danger. The following apply to the authority granted under this subsection:

(a) Statutory speeds may be overridden by a temporary designated speed only:

(A) For a specific period of time for all vehicles; or

(B) For a specified period of time for a specific kind or class of vehicle that is causing identified damage to highways.

(b) This subsection may not be used to establish a permanent designated speed.

(c) The authority granted by this subsection may be exercised only if the ordinance or order that imposes the temporary designated speed:

(A) Specifies the hazard, damage or other condition requiring the temporary designated speed; and

(B) Is effective only for a specified time that corresponds to the hazard, damage or other condition specified.

(d) A temporary designated speed imposed under this subsection must be imposed by a proper written ordinance or order. A sign giving notice of the temporary designated speed must be posted at each end of the portion of highway where the temporary designated speed is imposed and at such other places on the highway as may be necessary to inform the public. The temporary designated speed shall be effective when signs giving notice of the temporary designated speed are posted.

(9) A road authority may establish an emergency speed on any highway under the jurisdiction of the road authority that is different from the existing speed on the highway. The authority granted under this subsection is subject to all of the following:

(a) A speed established under this subsection is effective when appropriate signs giving notice thereof are posted upon the highway or portion of highway where the emergency speed is imposed. All signs posted under this subsection must comply with ORS 810.200.

(b) The expense of posting any sign under this subsection shall be borne by the road authority having jurisdiction over the highway or portion of highway where the emergency speed is imposed.

(c) A speed established under this subsection may be effective for not more than 120 days.

(10) A road authority may establish by ordinance a designated speed for a highway under the jurisdiction of the road authority that is five miles per hour lower than the statutory speed. The following apply to the authority granted under this subsection:

(a) The highway is located in a residence district.

(b) The statutory speed may be overridden by a designated speed only if:

(A) The road authority determines that the highway has an average volume of fewer than 2,000 motor vehicles per day, more than 85 percent of which are traveling less than 30 miles per hour; and

(B) There is a traffic control device on the highway that indicates the presence of pedestrians or bicyclists.

(c) The road authority shall post a sign giving notice of the designated speed at each end of the portion of highway where the designated speed is imposed and at such other places on the highway as may be necessary to inform the public. The designated speed shall be effective when signs giving notice of the designated speed are posted.

(11) A city may establish by ordinance a designated speed for a highway under the jurisdiction of the city that is up to 10 miles per hour lower than the statutory speed, so long as the designated speed is not less than 20 miles per hour. The following apply to the authority granted under this subsection:

(a) The highway is located in a residence district.

(b) The highway is not an arterial highway.

(c) The designated speed is effective when appropriate signs giving notice of the designated speed are posted on the highway where the designated speed is imposed.

(12) Notwithstanding ORS 801.430, as used in subsection (11) of this section, “residence district” includes territory not comprising a business district that is contiguous to a highway and has access to dwellings provided by alleys.

54

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

Section 2B.21 Speed Limit Sign (R2-1)

Support:

01 In general, the maximum speed limits applicable to rural and urban roads are established:
A. Statutorily – a maximum speed limit applicable to a particular class of road, such as freeways or city streets, that is established by State law; or
B. As speed zones – based on engineering studies.

02 State statutory limits might restrict the maximum speed limit that can be established on a particular road, notwithstanding what an engineering study might indicate.

03 Agencies with designated authorities to set speed limits, which include States, and sometimes local jurisdictions, can establish non-statutory speed limits or designate reduced speed zones using an engineering study. Setting appropriate speed limits is especially important to ensure safety for all road users in varying types of contexts, particularly on roadways where adjacent land use suggests that trips could be served by varied modes. These situations include urban and suburban non-freeway arterials or rural arterials that serve as main streets in smaller communities, consistent with the context classifications of urban core, urban, suburban, and rural towns found in "A Policy on Geometric Design of Highways and Streets," 2018 Edition, AASHTO. When setting a speed limit, a range of factors such as land-use context, pedestrian and bicyclist activity, crash history, intersection spacing, driveway density, roadway geometry, roadside conditions, roadway functional classification, traffic volume, and observed speeds can influence the speed limit determined in the engineering study. The engineering study will determine which of the recommended factors will prevail in setting the speed limit.

04 Jurisdictions can use speed limit setting tools and methods such as expert systems and those consistent with the safe system approach as part of the required engineering study for a non-statutory speed limit. As speed limit setting tools vary, jurisdictions need to be aware of their limitations and advantages, possible variation between the tools and the need to explore gaps or weaknesses of tools, and weigh the output accordingly in consideration of setting speed limits.

05 To achieve desired operating speeds, agencies often implement other speed management strategies concurrently with setting speed limits, such as traffic calming measures, geometric design features, speed safety cameras, and increased enforcement.

Standard:

06 **Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices. The engineering study shall consider the roadway context.**

Guidance:

07 *Among the factors that should be considered when conducting an engineering study for establishing or reevaluating speed limits within speed zones are the following:*

- *A. Roadway environment (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;*
- *B. Roadway characteristics (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);*
- *C. Geographic context (such as an urban core, urban mix, suburban commercial or residential, suburban fringe, rural or rural community ~~urban district, rural town center, non-urbanized rural area, or suburban area~~), and multi-modal trip generation;*
- *D. Reported crash experience for at least a ~~12-month period~~ 36-month period, including noting any fatal or serious injury crash;*
- *E. Speed distribution of free-flowing vehicles including the pace, median (50th-percentile), and 85th percentile speeds; and*
- *F. A review of past speed studies to identify any trends in operating speeds.*

08 *When the 85th-percentile speed is appreciably greater than the posted speed limit, and the roadway context does not support setting a higher speed limit, the engineering study should consider whether changes to geometric features, enforcement, and/or other speed-reduction countermeasures might improve compliance with the posted speed limit. A similar approach should be used if the results of past speed studies indicate that the 85th-percentile speed has consistently increased.*

09 *On urban and suburban arterials, and on rural arterials that serve as main streets through developed areas of communities, the 85th-percentile speed should not be used to set speed limits without consideration of all factors described in Paragraph 7 of this Section.*

Standard:

10 **Except as provided in ORS 810.180 and Paragraphs 10a, 10b, and 10c of this section, the speed limit that is posted within a speed zone shall be set according to the method described in OAR 734-020-0015.** ~~*On a freeway, expressway, or rural highway (outside urbanized locations or conditions), the speed limit that is posted within a speed zone should be within 5 mph of the 85th-percentile speed of free-flowing motor-vehicle traffic under the following conditions:*~~

- ~~*A. All factors described in Paragraph 7 of this Section have been considered and determined to be nonmitigating, and*~~
- ~~*B. The measures described in Paragraph 8 of this Section have been considered to the extent practicable.*~~

10a **On interstates, the speed limit that is posted within a speed zone shall be set according to the method described in OAR 734-020-0010.**

10b **On paved low volume highways, the speed limit that is posted within a speed zone shall be set according to the method described in OAR 734-020-0016. On unpaved highways, the speed limit that is posted within a speed zone shall be set according to the method described in OAR 734-020-0017.**

10c **The speed limit that is posted within a variable speed zone shall be set according to the method described in OAR 734-020-0018.**

11 *State and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review (such as changes to roadway context, the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes to road geometrics, changes in traffic control signal coordination, or significant changes in traffic volumes).*

12 *Speed studies for signalized intersection approaches should be taken outside the influence area of the traffic control signal, which is generally considered to be approximately 1/2 mile, to avoid obtaining skewed results for the speed distribution. If the signal spacing is less than 1 mile, the speed study should be at approximately the middle of the segment.*

Standard:

13 **The Speed Limit (R2-1) sign (see Figure 2B-3) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency based on an engineering study. The speed limits displayed shall be in multiples of 5 mph.**

14 **Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.**

15 **At the downstream end of the section to which a particular speed limit applies, a Speed Limit sign showing the next speed limit shall be installed.**

16 **Speed Limit signs indicating the statutory speed limit~~s~~ or speed zone for the highway shall be installed at entrances to the State and, where appropriate, at jurisdictional boundaries in urban areas.**

Support:

16a The standard has been modified for clarity to show the intent of installing a speed limit sign for the location only, and not installing a sign showing all speed limits throughout the state.

Guidance:

17 *Additional Speed Limit signs should be installed beyond interchanges and major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.*

Support:

18 The "Traffic Control Devices Handbook" contains suggested criteria on the spacing of speed limit signs.

Option:

19 If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory requirements only on the streets that enter a city, neighborhood, or residential area to indicate the speed limit that is applicable to the entire city, neighborhood, or residential area unless otherwise posted, a CITYWIDE (R2-5aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP) plaque may be mounted above the Speed Limit sign and an UNLESS OTHERWISE POSTED (R2-5P) plaque may be mounted below the Speed Limit sign (see Figure 2B-3).

Support:

20 Section 2C.40 contains information about the use of speed zone signs to inform road users of a reduced or variable speed zone to provide advance notice to comply with the posted speed limit ahead.

Option:

21 If a W3-5b sign is posted to provide notice of a variable speed zone, an END VARIABLE SPEED LIMIT (R2-13) sign (see Figure 2B-3) may be installed at the downstream end of the zone to provide notice to road users of the termination of the speed zone.

Standard:

22 **If a W3-5c sign is posted to provide notice of a truck speed zone, an END TRUCK SPEED LIMIT (R2-14) sign (see Figure 2B-3) shall be installed at the downstream end of the zone to provide notice to road users of the termination of the speed zone.**

Guidance:

23 *An advisory speed plaque (see Section 2C.59) mounted below a warning sign should be used to warn road users of an advisory speed for a roadway condition. A Speed Limit sign should not be used for this purpose.*

24 *Advance traffic control warning signs (see Section 2C.35), intersection warning signs (see Section 2C.41), and/or other traffic control devices are appropriate warning prior to a signalized intersection. A Speed Limit sign should not be used for this purpose.*

Option:

25 Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or maximum or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

Guidance:

26 *No more than three speed limits should be displayed on any one Speed Limit sign or assembly.*

Option:

27 A variable speed limit sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is displayed at the proper times and locations in accordance with Paragraphs 9 and 10 of this Section.

Standard:

28 **The variable speed limit sign legend "SPEED LIMIT" shall be a black legend on a white retroreflective background. The variable speed limit legend shall be displayed in white LEDs on an opaque black background.**

Support:

29 Section 2C.13 contains information about the use of a Vehicle Speed Feedback plaque mounted below a Speed Limit sign that displays to approaching drivers the speed at which they are traveling.

30 Advisory speed signs and plaques are discussed in Sections 2C.12 and 2C.59. Temporary traffic control zone speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque intended for installation above a Speed Limit sign is discussed in Section 6G.08. School Speed Limit signs are discussed in Section 7B.05.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
2B.28 – Mandatory Movement Lane Control Signs & Plaques	October 15, 2024	11203
Supplement Team	**Status**	
2-Signs-R&W	OTCDC Review – 1st round	

Summary (2-3 sentences)

The MUTCD 11th Edition implies that R3-5R (Right Arrow symbol ONLY) can only be used if it is mounted overhead. Many road authorities in Oregon use this sign at one-way T-intersections below the stop sign to control turning movements and give a positive direction at the location of the turn.

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- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Oregon uses sign 3-5R(L) attached to the bottom of a stop sign at single lane approaches to one-way streets. The new MUTCD limits this sign to overhead use only. The 2009 MUTCD only limited the signs' use when there were multiple lanes at the approach to a one-way street.

Discussion

Many road authorities in Oregon use R3-5R(L) below stop signs at single approach lanes at T intersections or when there is a physical median that requires a turn, either right or left depending on the direction of the cross street.

Wrong-way driving continues to be a concern and having this sign at the intersection is helpful to show drivers the correct direction to travel.

This proposes to use this sign below stop signs when there is only one lane approaching a street where there is only one movement allowed. This way there is no confusion on whom the sign applies to.

Oregon has designed a smaller R3-5R(L) (OR3-5R(L)) for use under stop signs when certain conditions apply. This sign has been part of ODOT sign policy since at least 1990.

Figure 1: ODOT Sign Policy & Guidelines sign OR3-5L & OR3-5R

Traffic-Roadway Section

Sign Policy and Guidelines

OR3-5L & OR3-5R

Figure 3: Sign OR3-5L & OR3-5R (left (right) turn ONLY) Detail

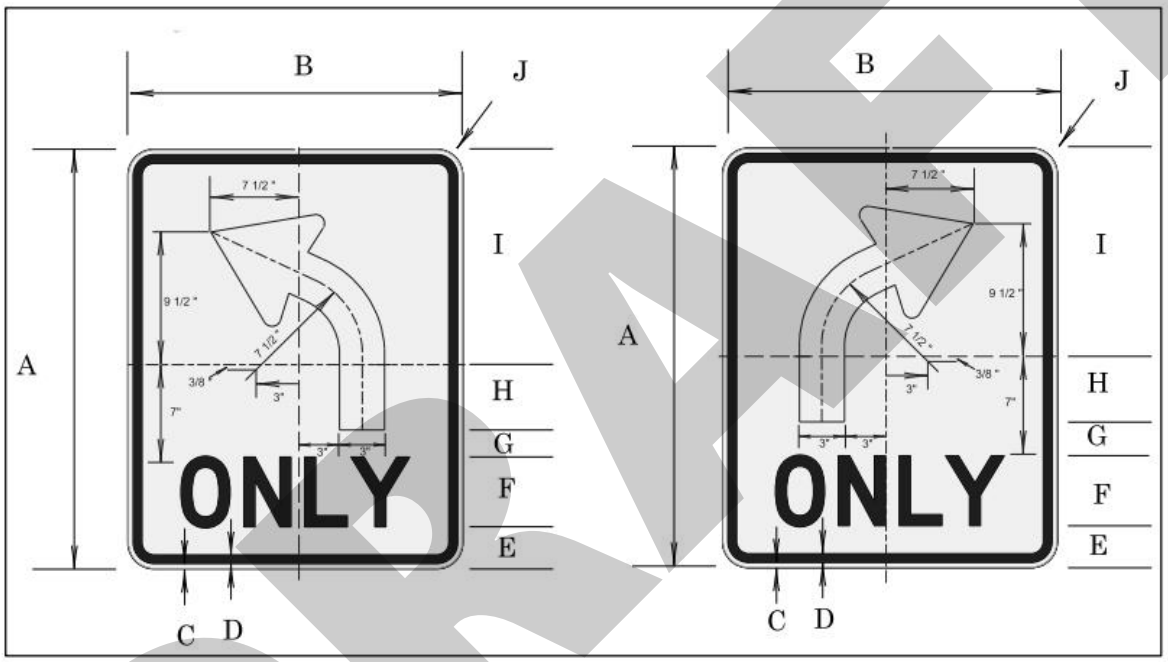

Table 4: Sign OR3-5L & OR3-5R (left (right) turn ONLY) Dimensions (inches)

A	B	C	D	E	F	G	H	I	J
30	24	0.375	0.625	3	5D	2	5	15	1.5

Sign Background: White, standard retroreflective sheeting.

Sign Legend: Black, non-reflective sheeting.

The left (right) turn ONLY sign shall only be used with, and mounted directly below, a STOP (R1-1) sign to direct the motorist through the intersection.

The OTC approved the OR3-5L (left turn ONLY) and OR3-5R (right turn ONLY) signs in January 1990. The sign was last updated in August 2006.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

Section 2B.28 Mandatory Movement Lane Control Signs (R3-5, R3-5a, R3-7, R3-19 Series, and R3-20) and Plaques

Standard:

01 **Mandatory Movement Lane Control (R3-5, R3-5a, and R3-7) signs (see Figure 2B-4), if used, shall indicate only the single vehicle movement that is required from the lane.**

02 **The Mandatory Movement Lane Control (R3-5 and R3-5a) symbol signs shall include the legend ONLY and ~~shall be~~ when mounted overhead, it shall be mounted over the specific lanes to which they apply (see Section 2B.27). The R3-7 sign shall be for post-mounting only. The R3-7 sign shall not be mounted at the far side of the intersection.**

Option:

02a A right (left) turn ONLY (OR3-5R(L)) sign may be mounted below a stop sign when there is a single lane approach to a one-way street where the only movement permitted is to turn onto the one-way street.

03 **When the mandatory movement applies to lanes exclusively designated for HOV traffic, the HOV 2+ (R3-5cP) supplemental plaque shall be used. When the mandatory movement applies to lanes that are not HOV facilities, but are lanes exclusively designated for buses and/or taxis, the TAXI LANE (R3-5dP) and/or BUS LANE (R3-5gP) supplemental plaques shall be used.**

04 **If used, the Mandatory Movement Lane Control (R3-7) sign shall be located in advance of the intersection, such as near the upstream end of the mandatory movement lane, and/or at the near side of the intersection where the regulation applies.**

Guidance:

05 *The use of the Mandatory Movement Lane Control (R3-7) word message sign should be limited to only locations that are adjacent to the full-width portion of a mandatory turn lane. The R3-7 sign should not be installed adjacent to a through lane in advance of a turn bay taper or adjacent to a turn bay taper.*

06 *Mandatory Movement Lane Control signs should be accompanied by lane-use arrow markings, especially where traffic volumes are high, where there is a high percentage of commercial vehicles, or where other distractions exist.*

07 *Where the restriction does not apply to buses or bicycles an EXCEPT BUSES (R3-7aP) or EXCEPT BICYCLES (R3-7bP) plaque should be used.*

Option:

08 The Through Only (R3-5a) sign may be used to require a road user in a particular lane to proceed straight through an intersection.

09 The diamond symbol may be used instead of the word message HOV on the R3-5cP supplemental plaque.

10 Where a mandatory left or U-turn lane is added at a median location, a LANE FOR LEFT TURN ONLY (R3-19) or LANE FOR U TURN ONLY (R3-19a) sign may be post-mounted on the median at the beginning of the taper. Where a U turn and a left turn are both allowed, a LANE FOR U AND LEFT TURNS ONLY (R3-19b) sign may be used. Where a R3-19 series sign is used, Mandatory Movement Lane Control signs along the turn lane in the median may be omitted.

11 The R3-19 series signs may be used where the added median turn lane is separated from the through lanes by a channelizing or divisional island.

12 On an approach to a mandatory turn lane where traffic regularly enters the shoulder to access the turn lane inappropriately, creating safety or operational issues, a DO NOT DRIVE ON SHOULDER (R4-17) sign (see Section 2B.43) may be used to supplement the standard Mandatory Movement Lane Control (R3-5 and/or R3-7 series) signs.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
2B.60 – No Turn on Red Signs	October 15, 2024	11204
Supplement Team	**Status**	
2-Signs-R&W	OTCDC Review – 1st round	

Summary (2-3 sentences)

Right turns on red indications are allowed in Oregon. Both the 2009 and 11th Editions of the MUTCD say that when there is a red arrow, a sign should go with it to say that a right turn is permitted after stopping. This proposes to change that guideline to an option because the sign is not needed to allow right turns on red.

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[Editor's note: Proposal No. 11401 is a parallel proposal related to turns on red arrows.]

Problem

Where turns on red arrow are allowed, Section 2B.60 recommends using a sign informing road users of the allowance. ORS 811.360 allows turns on red arrow as a default in Oregon; this would lead to excessive use of the sign.

Discussion

ORS 811.360 allows drivers to make a turn on a red arrow indication. Currently, Oregon road authorities sign if the right turn on a red arrow is prohibited.

It would take years for Oregon's road authorities to change existing signs to show when turns on red arrow are allowed. This would cause confusion during the interim as there would be no consistency. It would also require signing every right turn red arrow to show if turning on red is allowed or prohibited.

If a road user does not know Oregon law, they would stop at the red indication and not turn, which is a safe state. Excessive signing at a signalized intersection increases cognitive load and can cause confusion.

This proposes to continue what was in the 2009 MUTCD to minimize extra signing for red arrow indications.

811.360 Vehicle turns permitted at stop light; proceeding against traffic control device; improperly proceeding at stop light; penalty.

(1) The driver of a vehicle, subject to this section, who is intending to turn at an intersection where there is a traffic control device showing a steady circular red signal, a steady red bicycle signal or a steady red arrow signal may do any of the following without violating ORS 811.260 and 811.265:

(a) Make a right turn into a two-way street.

(b) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

(2) In addition to the provisions of subsection (1) of this section, a bicyclist or motorcyclist does not violate ORS 811.260 and 811.265 if:

(a) The bicyclist or motorcyclist approaches an intersection where there is a traffic control device showing a steady circular red signal, a steady red bicycle signal or a steady red arrow signal;

(b) The traffic control device is controlled by a vehicle detection device;

(c) The bicyclist or motorcyclist comes to a complete stop and waits for the traffic control device to complete one full cycle; and

(d) After the vehicle detection device fails to detect the presence of the bicycle or motorcycle and change the traffic control device to a green signal, the bicyclist or motorcyclist proceeds with caution through the intersection.

(3) A person commits the offense of improperly proceeding at a stop light if the person does any of the following while proceeding as described in this section:

(a) Fails to stop at the light as required.

(b) Fails to exercise caution to avoid an accident.

(c) Disobeys the directions of another traffic control device, other than the device described in subsections (1) and (2) of this section, or a police officer that prohibits the driver, motorcyclist or bicyclist from proceeding.

(d) Fails to yield the right of way to traffic lawfully within the intersection or approaching so close to the intersection as to constitute an immediate hazard.

(4) A driver, motorcyclist or bicyclist who is proceeding as described in this section is also subject to the requirements under ORS 811.028 to stop for a pedestrian before proceeding.

(5) The offense described in this section, improperly proceeding at a stop light, is a Class B traffic violation.

[1983 c.338 §628; 1997 c.507 §7; 2003 c.278 §7; 2005 c.746 §3; 2011 c.168 §2; 2015 c.147 §1]

Proposed Supplement Content

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CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

Section 2B.60 No Turn on Red Signs (R10-11 Series, R10-17a, and R10-30)

Standard:

01 **Where a right turn on a circular red signal indication (or a left turn on a circular red signal indication from a one-way street to a one-way street) is to be prohibited, a NO TURN ON RED (R10-11, R10-11b) word message sign (see Figure 2B-28) shall be used. A NO TURN ON RED (symbolic circular red) (R10-11a) sign (see Figure 2B-28) shall be used when the approach is controlled by both circular red and red arrow indications.**

Guidance:

02 *If used, the No Turn on Red sign should be installed near the appropriate signal head.*

03 *A No Turn on Red sign should be considered when an engineering study finds that one or more of the following conditions exists:*

- *A. Inadequate sight distance to vehicles approaching from the left (or right, if applicable);*
- *B. Geometrics or operational characteristics of the intersection that might result in unexpected conflicts;*
- *C. An exclusive pedestrian or bicycle phase;*
- *D. An unacceptable number of conflicting pedestrian movements with right-turn-on-red maneuvers, especially involving children, older pedestrians, or persons with disabilities;*
- *E. More than three right-turn-on-red crashes reported in a 12-month period for the particular approach; or*
- *F. The skew angle of the intersecting roadways creates difficulty for drivers to see traffic approaching from their left (or right, if applicable).*

Standard:

04 **If an R10-11, R10-11a, R10-11b, or R10-17a sign with conventional road size as shown in Table 2B-1 is used on an approach on the far side of the intersection and the distance between the stop line and the sign is greater than 120 feet, then a duplicate sign shall be located on the near side of the intersection to supplement the sign on the far side of the intersection.**

Option:

05 When a no-turn-on-red restriction applies during certain time periods only, the following alternatives may be used:

06 Movement Prohibition (R3-1, R3-2, R3-4, R3-18, and R3-27) signs or NO TURN ON RED signs displayed by using a blank-out sign for the time period or one or more portion(s) of a particular cycle of the traffic control signal during which the prohibition is applicable; or

07 Static signs incorporating a supplemental legend or with a supplemental R10-20aP plaque (see Figure 2B-28) showing the hours and days during which the prohibition is applicable.

08 White LEDs may be used in the border and activated during periods of turn prohibition to enhance the sign conspicuity.

09 On signalized approaches with more than one right-turn lane, a NO TURN ON RED EXCEPT FROM RIGHT LANE (R10-11c) sign (see Figure 2B-28) may be post-mounted at the intersection or a NO TURN ON RED FROM THIS LANE (with down arrow) (R10-11d) sign (see Figure 2B-28) may be mounted over the approximate center of the lane from which turns on red are prohibited.

~~*Guidance:*~~ Option:

10 Where turns on red are permitted and the signal indication is a steady RED ARROW, the RIGHT (LEFT) ON RED ARROW AFTER STOP (R10-17a) sign (see Figure 2B-28) ~~*should*~~ may be installed adjacent to the RED ARROW signal indication.

~~Option:~~

11 A RIGHT TURN ON RED MUST YIELD TO U-TURN (R10-30) sign (see Figure 2B-28) may be installed to remind road users that they must yield to conflicting U-turn traffic on the street or highway onto which they are turning right on a red signal after stopping.

Support:

12 ORS 811.360 allows vehicular traffic facing a Steady Red Arrow signal indication to make certain turns after stopping, making a RIGHT (LEFT) ON RED ARROW AFTER STOP (R10-17a) sign unnecessary.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
2B.69 – Photo Enforced Signs and Plaques, 2C.69 – Photo Enforced Plaques	October 15, 2024	11205
Supplement Team	**Status**	
2-Signs-R&W	OTCDC Review – 1st round	

Summary (2-3 sentences)

Oregon law prescribes specific signs when using photo enforcement and those laws are ever-changing. See ORS 810.436 thru 810.444.

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Problem

The MUTCD does not have a lot of guidance related to signing for photo enforcement. However, Oregon law does. The Supplement needs to fill this gap.

Discussion

Oregon's legislature has changed Oregon's photo enforcement statutes several times in the last few years, most recently in June 2024. ODOT anticipates the Legislature will consider more changes in the 2025 Legislative Session, too. This proposes pointing practitioners to the applicable statutes, so they use the signs required in statute.

The statutes below are from the 2023 Edition Oregon Revised Statutes, copied 05/01/2024 from https://www.oregonlegislature.gov/bills_laws/Pages/ORS.aspx and modified by HB-4109 (2024 Regular Session).

810.436 Citations based on photo red light; response to citation.

(1) Notwithstanding any other provision of law, if a city chooses to operate a camera that complies with this section and ORS 810.434, a citation for violation of ORS 811.265 may be issued on the basis of photographs from a camera taken without the presence of a police officer if the following conditions are met:

(a) Signs are posted, so far as is practicable, on all major routes entering the jurisdiction indicating that compliance with traffic control devices is enforced through cameras.

(b) For each traffic control device at which a camera is installed, signs indicating that a camera may be in operation at the device are posted before the device at a location near the device.

(c) If the traffic control device is a traffic light, the yellow light shows for at least the length of time recommended by the standard set by the Institute of Transportation Engineers.

(d) The citation is mailed to the registered owner of the vehicle, or to the driver if identifiable, within 10 business days of the alleged violation.

(e) The registered owner is given 30 days from the date the citation is mailed to respond to the citation.

(f) A police officer or a duly authorized traffic enforcement agent who has reviewed the photograph signs the citation. The citation may be prepared on a digital medium, and the signature may be electronic in accordance with the provisions of ORS 84.001 to 84.061.

[The remainder of this statute does not relate to signs.]

[1999 c.851 §2; 2001 c.104 §305; 2001 c.474 §2; 2001 c.535 §30a; 2003 c.14 §493; 2003 c.339 §3; 2005 c.686 §2; 2007 c.640 §2; 2017 c.288 §5; 2022 c.64 §1]

12

810.437 Citations for speeding based on photo red light; response to citation.

(1) Notwithstanding any other provision of law, if a city chooses to operate cameras that comply with this section and ORS 810.434, a citation for speeding may be issued on the basis of photographs from a camera and other technology, including but not limited to sensors, that measure the speed of a vehicle without the presence of a police officer if the following conditions are met:

(a) Signs are posted, so far as is practicable, on all major routes entering the jurisdiction indicating that compliance with traffic laws is enforced through cameras and other technology.

(b) For each traffic control device at which a camera is installed, signs indicating that a camera system may be in operation at the traffic control device are posted before the device at a location near the device.

(c) The citation is mailed to the registered owner of the vehicle, or to the driver if identifiable, within 10 business days of the alleged violation.

(d) The registered owner is given 30 days from the date the citation is delivered to respond to the citation.

(e) A police officer or a duly authorized traffic enforcement agent who has reviewed the photograph and other data signs the citation. The citation may be prepared on a digital medium, and the signature may be electronic in accordance with the provisions of ORS 84.001 to 84.061.

(f) The person exceeded the speed limit or designated speed by 11 miles per hour or greater.

[The remainder of this statute does not relate to signs.]

[2017 c.288 §2; 2022 c.64 §2]

810.438 Photo radar.

(1) A city at its own cost may operate photo radar.

(2) A photo radar system operated under this section:

(a) May be used on streets in residential areas or school zones.

(b) May be used in other areas if the governing body of the city makes a finding that speeding has had a negative impact on traffic safety in those areas.

(c) May not be used on controlled access highways.

(d) May not be used unless a sign is posted announcing "Traffic Laws Photo Enforced." The sign posted under this paragraph must:

(A) Be on the street on which the photo radar unit is being used;

(B) Be between 100 and 400 yards before the location of the photo radar unit;

(C) Be at least two feet above ground level; and

(D) If posted in a school zone not otherwise marked by a flashing light used as a traffic control device, indicate that school is in session.

[The remainder of this statute does not relate to signs.]

[1995 c.579 §1; 1997 c.280 §1; 1999 c.1071 §1; 2005 c.686 §3; 2007 c.634 §1; 2010 c.30 §9; 2011 c.545 §66; 2015 c.138 §25; 2023 c.33 §1]

13

810.441 Photo radar; highway work zones.

(1) The Department of Transportation may operate photo radar within a highway work zone that is located on a state highway. The photo radar unit may be operated only:

(a) In the area within a highway work zone when highway workers, as defined in ORS 811.230, are present. The photo radar unit may not be operated in a location more than 100 yards from where highway workers are present and, in the case of a divided state highway, the photo radar unit must be located on the same roadway where highway workers are present.

(b) When the configuration of the roadway is temporarily changed, including but not limited to temporary changes made to the number of usable lanes, lane width, shoulder width or curvature of the roadway. The photo radar unit may not be operated in a location more than 100 yards from where the configuration of the roadway is temporarily changed and, in the case of a divided state highway, the photo radar unit must be located on the same roadway where the highway configuration is temporarily changed.

(2) The department, at its own cost, may ask a jurisdiction authorized to operate photo radar under ORS 810.438 (1) or the Oregon State Police to operate a photo radar unit in a highway work zone on a state highway.

(3) A photo radar unit operated under this section may not be used unless a sign is posted announcing that photo radar is in use. The sign posted under this subsection must be all of the following:

(a) Located on the state highway on which the photo radar unit is being used.

(b) Between 100 and 400 yards before the location of the photo radar unit.

[The remainder of this statute does not relate to signs.]

[2007 c.634 §4; 2013 c.373 §1]

810.444 Citations based on photo radar; response to citation.

(1) Notwithstanding any other provision of law, in a city operating a photo radar system under ORS 810.438:

(a) A citation for speeding may be issued on the basis of photo radar if:

(A) A sign that provides drivers with information about the driver's current rate of speed is posted between 100 and 400 yards before the location of each photo radar unit;

(B) A police officer or a duly authorized traffic enforcement agent has reviewed the photographic evidence of the conduct; and

(C) A police officer signs and issues the citation, except that a citation issued by the City of Portland may be signed and issued by a duly authorized traffic enforcement agent or a police officer.

(b) A rebuttable presumption exists that the registered owner of the vehicle was the driver of the vehicle when the citation is issued and delivered as provided in subsection (2) of this section.

(c) An individual issued a citation under this subsection may respond to the citation by submitting a certificate of innocence under subsection (3)(a) of this section or may make any other response allowed by law.

(d) A business or public agency issued a citation under this subsection may respond to the citation by submitting an affidavit of nonliability under subsection (3)(b) of this section or may make any other response allowed by law.

[The remainder of this statute does not relate to signs.]

[2015 c.721 §2; 2022 c.64 §3; Updated with HB-4109(2024)]

Proposed Supplement Content

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CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

Section 2B.69 Photo Enforced Signs and Plaques (R10-18, R10-18a, R10-19P, R10-19aP)

~~Option:~~

~~01 A Traffic Laws Photo Enforced (R10-18) sign (see Figure 2B-32) may be installed at a jurisdictional boundary to advise road users that some of the traffic regulations within that jurisdiction are being enforced by photographic equipment.~~

~~02 A Traffic Signal Photo Enforced (R10-18a) sign (see Figure 2B-32) may be installed in advance of or at a traffic signal to advise road users that compliance with the signal is enforced by photographic equipment. A Signal Ahead (W3-3) sign and a Traffic Signal Photo Enforced (R10-18a) sign may be used on the same approach provided that they are on separate supports.~~

~~03 A Photo Enforced (R10-19P) plaque or a PHOTO ENFORCED (R10-19aP) word message plaque (see Figure 2B-32) may be mounted below a regulatory sign to advise road users that the regulation is being enforced by photographic equipment.~~

Standard:

~~04 The Traffic Signal Photo Enforced (R10-18a) sign shall not be installed on approaches to signalized locations where red-light cameras are not present on any of the approaches to the signalized location.~~

~~05 A Traffic Signal Photo Enforced (R10-18a) sign shall not be installed on the same support in combination with a Signal Ahead (W3-3) sign.~~

~~06 If used below a regulatory sign, the Photo Enforced (R10-19P or R10-19aP) plaque shall be a rectangle with a black legend and border on a white background.~~

07 **Signing for photo enforcement shall follow signing requirements in ORS 810.436 through ORS 810.444.**

CHAPTER 2C. WARNING SIGNS AND OBJECT MARKERS

Section 2C.69 Photo Enforced Plaques (W16-10P and W16-10aP)

~~Option:~~

~~01 A Photo Enforced (W16-10P) plaque or a PHOTO ENFORCED (W16-10aP) word message plaque (see Figure 2C-16) may be mounted below a warning sign to advise road users that the regulations associated with the condition being warned about (such as a traffic control signal or a toll plaza) are being enforced by photographic equipment.~~

Standard:

02 **Signing for photo enforcement shall follow signing requirements in ORS 810.436 through ORS 810.444.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
2C.40 – Reduced Speed Limit Ahead and Speed Zone Signs	October 15, 2024	11206
Supplement Team	**Status**	
2-Signs-R&W	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 2C.40 recommends using a VARIABLE SPEED ZONE AHEAD (W3-5b) sign ahead of a variable speed zone. Oregon's administrative rule for variable interstate speed limits (OAR 734-020-0019) requires (instead of recommends) a sign warning of entering a variable speed limit corridor. This proposes to align the language of the 11th Edition of the MUTCD with Oregon's existing administrative rule for variable interstate speed limits.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Section 2C.40 Paragraph 02 recommends using a VARIABLE SPEED ZONE AHEAD (W3-5b) sign to inform road users of a variable speed zone ahead.

Variable speed zones are designated under ORS 810.180 through OAR 734-020-0018 and OAR 734-020-0019. OAR 734-020-0019 requires signs warning of entering a variable speed corridor on interstates, instead of MUTCD's recommendation. This OAR standard only applies to variable speed limits on interstates; it does not extend to non-interstates.

Discussion

Under OAR 734-020-0019(3)(d)(K), variable speed zones on interstates must have static signs warning of entering the variable speed corridor at the beginning of the corridor.

This proposes to add a standard in the Supplement to align the 11th Edition of the MUTCD with the language in the OAR with by noting this requirement.

OAR 734-020-0019 Locations and Criteria of Variable Interstate Speed Limits

This rule is applicable only to regulatory systems and not to advisory systems.

[Sections (1) and (2) not shown.]

(3) Criteria for Changing Speeds. The Variable Speed Limit system has two automated subsystems, 1) a congestion subsystem and 2) a weather subsystem, each determining a recommended speed based on criteria set forth below in (a) and (b). The system also includes a manual control subsystem with criteria for use as described below in (c). The system automatically displays the lowest recommended speed from the automated subsystems with the ability for limited manual intervention when appropriate.

[Subsections (a) through (c) not shown.]

(d) General conditions for variable speed limits:

(A) Speed signs shall not display a speed greater than the designated speed limit for the segment as set in OAR 734-020-0011 and if none, then the statutory maximum speed limit in ORS 811.111.

(B) Speed Limits displayed shall be the lowest of the two automated subsystems, congestion or weather, unless overridden by the TOC.

(C) Speed limits between subsequent highway speed change segments typically shall not be reduced by more than 10 to 15 MPH between adjacent segments. These may be urban situations where speed signs are separated by no more than a few miles. In some cases (such as rural locations) where there are relatively long distances between speed signs, the speed change between subsequent sections may be much greater since there may be free flow speeds in adjacent segments and thus no reason for reduced speeds.

(D) The speed limit shall be displayed in 5 MPH increments.

(E) The speed limit shall not be decreased more than once within a 2 minute period, unless overridden by the TOC.

(F) The speed limit shall not be increased more than once within a 3 minute period, unless overridden by the TOC.

(G) The minimum variable speed limit shall not be less than 30 MPH.

(H) Variable speed signs should be posted near, and downstream of interstate entrances, typically within about 1500 to 2000 feet.

(I) Variable speed signs for urban areas should be placed at frequent intervals. For rural areas the sign interval should be at least every five miles but no more than every ten miles.

(J) The TOC shall log the speed limit being displayed on the variable speed signs and keep the log for a minimum of five years.

(K) Static signs giving warning of entering the variable speed corridor shall be placed at the beginning of the corridor.

(L) Static signs giving notice of the end of the variable speed limit may be placed at the exit points. A static speed sign shall be placed at the end of the corridor to establish the end of the variable speed and the beginning of the fixed speed limit.

Proposed Supplement Content

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CHAPTER 2C. WARNING SIGNS AND OBJECT MARKERS

Section 2C.40 Reduced Speed Limit Ahead and Speed Zone Signs (W3-5, W3-5a, W3-5b, and W3-5c)

Guidance:

01 *A Reduced Speed Limit Ahead (W3-5 or W3-5a) or Truck Speed Zone Ahead (W3-5c) sign (see Figure 2C-9) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.*

02 *A VARIABLE SPEED ZONE AHEAD (W3-5b) sign (see Figure 2C-9) should be used to inform road users of a zone where the speed limit is varied by time of day or as conditions change.*

Standard:

03 **If used, Reduced Speed Limit, Variable Speed Zone, or Truck Speed Zone Ahead signs shall be followed by a Speed Limit (R2-1) sign (see Figure 2B-3), with the Trucks (R2-2P) plaque (see Figure 2B-3) if applicable, installed at the beginning of the zone where the speed limit applies.**

04 **The speed limit displayed on the W3-5, W3-5a, and W3-5c signs shall be identical to the speed limit displayed on the subsequent Speed Limit sign.**

05 **On interstates, a VARIABLE SPEED ZONE AHEAD (W3-5b) sign shall be used to inform road users of a zone where the speed limit is varied by time of day or as conditions change.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3A.04 – Functions, Widths, and Patterns of Longitudinal Pavement Markings	October 15, 2024	11301
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

The guidance for discernable space of double lines has changed in the 11th edition. ODOT's and other agencies' current standard of practice would be affected. This proposes to allow discernable spaces between double lines up to 3 times the line width to maintain Oregon's current striping layouts.

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Problem

New guidance in the 11th Edition of the MUTCD limits the width of the discernable space between double lines to twice that of the markings itself. ODOT and other agencies currently use 12 inches as the discernable gap of a double line marking, which is beyond the limit of the new guidance when using a 4-inch line.

Discussion

Following MUTCD 11th Edition guidance to keep the discernable space between double lines no more than double the line width would significantly affect ODOT and many other agencies in Oregon. ODOT and other agencies have used a discernable space of 12 inches between double lines since at least 1976. This is three times the width of a normal line. This 12-inch space:

1. Keeps the location of centerlines constant as the line pattern transitions between broken, no-pass right, no-pass left, and double by using a 3-gun equipment setup.
2. Provides slightly more separation between opposing traffic.

To change all 12-inch spaces to 8-inch spaces, agencies will have to change the entire way they do their striping, would be a significant financial impact, and could leave ghost striping if done without paving. This would also affect how striping crews maintain lines – striping crews would need to change their truck layouts in the field as they go from a segment with 12-inch gaps to 8-inch gaps, and vice-versa.

A 12-inch gap is discernable given Oregon's highways have operated with a 12-inch gap for at least 48 years with no known confusion from road users.

Figure 1: Yellow Line 3-Gun Arrangement on Striping Truck

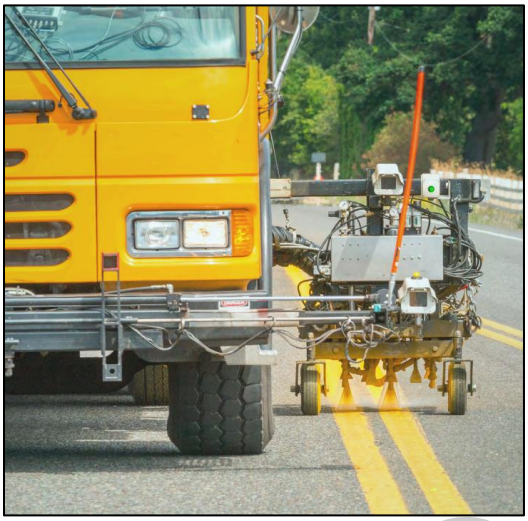

Figure 2: Striping Layout Based on 3-Gun Arrangement (ODOT Standard Drawing TM561)

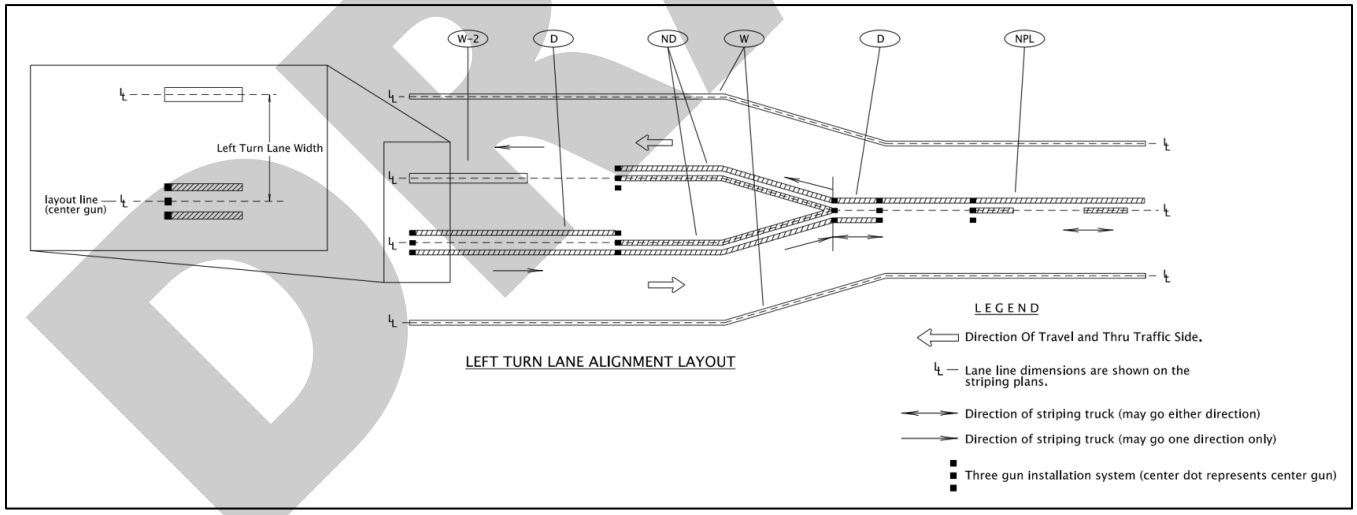

Figure 3: 8-inch vs. 12-inch Gap Comparison

8-inch Gap 12-inch gap

Proposed Supplement Content

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CHAPTER 3A. GENERAL

Section 3A.04 Functions, Widths, and Patterns of Longitudinal Pavement Markings

Standard:

01 **The general functions of longitudinal lines shall be as follows:**

- **A. A double line indicates maximum or special restrictions.**
- **B. A solid line discourages or prohibits crossing (depending on the specific application).**
- **C. A broken line indicates a permissive condition.**
- **D. A dotted lane line provides warning of a downstream change in lane function.**
- **E. A dotted line used as a lane line or edge line extension guides vehicles through an intersection, a taper area, or an interchange ramp area.**

02 **The widths and patterns of longitudinal lines shall be as follows:**

- **A. Normal line—4 to 6 inches wide.**
- **B. Wide line—at least twice the width of a normal line.**
- **C. Double line—two parallel lines separated by a discernible space. The pavement surface shall be visible between the lines in the same way that it is visible outside the lines, except where contrast markings are used in combination with the double line (see Section 3A.03).**
- **D. Broken line—normal width line segments separated by gaps.**
- **E. Dotted line—noticeably shorter line segments separated by shorter gaps than used for a broken line. The width of a dotted line extension shall be at least the same as the width of the line it extends.**

Guidance:

03 *To be recognized as a double line rather than two separate, disassociated single lines, the discernible space separating the parallel lines of a double line should not exceed ~~two~~ three times the line width of a single line.*

Support:

04 The width of the line indicates the degree of emphasis.

05 Increasing edge line width from 4 inches to 6 inches has been shown to be a beneficial countermeasure to enhance safety at locations with a history of run-off-the-road crashes (see Section 3B.09). Wider normal lines with a 6-inch width instead of the minimum 4-inch width can be beneficial to both human drivers and driving automation systems (see Section 5B.02).

Guidance:

06 *Broken lines should consist of 10-foot line segments and 30-foot gaps, or dimensions in a similar ratio of line segments to gaps as appropriate for traffic speeds and the need for delineation.*

07 *A dotted line used as a lane line (see Section 3B.07) should consist of 3-foot line segments and 9-foot gaps. A dotted line for line extensions within an intersection, taper area, or interchange ramp area (see Section 3B.11) should consist of 2-foot line segments and 2-foot to 6-foot gaps.*

Support:

08 Section 5B.02 contains information on pavement marking considerations for driving automation systems.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3B.19 – Stop and Yield Lines, & 3I.02 – Tubular Markers	October 15, 2024	11302
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

Oregon law (ORS 811.028) requires that drivers stop for pedestrians crossing a roadway within a marked or unmarked crosswalk. The 11th Edition allows for a variety of "yield to pedestrian" conditions that are not applicable in Oregon. This proposes to remove "yield to pedestrian" options and add guidance on locating yield markings at channelized right-turn lanes with marked crosswalks.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Oregon law (ORS 811.028) requires that drivers stop for pedestrians crossing a roadway within a marked or unmarked crosswalk. The 11th Edition and past editions allow for a variety of "yield to pedestrian" conditions that are not applicable Oregon.

The MUTCD also recommends a stop line at signalized intersections, even if there's a marked crosswalk on an approach. Oregon's long-standing practice is to require a stop line or a marked crosswalk as the stop line to reduce maintenance costs.

Discussion

Under ORS 811.028, drivers must stop – not yield – to pedestrians so all standards, guidance, options, and support related to yielding to pedestrians, instead of stopping for pedestrians, are proposed to for removal.

This also proposes adding guidance to reduce confusion where a channelized right-turn lane has yield markings and a marked crosswalk. This guidance proposes to place the yield lines beyond the crosswalk to avoid drivers thinking the yield line applies to the crosswalk.

Oregon has in the past also required either a stop line or a marked crosswalk to be at traffic signal-controlled locations. This proposes changes that remain consistent with Oregon's past supplements related to marking for stopping locations at traffic control signals.

811.028 Failure to stop and remain stopped for pedestrian; penalty.

(1) The driver of a vehicle commits the offense of failure to stop and remain stopped for a pedestrian if the driver does not stop and remain stopped for a pedestrian when the pedestrian is:

  (a) Proceeding in accordance with a traffic control device as provided under ORS 814.010 or crossing the roadway in a crosswalk; and

  (b) In any of the following locations:

    (A) In the lane in which the driver's vehicle is traveling;

    (B) In a lane adjacent to the lane in which the driver's vehicle is traveling;

    (C) In the lane into which the driver's vehicle is turning;

    (D) In a lane adjacent to the lane into which the driver's vehicle is turning, if the driver is making a turn at an intersection that does not have a traffic control device under which a pedestrian may proceed as provided under ORS 814.010; or

    (E) Less than six feet from the lane into which the driver's vehicle is turning, if the driver is making a turn at an intersection that has a traffic control device under which a pedestrian may proceed as provided under ORS 814.010.

(2) For the purpose of this section, a bicycle lane or the part of a roadway where a vehicle stops, stands or parks that is adjacent to a lane of travel is considered to be part of that adjacent lane of travel.

(3) This section does not require a driver to stop and remain stopped for a pedestrian under any of the following circumstances:

  (a) Upon a roadway with a safety island, if the driver is proceeding along the half of the roadway on the far side of the safety island from the pedestrian; or

  (b) Where a pedestrian tunnel or overhead crossing has been provided at or near a crosswalk.

(4) For the purposes of this section, a pedestrian is crossing the roadway in a crosswalk when any part or extension of the pedestrian, including but not limited to any part of the pedestrian's body, wheelchair, cane, crutch or bicycle, moves onto the roadway in a crosswalk with the intent to proceed.

(5) The offense described in this section, failure to stop and remain stopped for a pedestrian, is a Class B traffic violation.

[2005 c.746 §2; 2011 c.507 §1]

Proposed Supplement Content

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CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.19 Stop and Yield Lines

Option:

01 Stop lines may be used to indicate the point behind which vehicles are required to stop in compliance with a STOP (R1-1) sign, a Stop Here for Pedestrians (R1-5b) sign, a Stop Here for School Crossing (R1-5c) sign, a Stop Here for Trail Crossing (R-5e) sign, or some other traffic control device that requires vehicles to stop, except YIELD signs that are not associated with passive grade crossings.

Standard:

02 **Stop lines shall consist of solid white lines extending across approach lanes to indicate the point at which the stop is intended or required to be made.**

03 **Except as provided in Section 8C.03, stop lines shall not be used at locations where drivers are required to yield in compliance with a YIELD (R1-2) sign~~, a Yield Here to Pedestrians (R1-5) sign, a Yield Here to School Crossings (R1-5a) sign, a Yield Here to Trail Crossings (R1-5d) sign, or at locations on uncontrolled approaches where drivers or bicyclists are required by State law to yield to pedestrians~~.**

~~*Guidance:*~~

04 **Stop lines or a marked crosswalk shall ~~*should*~~ be used to indicate the point behind which vehicles are required to stop in compliance with a traffic control signal (see Section 4D.08).**

Option:

04a At a controlled intersection with a marked crosswalk, a separate stop line may be installed if engineering judgment determines a need, such as accommodating truck turning radii, or at highly skewed approaches.

Support:

04b Lack of stop lines or crosswalks used at traffic control signals negatively affects the safety, operation, and efficiency of the intersection. However, separate stop lines used in conjunction with a marked crosswalk at a controlled intersection are unnecessary, as the location of the near-side transverse crosswalk line adequately performs the same function as a stop line without vehicular encroachment into the crosswalk (when a typical 10 foot wide crosswalk is used) and without being confusing to the motorist.

Guidance:

05 *Stop lines should be 12 to 24 inches wide.*

Option:

06 Stop lines may be omitted at ramp control signals.

Support:

07 Section 4J.02 contains information regarding the use and application of stop lines in conjunction with a pedestrian hybrid beacon.

Standard:

08 **If used, a yield line pavement marking shall not be installed without a Yield (R1-2) sign~~, a Yield Here to Pedestrians (R1-5) sign, a Yield Here to School Crossings (R1-5a) sign, a Yield Here to Trail Crossings (R1-5d) sign,~~ or some other traffic control device that requires vehicles to yield ~~(see Figure 3B-16)~~.**

09 **Yield lines shall not be used at locations where drivers are required to stop in compliance with a STOP (R1-1) sign, a Stop Here for Pedestrians (R1-5b) sign, a Stop Here for School Crossing (R1-5c) sign, a Stop Here for Trail Crossing (R1-5e) sign, a traffic control signal, or some other traffic control device.**

10 **Yield lines shall consist of a row of solid white isosceles triangles pointing toward approaching vehicles extending across approach lanes to indicate the point at which the yield is intended or required to be made.**

Option:

11 If a yield line marking is used on a bicycle facility, a Bicycles Yield to Pedestrians (R9-6) sign (see Section 9B-12) may be used when not at a crosswalk.

Guidance:

12 *The individual triangles comprising the yield line should have a base of 12 to 24 inches wide and a height equal to 1.5 times the base. The space between the triangles should be 3 to 12 inches.*

13 *If used, stop ~~and yield~~ lines should be placed a minimum of 4 feet in advance of the nearest crosswalk line at controlled intersections~~, except for yield lines at roundabouts as provided for in Section 3D.04 and at midblock crosswalks~~. In the absence of a marked crosswalk, the stop line or yield line should be placed at the desired stopping or yielding point, but should not be placed more than 30 feet or less than 4 feet from the nearest edge of the intersecting traveled way.*

13a *When used at channelized-right turn lanes with a marked crosswalk, yield lines should be placed beyond the marked crosswalk.*

Standard:

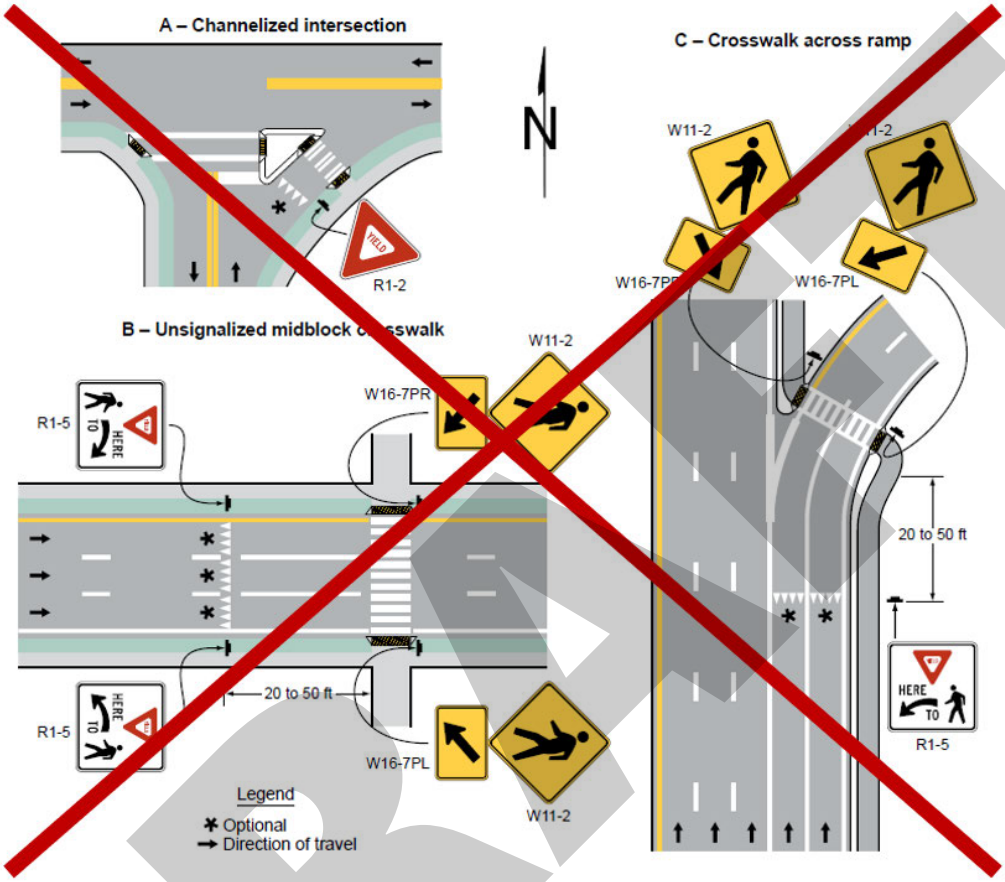
14 **If ~~yield (~~stop~~)~~ lines are used at a crosswalk that crosses an uncontrolled multi-lane approach, ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians (R1-5 series) signs (see Section 2B.19) shall be used.**

Guidance:

15 *If ~~yield (~~stop~~)~~ lines are used at a crosswalk that crosses an uncontrolled multi-lane approach, the ~~yield (~~stop~~)~~ line should be placed 20 to 50 feet in advance of the nearest crosswalk line ~~(see Drawing B in Figure 3B-16)~~.*

16 *If ~~yield or~~ stop lines are used in advance of a crosswalk that crosses an uncontrolled multi-lane approach, parking should be prohibited in the area between the ~~yield or~~ stop line and the crosswalk.*

~~Figure 3B-16. Examples of Yield Line Applications~~



Support:

17 Section 9B.12 contains information for providing signing applicable to bicyclists also subject to a yielding requirement at a crosswalk that crosses an uncontrolled approach.

Guidance:

18 *~~Yield (stop)~~ Stop lines and ~~Yield Here to (~~Stop Here for~~)~~ Pedestrians signs should not be used in advance of crosswalks that cross an approach to or departure from a circular intersection.*

Support:

19 Section 8C.03 contains information regarding the use of stop lines and yield lines at grade crossings.

Option:

20 Stop and yield lines may be staggered longitudinally on a lane-by-lane basis (see Drawing D in Figure 3B-13).

Support:

21 Staggered stop lines and staggered yield lines can improve the driver's view of pedestrians, provide better sight distance for turning vehicles, and increase the turning radius for left-turning vehicles.

22 Oregon law (ORS 811.028) requires that drivers stop for pedestrians crossing a roadway within a marked or unmarked crosswalk.

CHAPTER 3I. CHANNELIZING DEVICES USED FOR EMPHASIS OF PAVEMENT MARKING PATTERNS

Section 3I.02 Tubular Markers

Standard:

01 **Tubular markers for permanent installations shall be a minimum of 28 inches in height and shall be a minimum of 2 inches wide facing road users.**

Guidance:

02 *Tubular markers should be affixed to the pavement or other surface either directly or by means of an attachment system that is affixed to the pavement or other surface. Tubular markers should normally be spaced no greater than N as cited in Section 3B.14.*

Option:

03 Other spacing may be used based on engineering judgment.

Support:

04 Tubular markers are sometimes used to provide additional emphasis or improve lane discipline in advance of an unsignalized crosswalk (see Figure 3I-1 and Figure 3I-1(OR)).

Guidance:

05 *When tubular markers are used to supplement a R1-6 series sign (see Section 2B.20) that is either on the center line, lane line, or median island, they should not be used on the same pavement marking line where the R1-6 series sign is installed.*

Support:

06 Section 6K.04 contains information for temporary installations of tubular markers.

~~Figure 3I-1. Examples of Tubular Markers Supplementing Pavement Markings in Advance of an Unsignalized Crosswalk~~ (~~Sheet 2 of 2~~)

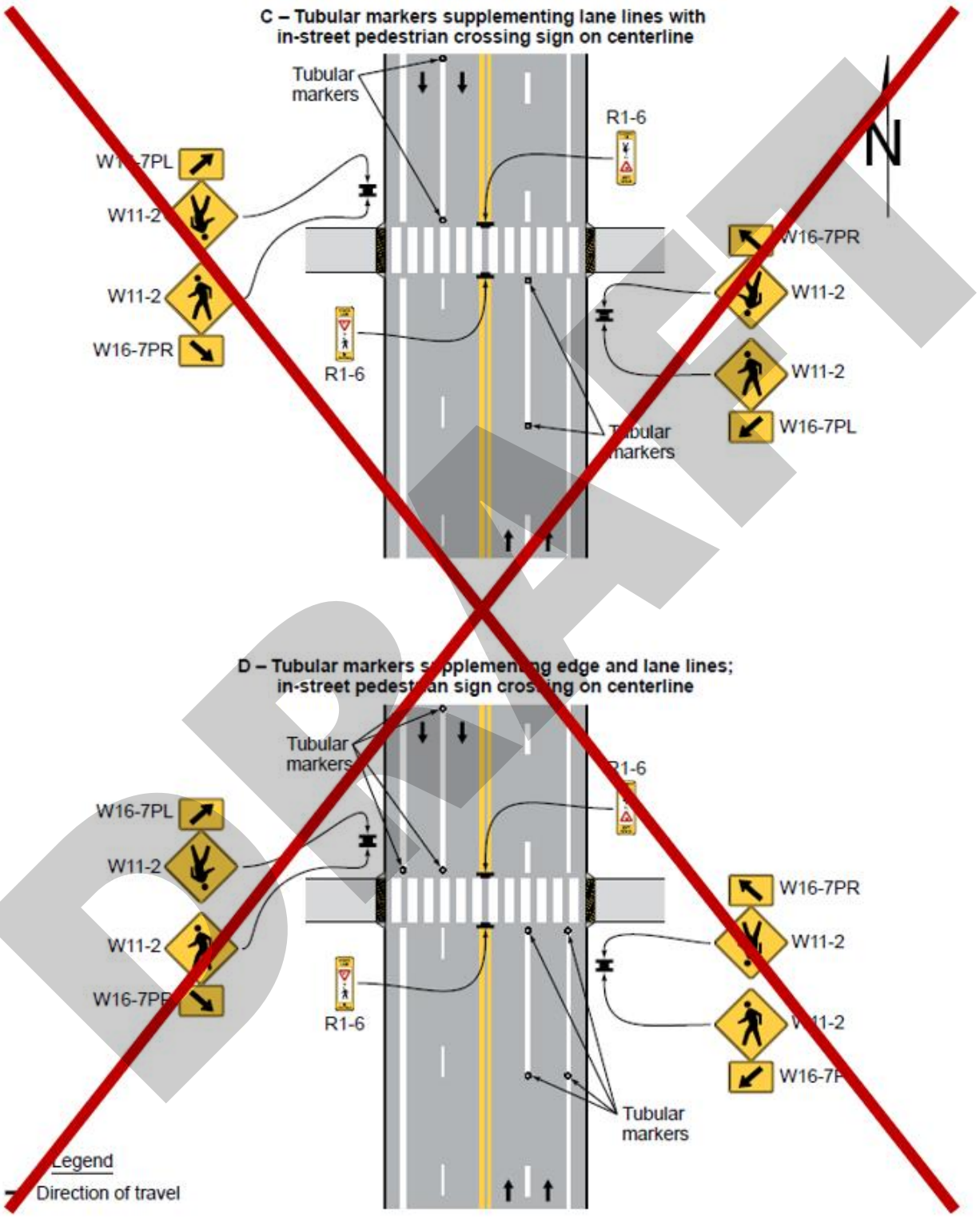
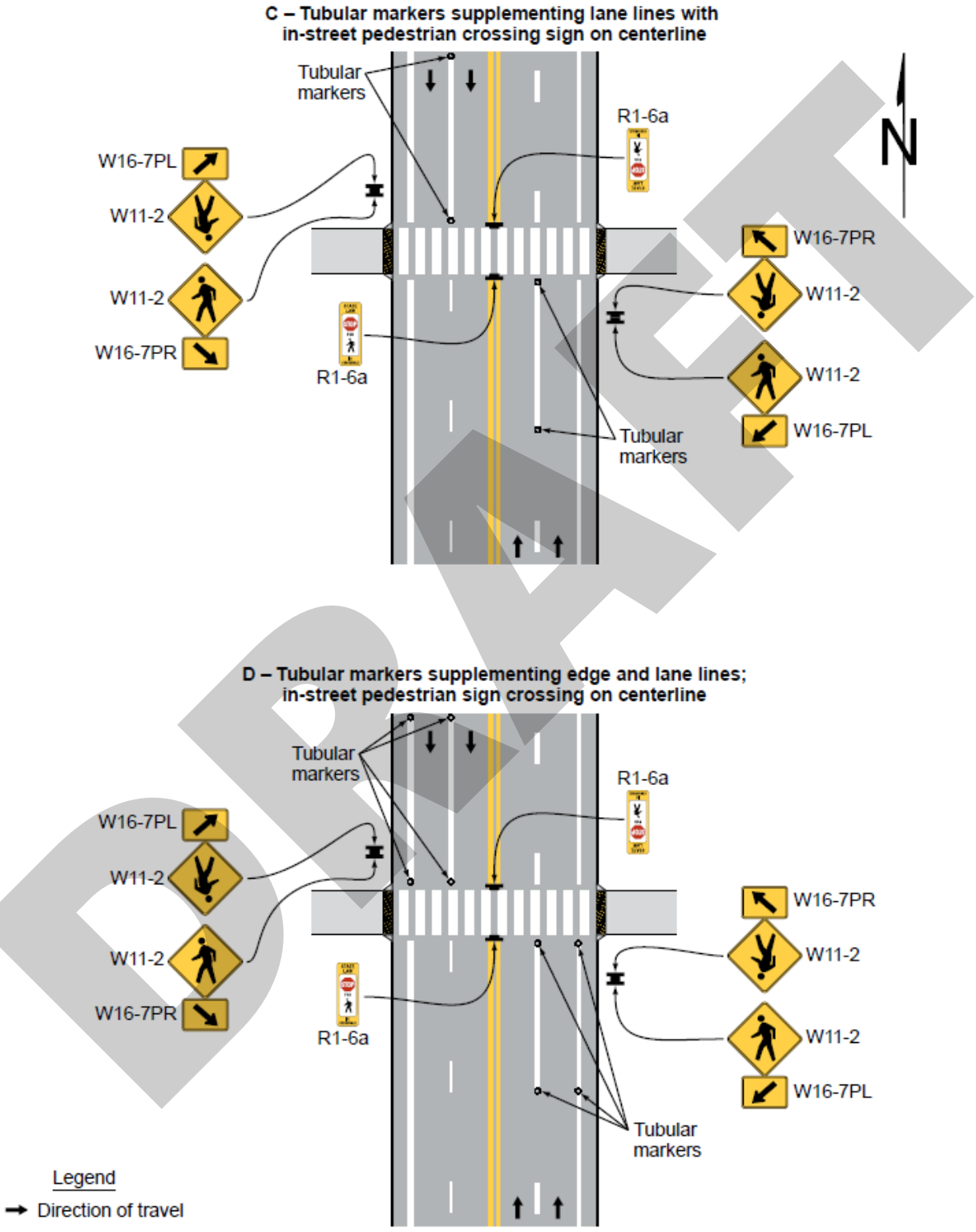


Figure 3I-1(OR). Examples of Tubular Markers Supplementing Pavement Markings in Advance of an Unsignalized Crosswalk



OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3B.05 Pavement Markings for Two-Way Left-Turn Lanes	October 15, 2024	11303
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

The 11th Edition of the MUTCD adds guidance that was not in the 2009 Edition that says two-way left-turn lanes should not extend to intersections. The 2009 Edition allowed this and many agencies in Oregon do this as common practice. This proposes to remove the added guidance.

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Problem

The 11th Edition of the MUTCD added guidance that two-way left-turn lanes (TWLTL) should not extend to intersections. The 2009 Edition allowed this and many agencies in Oregon do this as common practice.

Discussion

When a TWLTL is added to a two-lane or four-lane street, crashes may be reduced. This reduction is possible as stopped or slow left-turning vehicles aren't in the through lanes. Drivers in the TWLTL may feel more comfortable waiting for an adequate gap in traffic instead of blocking through drivers. Delay to through vehicles is also reduced because left-turning vehicles do not block the through lanes

In many locations in Oregon, driveways and intersection are very near each other and roadways use TWLTLs to serve turns into these driveways and side streets. If these all had to be converted to designated left turn lanes at intersections, Oregon would lose the safety benefit of allowing drivers to and from driveways near that intersection to use the TWLTL.

Below are example locations in Oregon where TWLTLs extend to intersections. These locations also have driveways nearby and it would be difficult to place a long enough left-turn lane at the intersection and keep the TWLTL for the driveways. Drivers wanting to turn into driveway would likely use the left turn lane anyway, facing the wrong direction.

Figure 1: Example TWLTL at Intersection (1 of 3)

Figure 2: Example TWLTL at Intersection (2 of 3)

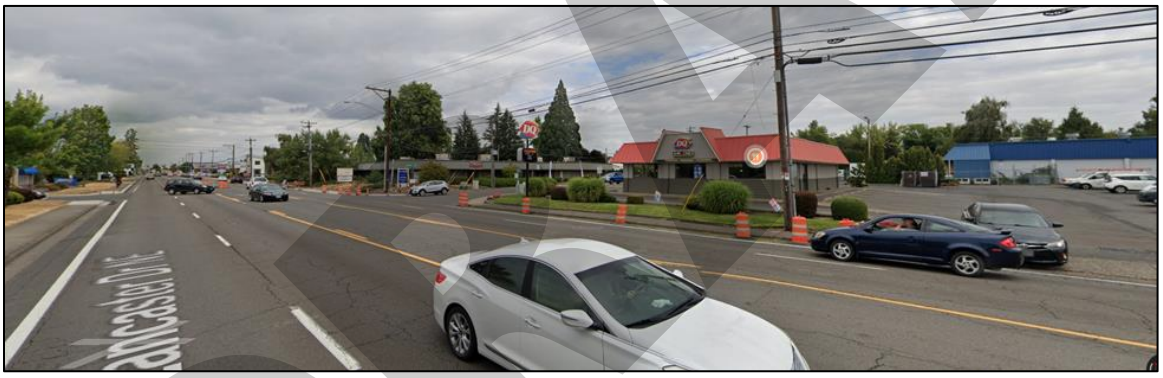

Figure 3: Example TWLTL at Intersection (3 of 3)

The Highway Safety Manual has a crash modification factor for rural two-lane road. It suggests that TWLTL on urban arterials appear to trend toward lower crashes, but the magnitude is uncertain.

The CMF Clearinghouse includes a 2010 study indicating crash reduction for adding TWLTL to the major approach of unsignalized 3-leg and 4-leg intersections. ODOT also has approved countermeasures in its Crash Reduction Factor Manual of converting a 4-lane roadway to a 3-lane roadway with a TWLTL as well as installing TWLTL on a 2-lane roadway. See countermeasure H-33 and H53 for more information in the link below.

https://www.oregon.gov/odot/Engineering/ARTS/CRF-Manual.pdf

Road authorities in Oregon have been extending TWLTL to intersection in compliance with the 2009 MUTCD in support of the safety benefits cited above. The proposed language in the 11th Edition would make this more difficult in urban areas that have many driveways and intersections. This proposes to remove the guidance added in the 11th Edition that says a TWLTLs should not extend to intersections, thus using TWLTLs as allowed in the 2009 MUTCD and how road users are used to.

Proposed Supplement Content

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CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.05 Pavement Markings for Two-Way Left-Turn Lanes

Standard:

01 **If a two-way left-turn lane that is never operated as a reversible lane is used, the lane line pavement markings on each side of the two-way left-turn lane shall consist of a normal width broken yellow line and a normal width solid yellow line to delineate the edges of a lane that can be used by traffic in either direction as part of a left-turn maneuver. These markings shall be placed with the broken line toward the two-way left-turn lane and the solid line toward the adjacent traffic lane as shown in Figure 3B-7.**

Guidance:

02 *White two-way left-turn lane-use arrows should be used at or just downstream from the beginning of a two-way left-turn lane.*

Option:

03 Additional two-way left-turn lane-use arrow markings may be used at other locations along a two-way left-turn lane where engineering judgment determines that such additional markings are needed to emphasize the proper use of the lane.

Standard:

04 **A single-direction lane-use arrow shall not be used in a lane bordered on both sides by yellow two-way left-turn lane longitudinal markings.**

Guidance:

05 *Signs should be used in conjunction with the two-way left-turn markings (see Section 2B.32).*

06 ~~*Two-way left-turn lane markings should not extend to intersections (see definition in Section 1C.02).*~~

Option:

07 Two-way left-turn lanes may be transitioned to mandatory left-turn lanes as shown in Figure 3B-7 or painted median islands where they approach an intersection.

Support:

08 Section 8A.06 contains guidance information for discontinuing a two-way left-turn lane in the immediate vicinity of a highway-rail or highway-LRT grade crossing.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3B.11 Application of Pavement Markings through Intersections or Interchanges	October 15, 2024	11304
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

As written, Section 3B.11 recommends all driveways should have edge line markings maintained across the intersection approach of driveway. Oregon has a history of breaking these edge lines for major driveways, due to their similar feel to intersections as well not wasting marking material traffic will wear down if the line is not broken. This supplement removes the recommendation for major intersections.

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Problem

As written, Section 3B.11 recommends all driveways should have edge line markings maintained across the intersection approach of the driveway. Oregon has a history of breaking these edge lines for major driveways, as they operate similarly to an intersection as well not wasting marking material that traffic will wear down if the line is not broken.

Discussion

Given how FHWA wrote Section 3B.11 in the 11th Edition of the MUTCD, Oregon would have a lot of locations that do not meet the recommendation of continuing edge lines through driveways. Examples below.

Figure 1: Edge Line Breaks for Major Driveway (1 of 3)

Figure 2: Edge Line Breaks for Major Driveway (2 of 3)

Figure 3: Edge Line Breaks for Major Driveway (3 of 3)

These locations have characteristics like curb returns, stop signs, multiple approach lanes, turn lanes, and substantial volumes on the driveway. With these characteristics, these driveways are very comparable to a roadway intersection from the road user's perspective.

Another thing to consider when breaking or striping these driveways is wear on the markings themselves. Below are examples of how pavement markings can wear at minor driveways. With this being common major driveways would expect to have even worse wear than minor driveways. Breaking the edge lines at intersections avoids this wearing of materials and avoids any confusion with any patterns in the markings caused by wearing.

Figure 4: Edge Line Wear at Minor Driveway (1 of 2)

Figure 5: Edge Line Wear at Minor Driveway (2 of 2)

This proposal as drafted would allow edge lines to be broken through major driveways. This is in line with the guidance of the 2009 MUTCD and is consistent with current practice. With this proposal, guidance for markings at major driveways would meet current driver expectation and avoid confusion from drivers.

Proposed Supplement Content

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CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.11 Application of Pavement Markings through Intersections or Interchanges

Standard:

01 **Pavement markings extended into or continued through an intersection or interchange area shall be the same color as the line markings they extend (see Figure 3B-13).**

Guidance:

02 *Pavement markings extended into or continued through an intersection or interchange area should be at least the same width as the line markings they extend.*

03 *Where highway design or reduced visibility conditions make it desirable to provide control or to guide vehicles through an intersection or interchange, such as at offset, skewed, complex, or multi-leg intersections, on curved roadways, where multiple turn lanes are used, or where offset left-turn lanes might cause driver confusion, dotted lane line extension markings consisting of 2-foot line segments and 2-foot to 6-foot gaps should be used to extend longitudinal line markings through an intersection or interchange area.*

04 *Where greater restriction is preferred, solid lane lines or channelizing lines should be extended into or continued through intersections.*

Standard:

05 **Extensions of center lines through intersections shall be dotted lines.**

Guidance:

06 *Where a double line is extended through an intersection, a single line of equal width to one of the lines of the double line should be used.*

Standard:

07 **Solid lines shall not be used to extend edge lines into or through intersections except through that part of an intersection with no intersecting approach (such as at the far side of a T-intersection).**

Guidance:

08 *Edge line markings should be discontinued across intersecting approaches at intersections or interchanges.*

09 *Driveways that do not meet the definition of an intersection, or are not major driveways, (see Section 1C.02) should have edge line markings maintained across the intersecting approach of the driveway.*

Support:

09a Major driveway indicators:

A. Curb returns and/or significant radii (not a dustpan design or curb cut).
B. A stop sign at the driveway.
C. Multiple approach lanes on the driveway.
D. Turn lanes present on the major roadway at the driveway.
E. Substantial volumes entering and leaving the driveway.

09b Minor driveway indicators:

A. Dustpan design, curb cut, or small radii.
B. Narrow width of intersecting roadway.
C. Minor volumes entering and leaving driveway (e.g.: single home or small business).

Option:

10 Dotted edge line extensions may be placed through intersections.

Support:

11 Section 3B.31 contains information about edge lines through diverging diamond interchanges with a transposed alignment crossroad.

12 Section 3D.03 provides information for edge lines through roundabouts.

13 Section 5B.02 contains information on edge line extensions for driving automation system considerations.

14 Section 8C.05 contains information about the extension of edge lines through grade crossing areas.

15 Section 9E.03 contains information for the extensions of bicycle lanes through intersections.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3B.12 Lane Reduction Transitions	October 15, 2024	11305
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

Figure 3B-14 in Section 3B.12 (Lane Reduction Transitions) is on the FHWA's known error list. In Figure 3B-14 the sign assembly location is in the wrong location. This can lead to incorrect sign placement at lane reductions if this is not addressed.

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Problem

Figure 3B-14 in Section 3B.12 Lane Reduction Transitions is on FHWA's known error list. In Figure 3B-14 the sign assembly is in the incorrect location. This can lead to incorrect sign placement at lane reductions if the Supplement does not address it.

Discussion

FHWA published the know errors of the 11th Edition of the MUTCD. This proposes to address the known error of the sign placement in Figure 3B-14. The placement of sign W4-2R in Figure 3B-14 moved to the correct location.

Figure 1: FHWA Known Error for Figure 3B-14

Figure 3B-14

- Both drawings A – Lane reduction and B – Lane reduction with lateral shift to the left: The W4-2R signs should be located at the advanced placement distance where the W9-1R and W16-2P signs and plaques are shown. The W9-1R and W16-2P signs and plaques should be shown at a location in advance of the W4-2R signs. (May 10, 2024)

Proposed Supplement Content

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CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.12 Lane-Reduction Transitions

Support:

01 A lane-reduction is where the number of through lanes is reduced at a location that is not at an interchange or intersection because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane.

02 Section 3B.07 contains information on pavement markings for lane drops and splits.

03 Section 2C.47 contains information for warning signing used for lane reductions.

Standard:

04 **Lane-reduction transitions (see Figure 3B-14) shall include the following elements:**

A. A no-passing zone (see Section 3B.03) to prohibit passing in the direction of the convergence and through the transition area except where not applicable such as one-way streets, expressways, and freeways; and

B. An edge line (see Section 3B.09) in the direction of the convergence and through the transition area, except as provided in Paragraph 6 of this Section.

Guidance:

05 Except as provided in Paragraph 6 of this Section, the edge line marking should be installed from the location of the Lane Ends warning sign to beyond the beginning of the narrower roadway.

Option:

06 On roadways with operating speeds less than 25 mph where curbs clearly define the roadway edge in the lane reduction transition, or where a through lane becomes a parking lane, the edge line may be omitted as determined by engineering judgment.

Guidance:

07 *Lane-reduction transitions should include the following elements:*

A. Delineators installed adjacent to the lane or lanes reduced for the full length of the transition and should be so placed and spaced (see Section 3G.04) to show the reduction except as provided in Paragraph 13 of this Section and except as provided in Paragraph 2 of Section 3G.03 for freeways and expressways,

B. Lane-reduction arrow markings (see Drawing F in Figure 3B-21) on the roadway with a speed limit of 45 mph or more, and

C. A termination of the broken white lane line at a point that is ¼ of the advance placement distance (see Section 2C.04) between the Lane Ends sign (see Section 2C.47) and the point where the transition taper begins.

08 *For roadways having a speed limit of 45 mph or greater, the transition taper length for a lane-reduction transition should be computed by the formula L = WS, where L equals the taper length in feet, W equals the width of the offset distance in feet, and S equals the 85th-percentile speed or the speed limit in mph, whichever is higher. For roadways where the speed limit is less than 45 mph, the formula L = WS2/60 should be used to compute the taper length.*

09 *The minimum lane reduction transition taper length should be 100 feet in urban areas and 200 feet in rural areas.*

10 *Where observed speeds exceed speed limits, longer tapers should be used.*

Option:

11 The minimum taper length may be less than 100 feet on roadways where the operating speed is less than 25 mph.

12 On new construction, where no speed limit has been established, the design speed may be used in the transition taper length formula.

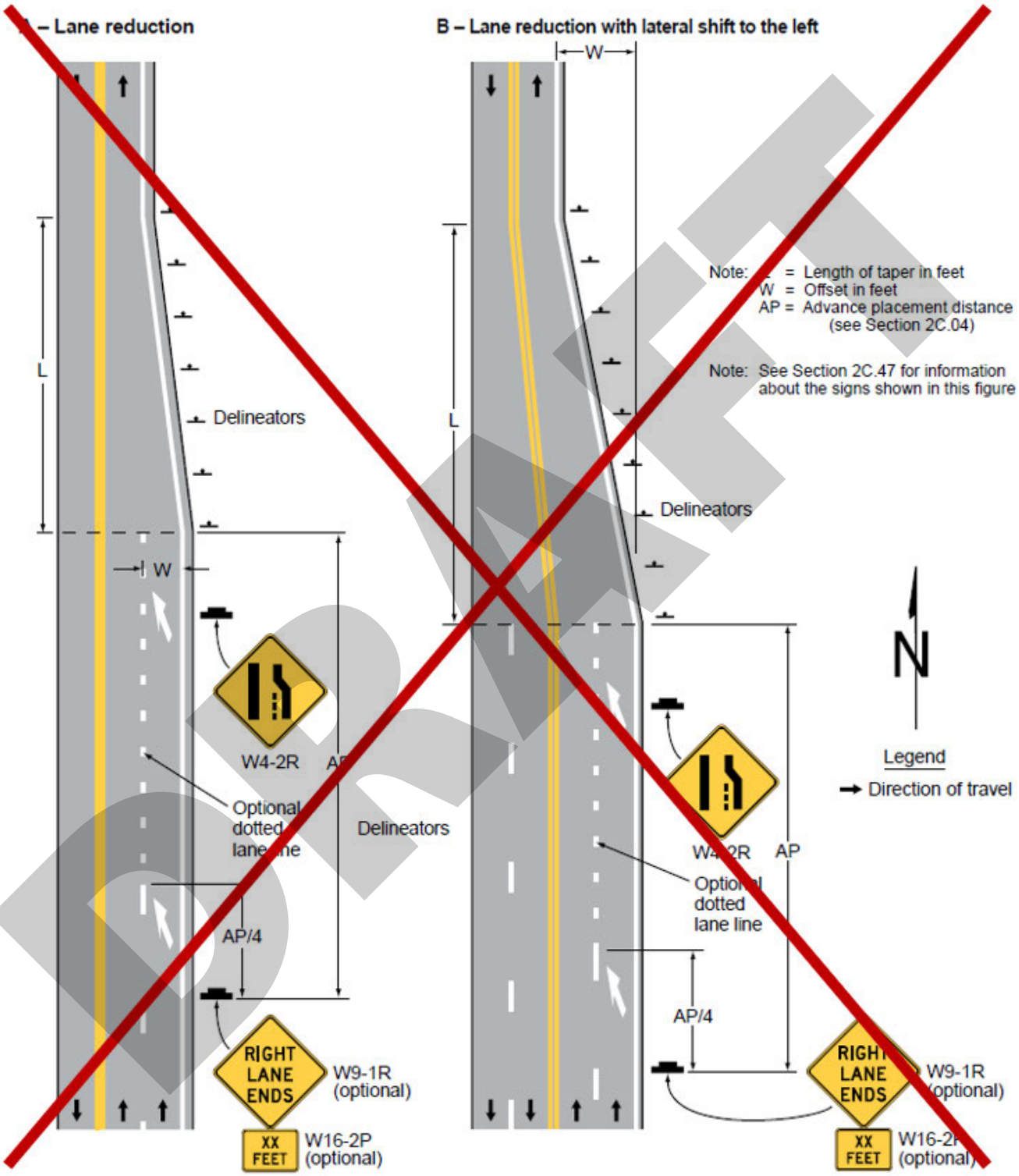
13 On low-speed urban roadways where curbs clearly define the roadway edge in the lane-reduction transition, or where a through lane becomes a parking lane, delineators may be omitted as determined by engineering judgment.

14 Where a lane-reduction transition occurs on a roadway with a speed limit of less than 45 mph, lane-reduction arrow markings may be used.

15 Lane-reduction arrow markings may be used in long acceleration lanes based on engineering judgment.

16 A dotted white line may be used between the point where the broken white lane line is terminated to the point where the transition taper begins.

68 **~~Figure 3B-14. Examples of Applications of Lane-Reduction Transition Markings~~**



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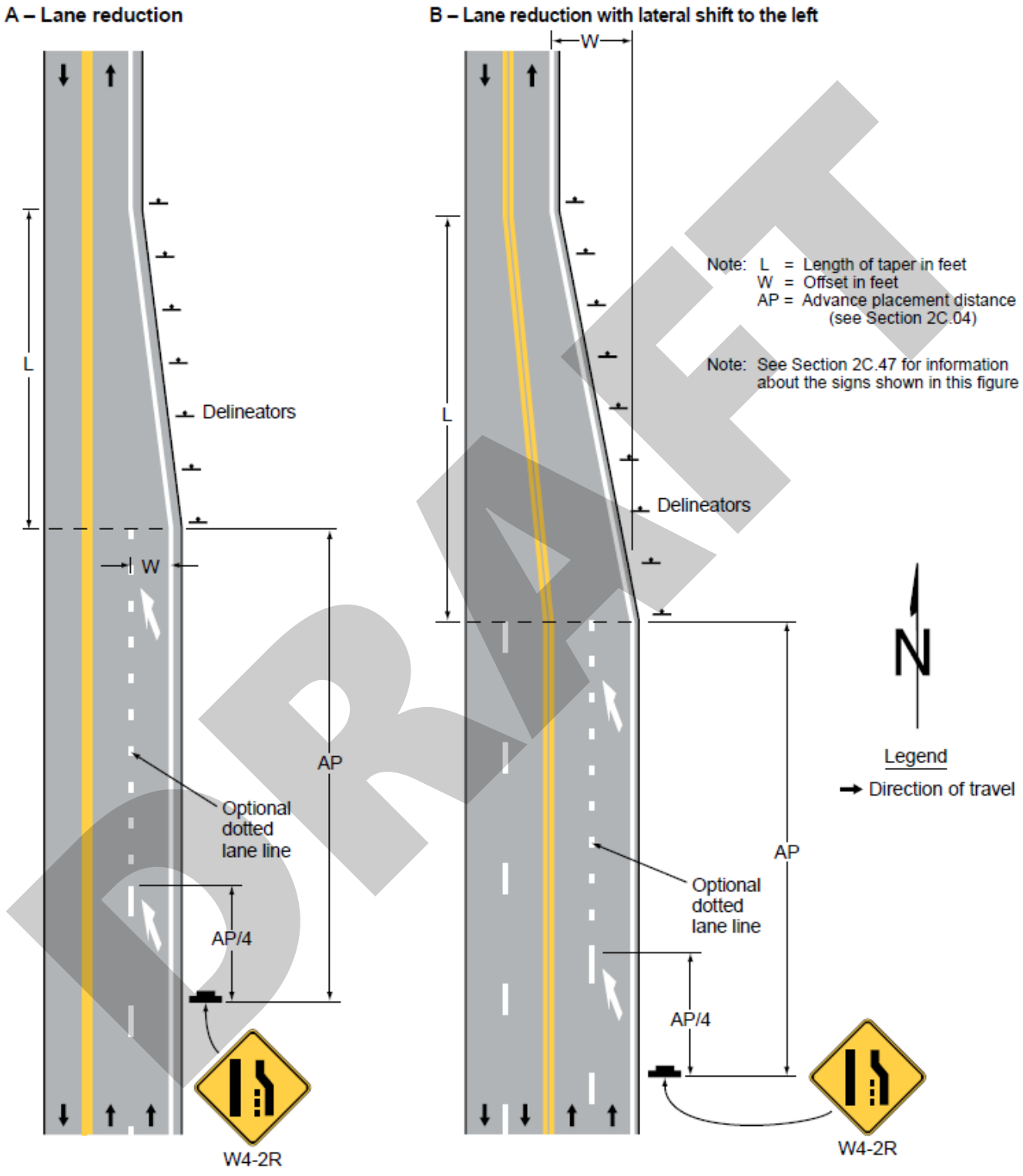
70 **Figure 3B-14(OR). Examples of Applications of Lane-Reduction Transition Markings**



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SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3C.03 – Design of Crosswalk Markings	October 15, 2024	11306
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 3C.03 Paragraph 09 could lead to unintended confusion without clarification. This proposes adding clarifying language.

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Problem

Section 3C.03 Paragraph 09 says crosswalks is a standard that says, "Where curb ramps are provided, crosswalk markings shall be located so that the curb ramps are within the extension of the crosswalk markings." This could lead to unintended confusion about needing to mark all crosswalks wherever a curb ramp is provided.

Discussion

Without clarification, practitioners could take Paragraph 09 that crosswalks must be marked wherever curb ramps are provided. FHWA's Supplemental Summary of Final Rule Dispositions describes this change in NPA Item 348.

Figure 1: FHWA Final Rule Disposition for 3C.03 Paragraph 09.

In addition, FHWA proposes changing P17 from a Guidance to Standard requiring, rather than recommending, crosswalk markings to be located so that the curb ramps are within the extension of the crosswalk markings, where curb ramps are provided. FHWA proposes this change to accommodate users with visual disabilities better.	The proposal to change the Guidance regarding curb ramps being located within the extension of the crosswalk markings to Standard is adopted as proposed.

This proposes adding a clarification in the Supplement to address potential confusion and uphold the intent of the standard.

Proposed Supplement Content

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CHAPTER 3C. CROSSWALK MARKINGS

Section 3C.03 Design of Crosswalk Markings

Support:

01 Section 3B.19 contains information regarding placement of stop line markings and yield line markings near crosswalk markings.

02 Crosswalk markings are classified as either transverse line or high-visibility. Transverse crosswalk markings consist of two transverse lines. High-visibility markings consist of longitudinal lines parallel to traffic flow with or without transverse lines. Figure 3C-1 presents crosswalk marking designs.

Standard:

03 **Crosswalk markings shall be white. When used, transverse lines shall not be less than 6 inches or greater than 24 inches in width.**

Support:

04 The allowable upper limit approaching 24 inches for the width of the transverse lines is normally applied where no stop or yield line is used in advance of the crosswalk or when approach speeds exceed 35 miles per hour.

Standard:

05 **Except as provided in Paragraph 6 of this Section, the minimum width of a marked crosswalk shall be 6 feet.**

06 **At a non-intersection crosswalk where the posted speed limit is 40 mph or greater, the minimum width of the crosswalk shall be 8 feet.**

Guidance:

07 *High-visibility crosswalk markings (such as shown in Figure 3C-1) and warning signs (see Section 2C.55) should be installed for all crosswalks at non-intersection locations.*

08 *Added visibility should be provided by parking prohibitions on the approach to marked crosswalks at non-intersection locations.*

Standard:

09 **Where curb ramps are provided at marked crosswalks, crosswalk markings shall be located so that the curb ramps are within the extension of the crosswalk markings.**

Guidance:

10 *Transverse line crosswalk markings should extend across the full width of pavement or to the edge of the intersecting crosswalk to discourage diagonal walking between crosswalks.*

Support:

11 Provisions for aesthetic treatments for the interior portion of a legally-established crosswalk are contained in Section 3H.03.

Standard:

12 **If paving materials are used to function as the white transverse lines to establish a marked crosswalk, white additives shall be part of the mixture to produce a white surface. The white paving materials shall be retroreflective.**

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SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3C.06 – High-Visibility Crosswalks	October 15, 2024	11307
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

As written, Section 3C.05 requires three elements to establish a high-visibility crosswalk. Separated bike lanes have marked crosswalks in some cases. Under MUTCD's standards for high-visibility crosswalk markings, bike lanes would always need to be greater than 5 feet wide to fit a high-visibility crosswalk across the bike lane. Not all bike lanes in Oregon are 5 feet wide. This proposes adding an option for high-visibility crosswalks in bike lanes that allows narrower spacing or fewer longitudinal elements.

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Problem

As written, Section 3C.05 requires three elements to establish a high-visibility crosswalk. Marked crosswalks can cross bike lanes. Under MUTCD's standards for high-visibility crosswalk markings, bike lanes would always need to be greater than 5 feet wide to fit a high-visibility crosswalk across the bike lane. Not all bike lanes in Oregon are 5 feet wide. This proposes adding an option for high-visibility crosswalks in bike lanes that allows narrower spacing or fewer longitudinal elements.

Discussion

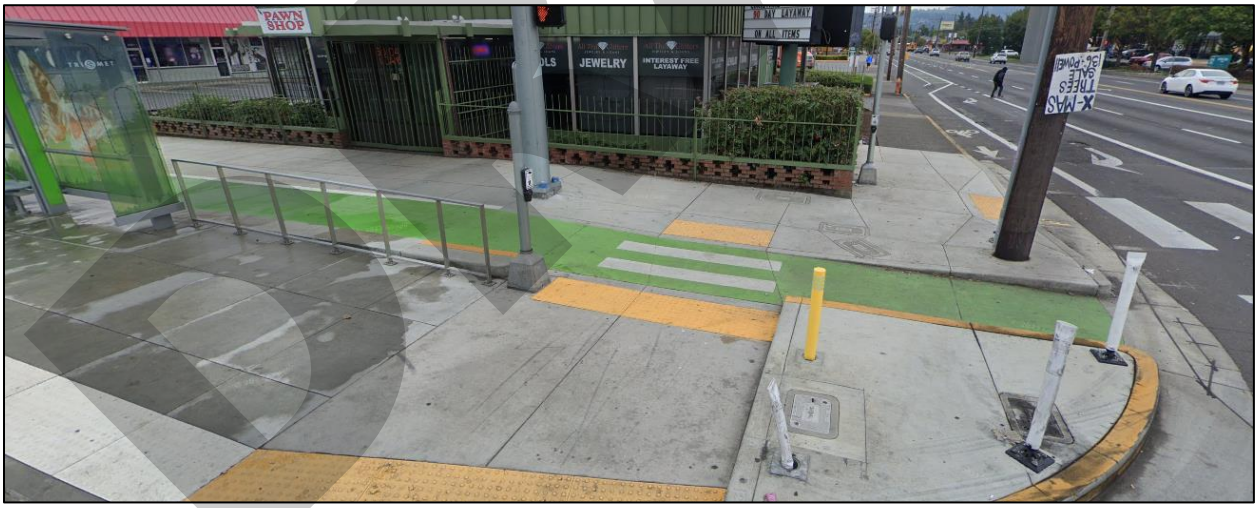
The minimum width layout and minimum number of elements to create a high-visibility crosswalks means this marking pattern will not fit on narrow separated bike lanes. The narrowest high-visibility marking option (longitudinal bar) is 5 feet wide. While this will be sufficient for most applications, there may be cases where a narrower separated bike lane is needed to fit the needs of the location.

For example, there is design practice in Oregon at some bus stop locations that separate the bike lane from the roadway and have it cross the pedestrian area loading zone for buses. These locations do not always have the space required to meet the minimum number of elements with the minimum spacing. See Figure 1 below. Constrained urban environments may also mean separated bicycle lanes need to narrow for other features, like in Figure 2.

This proposal would add an option for high-visibility crosswalks in bike lanes that allows the narrower spacing or fewer longitudinal elements. This proposal would make locations like the examples below follow the Supplement.

Figure 1: Crosswalk Markings Across Narrow Separated Bicycle Lane (1 of 2)

Figure 2: Crosswalk Markings Across Narrow Separated Bicycle Lane (2 of 2)



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CHAPTER 3C. CROSSWALK MARKINGS

Section 3C.05 High-Visibility Crosswalks

Option:

01 High-visibility crosswalk markings may be used where additional conspicuity is desired for a crosswalk over transverse line crosswalk markings.

Support:

02 High-visibility crosswalk markings include the longitudinal bar, ladder, and bar pair designs (see Figure 3C-1).

03 High-visibility crosswalk markings can provide benefits to crosswalk operations including:

A. Providing greater detection distances for the approaching motorist.
B. Emphasizing a crosswalk where substantial numbers of pedestrians cross without any other traffic control device.
C. Emphasizing a crosswalk at an uncontrolled approach.
D. Emphasizing the location where a high number of conflicts between turning motorists and users of the crosswalk are expected.
E. Improving visibility of the crosswalk location for otherwise difficult-to-detect pedestrians or other nonmotorized users of the crosswalk.
F. Emphasizing a school crossing.

Standard:

04 **The minimum number of individual longitudinal elements to establish a high-visibility crosswalk shall be three. For the bar pair crosswalk design (see Section 3C.08), a coupling set of two longitudinal bars shall be considered to be one individual longitudinal element.**

Guidance:

05 *The dimensions of the individual longitudinal element and the lateral spacing between subsequent individual longitudinal elements for a high-visibility crosswalk should be uniform when establishing the crosswalk.*

06 *The dimensions of the individual longitudinal element and the lateral spacing between subsequent individual longitudinal elements for a high-visibility crosswalk should be uniform when establishing separate crosswalks on multiple approaches to the same intersection and on both sides of a median refuge if one is present.*

07 *The individual longitudinal elements of a high-visibility crosswalk should be angled such that they are parallel to the travel path of approaching traffic.*

Option:

08 The lateral spacing between longitudinal elements may be staggered to avoid wheel paths, center lines, and lane lines.

09 In bike lanes with a high-visibility crosswalk where minimum spacing between elements or number of longitudinal elements cannot be met because of the bike lane width, lateral spacing between elements or the number of elements may be reduced.

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OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
3J.03 – Islands Designated by Pavement Markings	October 15, 2024	11308
Supplement Team	**Status**	
3-Markings	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 3J.03 only allows white markings for a crosswalk within the island created by two sets of solid double yellow lines. In some scenarios, green pavement makings for bicycle facilities may be appropriate, such as green bike lane extension markings across one of these islands. Green markings may be desired but would not be allowed as written.

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Problem

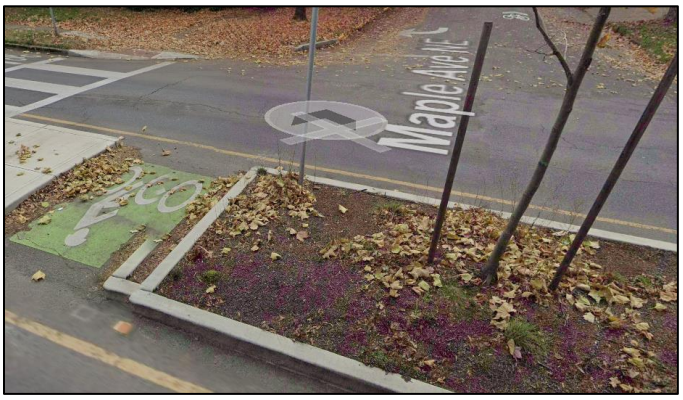
Section 3J.03 only allows white markings for a crosswalk within the island created by two sets of double yellow lines. In some scenarios, green pavement markings for bicycle facilities may be appropriate, such as green bike lane extension markings across one of these islands, and green markings may be desired but would not be allowed as written.

Discussion

In some cases, medians can be continuous though intersections and vehicle travel may be restricted to right-in right out, but bicycles may still be allowed to cross. In this scenario, green colored pavement installed according to MUTCD 11th Edition Section 3H.06 or Figure 9E-14 may be desired. As written now, Section 3J.03 would not allow green in these scenarios.

This proposes to allow green markings which, following Section 3H.06, would be allowed in the correct scenarios.

Figure 1: Green Markings in Median

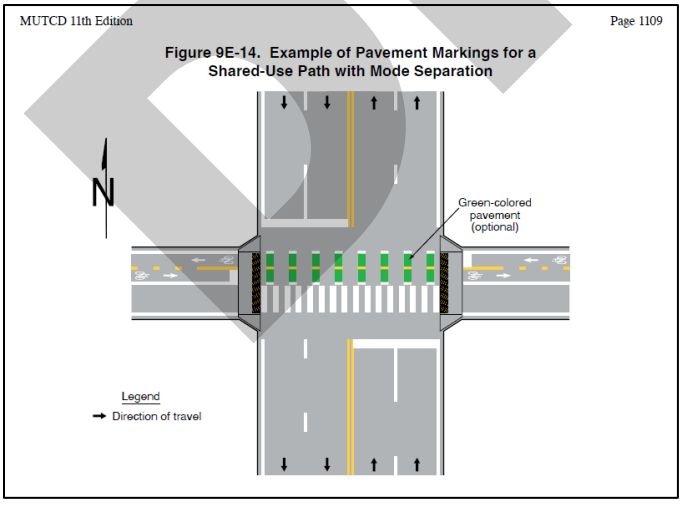


Note: this shows a raised median, but green bike lane markings might be desired in a painted median.

Figure 2: Shared-Use Path Crossing Painted Median

Note: this shows crosswalk markings. However, green markings could be used if this shared-use path separated modes, like MUTCD Figure 9E-14.

Figure 3: MUTCD 11th Edition Figure 9E-14



Proposed Supplement Content

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CHAPTER 3J. MARKING AND DELINEATION OF ISLANDS AND SIDEWALK EXTENSIONS

Section 3J.03 Islands Designated by Pavement Markings

Standard:

01 **Except as provided in Paragraph 2 of this Section, islands formed by pavement markings only shall be established using channelizing lines, and shall be white when separating traffic flows in the same general direction or yellow when separating opposing directions of traffic.**

02 **If a continuous flush median island separating travel in opposite directions is used, two sets of double solid yellow lines shall be used to form the island (see Figure 3B-5). Other markings in the median island area, such as diagonal lines (see Section 3B.25), shall also be yellow, except crosswalk markings which shall be white (see Chapter 3C) and green-colored pavement for bicycle facilities which shall be green and follow Section 3H.06.**

03 **If used, chevron or diagonal markings (see Section 3B.25) within the island shall be the same color as the channelizing line.**

Option:

04 Both chevron and diagonal markings of the same color may be used within the same island based on engineering judgment.

05 The area within the flush island delineated by pavement markings may use colored pavement in accordance with the provisions of Chapter 3H.

Support:

06 Figure 3J-2 illustrates examples of islands designated by pavement markings.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4A.02 – Meanings of Signal Indications	October 15, 2024	11401
Supplement Team	**Status**	
4-Signals	OTCDC Review – 1st round	

Summary (2-3 sentences)

Conflict with Oregon law. ORS 811.260 and 811.360 allows a right turn on red arrow. This proposes a direct carry-over from the 2009 MUTCD and Oregon Supplement.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

[Editor's note: Proposal No. 11204 is a parallel proposal related to turns on red arrows.]

Problem

Conflict with Oregon law.

Discussion

ORS 811.260(8) and 811.360(1)(a) & (b) allows a right turn on red arrow. This proposes a direct carry-over from the 2009 MUTCD and Oregon Supplement. See clip of Oregon Law below.

811.260 Appropriate driver responses to traffic control devices.

Except as provided in ORS 811.265 (2), a driver is in violation of ORS 811.265 if the driver makes a response to traffic control devices that is not permitted under the following:

[Sections (1) through (7) not shown.]

(8) Steady red arrow signal. A driver facing a steady red arrow signal, alone or in combination with other signal indications, may not enter the intersection to make the movement indicated by the red arrow signal. Unless entering the intersection to make some other movement which is permitted by another signal, a driver facing a steady red arrow signal shall stop at a clearly marked stop line, but if none, before entering the marked crosswalk on the near side of the intersection, or if there is no marked crosswalk, then before entering the intersection. The vehicle shall remain stopped until a green light is shown except when the driver is permitted to proceed under ORS 811.360.

[Sections (9) through (17) not shown.]

811.360 Vehicle turns permitted at stop light; proceeding against traffic control device; improperly proceeding at stop light; penalty.

(1) The driver of a vehicle, subject to this section, who is intending to turn at an intersection where there is a traffic control device showing a steady circular red signal, a steady red bicycle signal or a steady red arrow signal may do any of the following without violating ORS 811.260 and 811.265:

(a) Make a right turn into a two-way street.

(b) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

[Sections (2) through (5) not shown.]

Proposed Supplement Content

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CHAPTER 4A. GENERAL

Section 4A.02 Meanings of Signal Indications

Support:

01a The appropriate driver response to traffic control devices in Oregon and the conditions when a vehicle turn is permitted at a traffic control signal are governed by ORS 811.260 and 811.360 respectively.

01 The "Uniform Vehicle Code" (see Section 1A.06) is the primary source for the standards for the meanings of vehicular signal indications to both vehicle operators and pedestrians as provided in Sections 4A.03 and 4A.04, the standards for the meanings of separate bicycle signal face indications as provided in Section 4A.05, and the standards for the meanings of separate pedestrian signal head indications as provided in Section 4A.06.

02 The physical area that is defined as being "within the intersection" is dependent upon the conditions that are described in the definition of an intersection in Section 1C.02.

Section 4A.03 Meanings of Steady Vehicular Signal Indications

Standard:

01 **The following meanings shall be given to steady highway traffic signal indications for vehicles and pedestrians:**

A. Steady green signal indications shall have the following meanings:

1. Vehicular traffic facing a CIRCULAR GREEN signal indication is permitted to proceed straight through or turn right or left or make a U-turn movement except as such movement is modified by lane-use signs, turn prohibition signs, lane markings, roadway design, separate turn signal indications, or other traffic control devices. Such vehicular traffic, including vehicles turning right or left or making a U-turn movement, shall yield the right-of-way to:
(a) Pedestrians lawfully within an associated crosswalk, and
(b) Other vehicles lawfully within the intersection.

In addition, vehicular traffic turning left or making a U-turn movement to the left shall yield the right-of-way to other vehicles approaching from the opposite direction so closely as to constitute an immediate hazard during the time when such turning vehicle is moving across or within the intersection.

2. Vehicular traffic facing a GREEN ARROW signal indication, displayed alone or in combination with another signal indication, is permitted to cautiously enter the intersection only to make the movement indicated by such arrow, or such other movement as is permitted by other signal indications displayed at the same time.

Such vehicular traffic, including vehicles turning right or left or making a U-turn movement, shall yield the right-of-way to:
(a) Pedestrians lawfully within an associated crosswalk, and
(b) Other vehicles lawfully within the intersection.

3. Pedestrians facing a CIRCULAR GREEN signal indication, unless otherwise directed by a pedestrian signal indication or other traffic control device, are permitted to proceed across the roadway within any marked or unmarked associated crosswalk. The pedestrian shall yield the right-of-way to vehicles lawfully within the intersection or so close as to create an immediate hazard at the time that the green signal indication is first displayed.

4. Pedestrians facing a GREEN ARROW signal indication, unless otherwise directed by a pedestrian signal indication or other traffic control device, shall not cross the roadway.

B. Steady yellow signal indications shall have the following meanings:

1. Vehicular traffic facing a steady CIRCULAR YELLOW signal indication is thereby warned that the related green movement or the related flashing arrow movement is being terminated or that a steady red signal indication will be displayed immediately thereafter when vehicular traffic shall not enter the intersection. The rules set forth concerning vehicular operation under the movement(s) being terminated shall continue to apply while the steady CIRCULAR YELLOW signal indication is displayed.

2. Vehicular traffic facing a steady YELLOW ARROW signal indication is thereby warned that the related GREEN ARROW movement or the related flashing arrow movement is being terminated. The rules set forth concerning vehicular operation under the movement(s) being terminated shall continue to apply while the steady YELLOW ARROW signal indication is displayed.

3. Pedestrians facing a steady CIRCULAR YELLOW or YELLOW ARROW signal indication, unless otherwise directed by a pedestrian signal indication or other traffic control device shall not start to cross the roadway.

C. Steady red signal indications shall have the following meanings:

1. Vehicular traffic facing a steady CIRCULAR RED signal indication, unless entering the intersection to make another movement permitted by another signal indication, shall stop at a clearly marked stop line; but if there is no stop line, traffic shall stop before entering the crosswalk on the near side of the intersection; or if there is no crosswalk, then before entering the intersection; and shall remain stopped until a signal indication to proceed is displayed, or as provided below.

Except when a traffic control device is in place prohibiting a turn on red ~~or a steady RED ARROW signal indication is displayed~~, vehicular traffic facing a steady CIRCULAR RED signal indication is permitted to enter the intersection to turn right, or to turn left ~~from a one-way street~~ into a one-way street, after stopping. The right to proceed with the turn shall be subject to the rules applicable after making a stop at a STOP sign.

2. Vehicular traffic facing a steady RED ARROW signal indication shall not enter the intersection to make the movement indicated by the arrow and, unless entering the intersection to make another movement permitted by another signal indication, shall stop at a clearly marked stop line; but if there is no stop line, before entering the crosswalk on the near side of the intersection; or if there is no crosswalk, then before entering the intersection; and shall remain stopped until a signal indication or other traffic control device permitting the movement indicated by such RED ARROW is displayed or as provided below.

~~When~~ Except when a traffic control device is in place ~~permitting~~ prohibiting a turn on red ~~a steady RED ARROW signal indication~~, vehicular traffic facing a steady RED ARROW signal indication is permitted to enter the intersection to make the movement indicated by the arrow signal indication, after stopping. The right to proceed with the turn shall be limited to the direction indicated by the arrow and shall be subject to the rules applicable after making a stop at a STOP sign.

3. Unless otherwise directed by a pedestrian signal indication or other traffic control device, pedestrians facing a steady CIRCULAR RED or steady RED ARROW signal indication shall not enter the roadway.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4D.02 – Provisions for Pedestrians	October 15, 2024	11402
Supplement Team	**Status**	
4-Signals	OTCDC Review – 1st round	

Summary (2-3 sentences)

Conflict with Oregon law. ORS 810.080 requires the use of a sign when closing a crosswalk.

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Problem

Conflict with Oregon law.

Discussion

ORS 810.080(1)(b) requires the use of a sign when closing a crosswalk. This proposes to change the MUTCD language from a "should" to a "shall." Direct carry over from the 2009 MUTCD and Oregon Supplement.

810.080 Pedestrian traffic.

(1) Road authorities may regulate the movement of pedestrians upon highways within their jurisdictions by doing any of the following:
  (a) Establishing marked crosswalks and designating them by appropriate marking.
  (b) Closing a marked or unmarked crosswalk and prohibiting pedestrians from crossing a roadway where a crosswalk has been closed by placing and maintaining signs giving notice of closure.
  (c) Prohibiting pedestrians from crossing a highway at any place other than within a marked or unmarked crosswalk.
(2) This section neither grants authority to nor limits the authority of the Department of Transportation.
[1983 c.338 §152]

Proposed Supplement Content

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CHAPTER 4D. DESIGN FEATURES OF TRAFFIC CONTROL SIGNALS

Section 4D.02 Provisions for Pedestrians

Support:

01 Chapter 4I contains additional information regarding pedestrian control features, Chapter 4J contains additional information regarding pedestrian hybrid beacons, and Chapter 4K contains additional information regarding accessible pedestrian signals and detectors.

Standard:

02 **Pedestrian signal heads shall be used in conjunction with vehicular traffic control signals under any of the following conditions, unless the pedestrian crossing is prohibited:**

- **A. If the basis for traffic signal installation was justified by an engineering study and meeting either Warrant 4, Pedestrian Volume or Warrant 5, School Crossing (see Chapter 4C);**
- **B. If an exclusive pedestrian signal phase or a leading pedestrian interval (LPI) is provided with all conflicting vehicular movements being stopped;**
- **C. At an established signalized school crossing; or**
- **D. Where there are existing pedestrian accommodations and engineering judgment determines that multi-phase signal indications (such as split-phase timing) would tend to confuse or cause conflicts with pedestrians using a crosswalk guided only by vehicular signal indications.**

Guidance:

03 *Pedestrian signal heads should be installed for each marked crosswalk at a location controlled by a traffic control signal.*

04 *Where pedestrian movements regularly occur, pedestrians should be provided with sufficient time to cross the roadway by adjusting the traffic control signal operation and timing to provide sufficient crossing time every cycle or by providing pedestrian detectors.*

Standard:

05 **Where certain pedestrian movements are prohibited at a traffic control signal location, a sign shall be used** ~~*No Pedestrian Crossing (R9-3) sign (see Section 2B.57) should be used if it is impracticable to provide a barrier or other physical feature to physically discourage the pedestrian movements.*~~

Guidance:

05a *A barrier or other physical feature to physically discourage the pedestrian movements should be provided when a crosswalk is closed at a traffic control signal location.*

Support:

05b ORS 810.080 details the requirements for regulating pedestrian traffic on highways in Oregon.

Support:

06 Accessible pedestrian signals (see Chapter 4K) that provide information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces) enhance safety and accessibility at signalized crossings for pedestrians with vision disabilities.

Option:

07 Pedestrian signal heads may be used under other conditions based on engineering judgment.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4F.19 – Preemption Control of Traffic Control Signals	October 15, 2024	11403
Supplement Team	**Status**	
4-Signals	OTCDC Review – 1st round	

Summary (2-3 sentences)

Conflict with Oregon law. OAR 734-020-0320(5)(e) prohibits the termination of an active pedestrian or vehicular clearance interval by emergency preemption or bus priority.

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Problem

Conflict with Oregon law.

Discussion

OAR 734-020-0320(5)(e) prohibits the termination of an active pedestrian or vehicular clearance interval by emergency preemption or bus priority. This proposes to remove the option to do so in Section 4F.19. This is a direct carry over from the 2009 MUTCD and Oregon Supplement. See clip of OAR below:

OAR 734-020-0320 – Standards for Installation and Operation of Emergency Preemption and Bus Priority Systems

[Sections (1) through (4) not shown.]

(5) Operating requirements for signal preemption devices and traffic control signal operating devices are as follows:

(a) All signal preemption devices and traffic control signal operating devices shall be tested by the Oregon Department of Transportation and approved for use;

(b) Where multiple users of traffic control signal operating devices are authorized, the signal preemption device shall recognize and respond to the priority of each user as established by OAR 734-020-0330;

(c) Actuation of a bus priority system is available only if the system has not been preempted by an emergency vehicle call. Bus priority operation will be immediately canceled when an emergency preemption call is received;

(d) A traffic control signal operating device shall not continue to control the traffic control signal once the vehicle has entered the intersection or if a vehicle remains stationary for more than two minutes; and

(e) Neither emergency preemption nor bus priority shall terminate an active pedestrian or vehicular clearance interval.

(f) Entities operating emergency vehicles will provide training for all drivers in the operation and limitations of emergency preemption systems.

(g) Lights and sirens on emergency vehicles must be activated when the traffic control signal operating device is activated.

(h) Traffic control signal operating devices shall be deactivated when the emergency vehicle's transmission is set in park or the parking brake is engaged.

Proposed Supplement Content

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CHAPTER 4F. STEADY (STOP-AND-GO) OPERATION OF TRAFFIC CONTROL SIGNALS

Section 4F.19 Preemption Control of Traffic Control Signals

Support:

01 Preemption control (see definition in Section 1C.02) is typically given to trains, boats, emergency vehicles, and light rail transit.

02 Examples of preemption control include the following:

A. The prompt displaying of green signal indications at signalized locations ahead of fire vehicles, law enforcement vehicles, ambulances, and other official emergency vehicles;

B. A special sequence of signal phases and timing to expedite and/or provide additional clearance time for vehicles to clear the tracks prior to the arrival of rail traffic; and
C. A special sequence of signal phases to display a steady red indication to prohibit turning movements toward the tracks during the approach or passage of rail traffic.

Standard:

03 **During the transition into preemption control, the yellow change interval, and any red clearance interval that follows, shall not be shortened or omitted.** **During the transition into preemption control any pedestrian change interval shall not be shortened or omitted unless the shortening or omission results from a railroad preemption or drawbridge preemption as documented in a highway-rail or highway-LRT grade Crossing Order or drawbridge preemption.**

~~Option:~~

04 ~~During the transition into preemption control:~~
~~A. Any pedestrian walk interval and/or pedestrian change interval may be shortened or omitted.~~
~~B. The red clearance interval, if any, may be omitted so that the return to the previous green signal indication follows a steady yellow signal indication in the same signal face.~~

Support:

04a OAR 734-020-0320(5)(e) prohibits the termination of an active pedestrian or vehicular clearance interval by emergency preemption or bus priority.

Standard:

05 **During preemption control and during the transition out of preemption control:**
A. Any yellow change interval, and any red clearance interval that follows, shall not be shortened or omitted.
B. A signal indication sequence from a steady yellow signal indication to a green signal indication shall not be permitted.

Option:

06 A distinctive indication may be provided at the intersection to inform law enforcement personnel who are escorting traffic (such as a parade or funeral procession) that the traffic control signal has changed to a red indication not because of normal cycling, but because it has been preempted by rail traffic approaching an adjacent grade crossing or by boat traffic approaching an adjacent movable bridge.

07 A distinctive indication may be provided at the intersection to show that an emergency vehicle has been given control of the traffic control signal (see Section 11-106 of the "Uniform Vehicle Code"). In order to assist in the understanding of the control of the traffic control signal, a common distinctive indication may be used where drivers from different agencies travel through the same intersection when responding to emergencies.

Guidance:

08 *Except for traffic control signals interconnected with light rail transit systems, traffic control signals with railroad preemption or coordinated with flashing-light signal systems should be provided with a back-up power supply.*

09 *If a traffic control signal or hybrid beacon is installed near or within a grade crossing or if a grade crossing with active traffic control devices is within or near a signalized highway intersection, Chapter 8D should be consulted.*

Support:

10 Section 8D.09 contains additional information regarding preemption for grade crossings. Section 8D.10 contains information regarding prohibiting movements toward the grade crossing during preemption. Sections 8D.11 and 8D.12 contain additional information regarding pre-signals and queue cutter signals, respectively, for grade crossings.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4I.06 – Pedestrian Intervals and Signal Phases	October 15, 2024	11404
Supplement Team	**Status**	
4-Signals	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes adding guidance to NOT show WALK concurrently with conflicting Flashing Yellow Arrow controlled turn movements.

This also proposes to only use the longer walk times for leading pedestrian intervals if audible pedestrian signals are not used. The guidance statement in 4I.06 Paragraph 24 recommends longer walk times with leading pedestrian intervals. This guidance will cause many agencies to avoid using leading pedestrian intervals because the longer walk times will increase cycle lengths and overall pedestrian delay.

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Problem

Section 4I.06 Paragraph 02 defines the vehicular movements that are required to display a steady red indication while a pedestrian signal head is displaying a steady WALK or a flashing DONT WALK indication. The standard requires that "any conflicting vehicular movement that is approaching the intersection or midblock location perpendicular or nearly perpendicular to the crosswalk" shall display a steady red indication. However, it does not prohibit flashing yellow indications for turning movements. The conflict arises when a flashing yellow arrow permits left turns while the pedestrian signal indicates that pedestrians have the right of way to cross the street. This scenario requires both drivers and pedestrians to be cautious and aware of each other.

The guidance statement in 4I.06 Paragraph 24 also recommends much longer walk times with leading pedestrian intervals. This guidance will cause many agencies to avoid using leading pedestrian intervals because the longer walk times will increase cycle lengths and overall pedestrian delay.

Discussion

Conflicting Flashing Yellow Arrow Movements

Pedestrians rely on traffic signals to know when it's safe to cross the street. If a flashing yellow arrow is active during a pedestrian walk interval, it can confuse pedestrians, leading them to believe that vehicles may be turning left while they have the right of way. Disabling the flashing yellow arrow removes this confusion and ensures that pedestrians have a clear understanding of when it's safe to cross.

Pedestrians should be given priority at intersections during WALK intervals. By disabling the flashing yellow arrow, it reinforces this priority and emphasizes the importance of yielding to pedestrians. This can contribute to a safer and more pedestrian-friendly environment.

Leading Pedestrian Interval

The guidance statement in 4I.06 Paragraph 24 recommends longer walk times where leading pedestrian intervals are used. The MUTCD seems to address the situations where pedestrians with low or no vision may only begin their crossing at the onset of the vehicular movement and not be given enough time to cross if they do not have other audible cues. However, if accessible pedestrian signals are used to provide the cues to pedestrians with low or no vision, this added 7 seconds of walk time after the leading pedestrian interval would not be necessary.

This proposes two modifications to the guidance statement in Paragraph 24:

1. Add a caveat that this guidance applies where leading pedestrian intervals are used without accessible pedestrian signals.
2. Add the exception provided in Paragraph 12 of this section to the 7-second minimum walk interval. This is to be consistent with the guidance given in previous sections to allow flexibility based on engineering judgement.

Proposed Supplement Content

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CHAPTER 4I. PEDESTRIAN CONTROL FEATURES

Section 4I.06 Pedestrian Intervals and Signal Phases

Standard:

01 **At intersections equipped with pedestrian signal heads, the pedestrian signal indications shall be displayed except when the vehicular traffic control signal is being operated in the flashing mode. At those times, the pedestrian signal indications shall not be displayed.**

02 **Except as provided in Paragraph 3 of Section 4J.03, when the pedestrian signal heads associated with a crosswalk are displaying either a steady WALKING PERSON (symbolizing WALK) or a flashing UPRAISED HAND (symbolizing DONT WALK) signal indication, a steady red signal indication shall be shown to any conflicting vehicular movement that is approaching the intersection or midblock location perpendicular or nearly perpendicular to the crosswalk.**

03 **When pedestrian signal heads are used, a WALKING PERSON (symbolizing WALK) signal indication shall be displayed only when pedestrians are permitted to leave the curb or shoulder.**

04 **A pedestrian change interval consisting of a flashing UPRAISED HAND (symbolizing DONT WALK) signal indication shall begin immediately following the WALKING PERSON (symbolizing WALK) signal indication. Following the pedestrian change interval, a buffer interval consisting of a steady UPRAISED HAND (symbolizing DONT WALK) signal indication shall be displayed for at least 2 seconds prior to the release of any conflicting vehicular movement. The sum of the time of the pedestrian change interval and the buffer interval shall not be less than the calculated pedestrian clearance time (see Paragraphs 7 through 16 of this Section). The buffer interval shall not begin later than the beginning of the red clearance interval, if used.**

Option:

05 During the yellow change interval, the UPRAISED HAND (symbolizing DON'T WALK) signal indication may be displayed as either a flashing indication, a steady indication, or a flashing indication for an initial portion of the yellow change interval and a steady indication for the remainder of the interval.

Support:

06 Figure 4I-4 illustrates the pedestrian intervals and their possible relationships with associated vehicular signal phase intervals.

Guidance:

07 *Except as provided in Paragraph 8 of this Section, the pedestrian clearance time should be sufficient to allow a pedestrian crossing in the crosswalk who left the curb or edge of pavement at the end of the WALKING PERSON (symbolizing WALK) signal indication to travel at a walking speed of 3.5 feet per second to at least the far side of the traveled way or to a median of sufficient width for pedestrians to wait.*

Option:

08 A walking speed of up to 4 feet per second may be used to evaluate the sufficiency of the pedestrian clearance time at locations where an extended push button press function has been installed to provide slower pedestrians an opportunity to request and receive a longer pedestrian clearance time. Passive pedestrian detection may also be used to automatically adjust the pedestrian clearance time based on the pedestrian's actual walking speed or actual clearance of the crosswalk.

09 The additional time provided by an extended push button press to satisfy pedestrian clearance time needs may be added to either the walk interval or the pedestrian change interval.

Guidance:

09a *When the pedestrian signal heads associated with a crosswalk are displaying a steady WALKING PERSON (symbolizing WALK) signal indication, a steady red signal indication should be shown to any conflicting left turn and right turn movement that is operated with a signal face with Flashing Yellow Arrow indication.*

10 *Where pedestrians who walk slower than 3.5 feet per second, or pedestrians who use wheelchairs, routinely use the crosswalk, a walking speed of less than 3.5 feet per second should be considered in determining the pedestrian clearance time.*

11 *Except as provided in Paragraph 12 of this Section, the walk interval should be at least 7 seconds in length so that pedestrians will have adequate opportunity to leave the curb or shoulder before the pedestrian clearance time begins.*

Option:

12 If pedestrian volumes and characteristics do not require a 7-second walk interval, walk intervals as short as 4 seconds may be used.

Support:

13 The walk interval is intended for pedestrians to start their crossing. The pedestrian clearance time is intended to allow pedestrians who started crossing during the walk interval to complete their crossing. Longer walk intervals are often used when the duration of the vehicular green phase associated with the pedestrian crossing is long enough to allow it.

Guidance:

14 *The total of the walk interval and pedestrian clearance time should be sufficient to allow a pedestrian crossing in the crosswalk who left the pedestrian detector (or, if no pedestrian detector is present, a location 6 feet behind the face of the curb or 6 feet behind the edge of the pavement) at the beginning of the WALKING PERSON (symbolizing WALK) signal indication to travel at a walking speed of 3 feet per second to the far side of the traveled way being crossed or to the median if a two-stage pedestrian crossing sequence is used. Any additional time that is required to satisfy the conditions of this paragraph should be added to the walk interval.*

Option:

15 On a street with a median of sufficient width for pedestrians to wait, a pedestrian clearance time that allows the pedestrian to cross only from the curb or shoulder to the median may be provided.

Standard:

16 **Where the pedestrian clearance time is sufficient only for crossing from the curb or shoulder to a median of sufficient width for pedestrians to wait, median-mounted pedestrian signals, with pedestrian detectors (see Sections 4I.05 and 4K.01) if actuated operation is used, shall be provided and signing such as the R10-3d sign (see Section 2B.58) shall be provided to notify pedestrians to cross only to the median to await the next WALKING PERSON (symbolizing WALK) signal indication.**

Support:

17 Accessible pedestrian signals (see Chapter 4K) where median-mounted pedestrian signals and detectors are used provide information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces) so that a pedestrian with vision disabilities can know when to resume crossing the street after crossing to the median.

Option:

18 During the transition into preemption, the walk interval and the pedestrian change interval may be shortened or omitted as described in Section 4F.19.

19 At intersections with high pedestrian volumes and high conflicting turning vehicle volumes, a brief leading pedestrian interval, during which an advance WALKING PERSON (symbolizing WALK) indication is displayed for the crosswalk while red indications continue to be displayed to parallel through and/or turning traffic, may be used to reduce conflicts between pedestrians and turning vehicles.

Support:

20 Accessible pedestrian signals (see Chapter 4K) where leading pedestrian intervals are used provide information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces) so that a pedestrian with vision disabilities can know when to cross the street in the absence of the audible cues normally provided when the onset of the vehicular and pedestrian movements coincide.

21 If a leading pedestrian interval is used without accessible features, pedestrians with vision disabilities might begin crossing at the onset of the vehicular movement when vehicle operators are not expecting them to begin crossing.

Guidance:

22 *If a leading pedestrian interval is used, it should be at least 3 seconds in duration and should be timed to allow pedestrians to cross at least one lane of traffic or, in the case of a large corner radius, to travel far enough for pedestrians to establish their position ahead of the turning traffic before the turning traffic is released.*

23 *If a leading pedestrian interval is used, consideration should be given to prohibiting turns across the crosswalk during the leading pedestrian interval.*

24 *Except as provided in Paragraph 12 of this section, at ~~At~~ locations where a leading pedestrian interval is used without accessible pedestrian signals, the minimum time for the WALKING PERSON (symbolizing WALK) indication should be the time provided for the leading pedestrian interval plus 7 seconds.*

Support:

25 At intersections with pedestrian volumes that are so high that drivers have difficulty finding an opportunity to turn across the crosswalk, the duration of the green interval for a parallel concurrent vehicular movement is sometimes intentionally set to extend beyond the pedestrian clearance time to provide turning drivers additional green time to make their turns while the pedestrian signal head is displaying a steady UPRAISED HAND (symbolizing DONT WALK) signal indication after pedestrians have had time to complete their crossings.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4J.02 – Design of Pedestrian Hybrid Beacons, 4J.03 – Operation of Pedestrian Hybrid Beacons	October 15, 2024	11405
Supplement Team	**Status**	
4-Signals	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes allowing a different PHB operation and coordination.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Recommending an operational strategy should be left to practitioners to decide how to achieve agency goals. Requiring a PHB to show alternating red indications during the pedestrian change interval may lead to safety issues for people walking or biking who enter the crossing during the change interval.

Discussion

Including guidance on the operational modes of PHBs may lead to practitioners following the recommendations without considering all the implications of the mode. Observations of pedestrians using PHBs in Portland show that when PHBs are coordinated, some users actuate the PHB but cross before the walk signal is served due to sufficient gaps. Running these signals free helps minimize this issue and leads to better compliance by users (both drivers and people walking).

Adding an option to display a solid red indication during the pedestrian change interval provides flexibility in how agencies operate PHBs to support their safety goals. Regardless of state law, in some areas people commonly begin their crossing after the onset of the pedestrian change interval. Allowing the vehicle signal to display a solid red indication during the pedestrian change interval provides an added safety buffer for vulnerable users in the crossing during the interval.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 4J. PEDESTRIAN HYBRID BEACONS

Section 4J.02 Design of Pedestrian Hybrid Beacons

Standard:

01 **Except as otherwise provided in this Section, a pedestrian hybrid beacon shall meet the provisions of Chapters 4D through 4G, 4I, and 4J.**

02 **A pedestrian hybrid beacon face shall consist of three signal sections, with a CIRCULAR YELLOW signal indication centered below two horizontally-aligned CIRCULAR RED signal indications (see Figure 4J-3).**

03 **When an engineering study finds that installation of a pedestrian hybrid beacon is justified, then:**

- **A. At least two pedestrian hybrid beacon faces shall be installed for each approach of the major street;**
- **B. A stop line shall be installed for each approach to the crosswalk;**
- **C. A pedestrian signal head complying with the provisions set forth in Chapter 4I shall be installed at each end of the marked crosswalk;**
- **D. The pedestrian hybrid beacon shall be pedestrian actuated; and**
- **E. If the pedestrian hybrid beacon is installed at or immediately adjacent to an intersection with a minor street, a STOP sign shall be installed for each minor-street approach.**

Guidance:

04 *When an engineering study finds that installation of a pedestrian hybrid beacon is justified, then:*

- *A. Parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the marked crosswalk, or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance; and*
- *B. If installed within a signal system, engineering judgement should be used to determine if the pedestrian hybrid beacon should be coordinated.*

Support:

04a Section 4B.02 discusses some of the disadvantages of a poorly operated traffic signal which also apply to pedestrian hybrid beacons.

05 *On approaches having posted or statutory speed limits or 85th-percentile speeds in excess of 35 mph and on approaches having traffic or operating conditions that would tend to obscure visibility of roadside hybrid beacon face locations, both of the minimum of two pedestrian hybrid beacon faces should be installed over the roadway.*

06 *On multi-lane approaches having posted or statutory speed limits or 85th-percentile speeds of 35 mph or less, either a pedestrian hybrid beacon face should be installed on each side of the approach (if a median of sufficient width exists) or at least one of the pedestrian hybrid beacon faces should be installed over the roadway.*

07 *A pedestrian hybrid beacon should comply with the signal face location provisions described in Sections 4D.05 through 4D.10.*

Option:

08 A CROSSWALK—STOP ON RED (symbolic circular red) (R10-23) or a STOP ON STEADY RED—YIELD ON FLASHING RED AFTER STOP (R10-23a) sign (see Section 2B.59) may be installed facing each major street approach.

09 A W11-2 (Pedestrian), S1-1 (School), or W11-15 (Trail) crossing warning sign with an AHEAD (W16-9P) supplemental plaque may be placed in advance of a pedestrian hybrid beacon. A Warning Beacon may be installed to supplement the W11-2, S1-1, or W11-15 sign.

10 Backplates (see Section 4D.06) may be used with pedestrian hybrid beacons.

Support:

11 Accessible pedestrian signals (see Chapter 4K) where a pedestrian hybrid beacon is used provide information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces) so that a pedestrian with vision disabilities can know when to cross the street.

Guidance:

12 *If a Warning Beacon supplements a W11-2 sign in advance of a pedestrian hybrid beacon, it should be programmed to flash only when the pedestrian hybrid beacon is not in the dark mode.*

Standard:

13 **If a Warning Beacon is installed to supplement the W11-2 sign, the design and location of the Warning Beacon shall comply with the provisions of Sections 4S.01 and 4S.03.**

14 **Bicycle signal faces (see Chapter 4H) shall not be used at a pedestrian hybrid beacon.**

Section 4J.03 Operation of Pedestrian Hybrid Beacons

Standard:

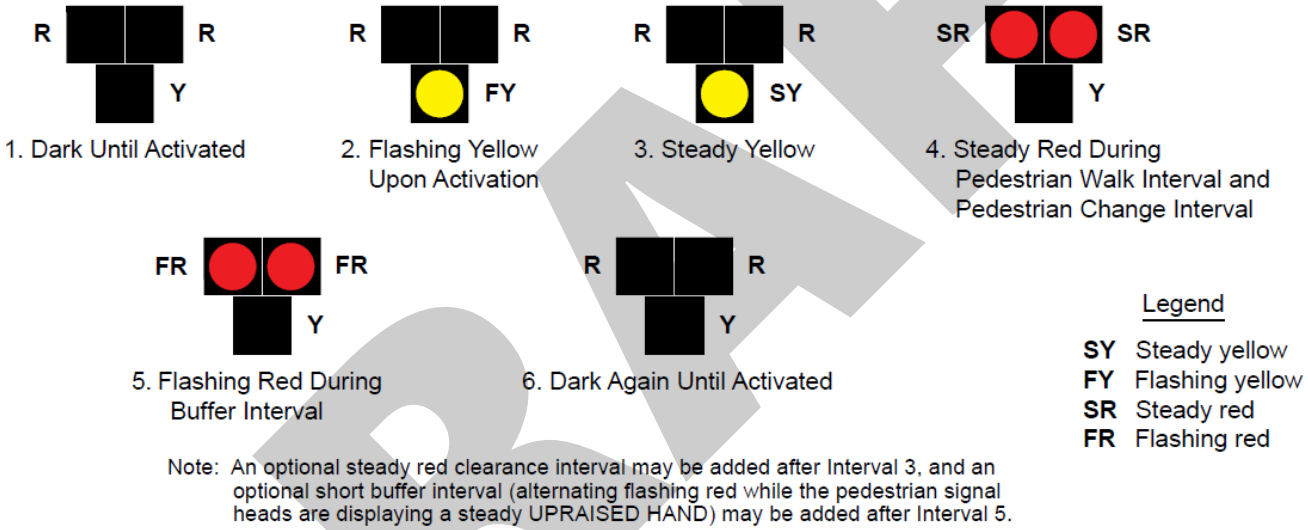
01 **Pedestrian hybrid beacon indications shall be dark (not illuminated) during periods between actuations.**

02 **Following an actuation by a pedestrian, a pedestrian hybrid beacon face shall display one of the following two sequences:**

A. ~~a~~ **A flashing CIRCULAR yellow signal indication, followed by a steady CIRCULAR yellow signal indication, followed by both steady CIRCULAR RED signal indications during the pedestrian walk interval, followed by alternating flashing CIRCULAR RED signal indications during the pedestrian change interval (see Figure 4J-3). Upon termination of the pedestrian change interval, the pedestrian hybrid beacon faces shall revert to a dark (not illuminated) condition.**

B. A flashing CIRCULAR yellow signal indication, followed by a steady CIRCULAR yellow signal indication, followed by both steady CIRCULAR RED signal indications during the pedestrian walk and pedestrian change intervals, followed by simultaneous flashing CIRCULAR RED signal indications during the buffer interval (see Figure 4J-3(OR)). Upon termination of the buffer interval, the pedestrian hybrid beacon faces shall revert to a dark (not illuminated) condition.

Figure 4J-3(OR). Alternate Sequence for a Pedestrian Hybrid Beacon



Note: An optional steady red clearance interval may be added after Interval 3, and an optional short buffer interval (alternating flashing red while the pedestrian signal heads are displaying a steady UPRAISED HAND) may be added after Interval 5.

03 **Except as provided in Paragraph 4 of this Section, the pedestrian signal heads shall continue to display a steady UPRAISED HAND (symbolizing DONT WALK) signal indication when the pedestrian hybrid beacon faces are either dark or displaying flashing or steady CIRCULAR yellow signal indications. The pedestrian signal heads shall display a WALKING PERSON (symbolizing WALK) signal indication when the pedestrian hybrid beacon faces are displaying steady CIRCULAR RED signal indications. The pedestrian signal heads shall display a flashing UPRAISED HAND (symbolizing DONT WALK) signal indication when the pedestrian hybrid beacon faces are displaying alternating flashing CIRCULAR RED signal indications. Upon termination of the pedestrian change interval, the pedestrian signal heads shall revert to a steady UPRAISED HAND (symbolizing DONT WALK) signal indication.**

Option:

04 Where the pedestrian hybrid beacon is installed adjacent to a roundabout to facilitate crossings by pedestrians with vision disabilities and an engineering study determines that pedestrians without vision disabilities can be allowed to cross the roadway without actuating the pedestrian hybrid beacon, the pedestrian signal heads may be dark (not illuminated) when the pedestrian hybrid beacon faces are dark.

Guidance:

05 *The duration of the flashing yellow interval should be determined by engineering judgment.*

06 *The duration of the flashing yellow interval should not vary on a cycle-by-cycle basis.*

07 *If the pedestrian hybrid beacon is coordinated as a part of a signal system, it should remain in the dark condition after a pedestrian actuation has been received until the point in the background cycle when the predetermined duration of the flashing yellow interval needs to be initiated in order to achieve the appropriate coordinated offset.*

Option:

08 If a minimum dark time between activations of the pedestrian hybrid beacon has been set on the controller, the pedestrian hybrid beacon may remain in the dark condition after a pedestrian actuation has been received until the minimum dark time has been provided.

Support:

09 The minimum dark time is a preprogrammed time set in the controller that provides time between the pedestrian actuation and beginning of the flashing yellow interval. At locations in coordinated signal systems, the dark time can be variable based on when the pedestrian actuation occurs in the coordinated signal timing sequence.

Standard:

10 **The duration of the steady yellow change interval shall be determined using engineering practices in accordance with the provisions in Section 4F.17.**

Guidance:

11 *A steady yellow change interval should have a minimum duration of 3 seconds and a maximum duration of 6 seconds (see Section 4F.17). The longer intervals should be reserved for use on approaches with higher speeds.*

Option:

12 A steady red clearance interval may be used after the steady yellow change interval.

13 The alternating flashing CIRCULAR RED signal indications may continue to flash for a short period after the pedestrian change interval has terminated to provide a buffer interval for pedestrians.

Guidance:

14 *A pedestrian hybrid beacon that is located 200 feet or less from an active grade crossing should be preempted in accordance with the applicable provisions in Sections 4F.19 and 8D.09.*

Standard:

15 **If a pedestrian hybrid beacon is placed into a flashing mode by a conflict monitor (malfunction management unit) or by a manual switch, the pedestrian hybrid beacon faces shall display flashing CIRCULAR YELLOW signal indications to each approach of the major street and the pedestrian signal heads shall revert to a dark (not illuminated) condition.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4K.01 General (APS)	October 15, 2024	11406
Supplement Team	**Status**	
4-Signals	OTCDC Review – 1st round	

Summary (2-3 sentences)

Standardizing APS Speech Messages at Signalized Intersections to provide greater accessibility and effective communication for pedestrians.

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Problem

Providing effective communication at signalized intersections is a requirement of the ADA.

Discussion

With additional information, the pedestrian should be able to navigate independently with more confidence and accuracy through an intersection to reach a desired destination. Pedestrians with low or no vision may be unable to read or find a sign to find which street they are crossing. Complicated intersections may not have an obvious or direct route to navigate through or other audible cues to figure out their location. For example, skewed intersections, intersections with multiple legs to cross, or channelized right turn lanes are more difficult for this population to navigate. Inconsistent application makes one intersection or certain communities more accessible than others.

This proposes improving accessibility through the supplement by including speech message requirements in prescribed scenarios. Providing a uniform speech message at all signalized locations will improve access and communication for people with disabilities, in particular complicated intersections that may be difficult to figure out street crossing navigation paths/patterns.

PROWAG Section R308.3 gives specifications for audible pedestrian signals. While USDOT and USDOJ have not adopted PROWAG yet, incorporating these specifications will help APS messages be consistent in Oregon and prepare Oregon's agencies for PROWAG compliance for APS.

Public Right-of-Way Accessibility Guidelines (PROWAG)

R308.3 Audible Walk Indications

Audible walk indications shall comply with R308.3.

R308.3.1 Percussive Tone

Where an accessible pedestrian signal is provided at a single crossing or where two accessible pedestrian signals are 10 feet or greater from each other at a corner, the audible walk indication shall be a percussive tone and repeat eight to ten ticks per second with multiple frequencies and a dominant component at 880 Hz.

R308.3.2 Speech Walk Message

In alterations, where it is technically infeasible to provide 10 feet separation between pedestrian push buttons on the same corner, the audible walk indication for each signal shall be a speech walk message that complies with R308.3.2.

R308.3.2.1 Speech Information Message when Walk Interval is Not Timing

Where speech push button information messages are made available at a pretimed signal or by actuating the accessible pedestrian push button or passive detection device, they shall only be actuated when the walk interval is not timing. They shall begin with the term "Wait," followed by intersection identification information modeled after: "Wait to cross Broadway at Grand." If information on intersection signalization or geometry is also given, it shall follow the intersection identification information.

R308.3.2.2 Speech Walk Message during Pedestrian Phasing Concurrent with Vehicular Phasing

Speech walk messages that are used at intersections having pedestrian phasing that is concurrent with vehicular phasing shall be patterned after the model: "Broadway. Walk sign is on to cross Broadway."

R308.3.2.3 Speech Walk Message during Exclusive Pedestrian Phasing

Speech walk messages that are used at intersections having exclusive pedestrian phasing shall be patterned after the model: "Walk sign is on for all crossings."

R308.3.2.4 Speech Walk Message and Pilot Light

If a pilot light is used at an accessible pedestrian signal location, each actuation shall be accompanied by the speech message, "Wait."

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 4K. ACCESSIBLE PEDESTRIAN SIGNALS AND DETECTORS

Section 4K.01 General

Support:

01 Accessible pedestrian signals and detectors provide information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces). The decision of when to use accessible pedestrian signals is subject to requirements of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973.

02 The primary technique that pedestrians with vision disabilities use to cross streets at signalized locations is to initiate their crossing when they hear the traffic in front of them stop and the traffic alongside them begin to move, which often corresponds to the onset of the green interval. The existing environment is often not sufficient to provide the information that pedestrians with vision disabilities need to cross a roadway at a signalized location.

03 The following factors are relevant in determining whether a particular signalized location presents difficulties for pedestrians with vision disabilities to cross the roadway:

A. Potential demand for accessible pedestrian signals;
B. A request for accessible pedestrian signals;
C. Traffic volumes during times when pedestrians might be present, including periods of low traffic volumes or high turn-on-red volumes;
D. The complexity of the traffic signal phasing (such as split phases, protected turn phases, leading pedestrian intervals, and exclusive pedestrian phases); and
E. The complexity of the intersection geometry.

04 The factors that make crossing at a signalized location difficult for pedestrians with vision disabilities include: increasingly quiet vehicles, turns on red (which mask the beginning of the through phase), continuous turning movements, complex signal operations, circular intersections, and wide streets. In addition, low traffic volumes might make it difficult for pedestrians with vision disabilities to discern signal phase changes.

05 State and local organizations providing support services to pedestrians with vision and/or hearing disabilities can provide advice to the traffic engineer on site-specific accessibility decisions. In addition, orientation and mobility specialists or similar staff can provide advice to inform such decisions. The U.S. Access Board (www.access-board.gov) provides technical assistance for making pedestrian signal information accessible to persons with vision disabilities.

Standard:

06 **When used, accessible pedestrian signals shall be used in combination with pedestrian signal timing.**

07 **The information provided by an accessible pedestrian signal shall indicate which pedestrian crossing is served by each device with a speech message identifying the name of the street.**

08 **Under steady (stop-and-go) operation, accessible pedestrian signals shall not be limited in operation by the time of day or day of week.**

Guidance:

08a *Where speech push button information messages are made available at a pretimed signal or by actuating the accessible pedestrian push button or passive detection device, they should only be actuated when the walk interval is not displayed. They should begin with the term "Wait," followed by intersection identification information modeled after: "Wait to cross Broadway at Grand." If information on intersection signalization or geometry is also given, it should follow the intersection identification information.*

08b *Speech walk messages that are used at intersections that have a closed crosswalk with no detectable treatment installed at the closed crosswalk should indicate which crosswalk is closed. Closed crosswalk messages should be patterned after the model: "Broadway crosswalk is closed. Wait to cross Main."*

08c *Speech walk messages that are used at intersections having pedestrian phasing that is concurrent with vehicular phasing should be patterned after the model: "Broadway. Walk sign is on to cross Broadway."*

08d *Speech walk messages that are used at intersections having exclusive pedestrian phasing should be patterned after the model: "Walk sign is on for all crossings."*

Option:

09 Accessible pedestrian signal detectors may be push buttons or passive detection devices.

10 At locations with pretimed traffic control signals or non-actuated approaches, pedestrian push buttons may be used to activate the accessible pedestrian signals.

Support:

11 Accessible pedestrian signals are typically integrated into the pedestrian detector (push button), so the audible tones and/or messages come from the push button housing. They have a push button locator tone and a vibrotactile arrow, and can include audible beaconing and other special features.

Option:

12 The name of the street to be crossed may also be provided in accessible format, such as Braille or raised characters. Tactile maps of crosswalks may also be provided.

Support:

13 Specifications regarding Braille or raised characters can be found in the U.S. Department of Justice 2010 ADA Standards for Accessible Design, September 15, 2010, 28 CFR 35 and 36, Americans with Disabilities Act of 1990.

Standard:

14 **At accessible pedestrian signal locations where pressing the pedestrian push button is necessary to activate the walk interval, pressing the pedestrian push button shall activate both the walk interval and the accessible pedestrian signals.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
Part 6 – Temporary Traffic Control	October 15, 2024	11601
Supplement Team	**Status**	
6-TTC	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes keeping the Oregon Temporary Traffic Control Handbook as a separate publication that covers traffic control in work zones of 72 hours or less.

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Problem

Field crews need a handbook to apply the principles in MUTCD Part 6 for short-duration work zones (72 hours or less).

Discussion

The OTTCH provides a reference for the standards and practices for temporary traffic control work zones in place continuously for three days or less on public roads in Oregon. It is based on the principles in Part 6 of the MUTCD.

For work requiring devices in place longer than three days, a more comprehensive Traffic Control Plan (TCP) is needed.

Each road authority (City, County, State, or Transit Authority) may have additional or more restrictive requirements and will generally require permits to work within the public right-of-way. The proper road authority should be contacted prior to planning or beginning any work within their jurisdiction.

There are safety concerns for workers while setting up and taking down work zones. As a result, the OTTCH is based on the premise, per the MUTCD, that simplified traffic control procedures are warranted for short term activities.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

OREGON TEMPORARY TRAFFIC CONTROL HANDBOOK

The Oregon Temporary Traffic Control Handbook (OTTCH) is a separate publication from the Oregon Supplement to the MUTCD 11th Edition and covers applications of Part 6 for work zones of 72 hours or less. ODOT and local agencies are free to adopt more restrictive requirements for Part 6 applications in work zones greater than 72 hours as part of their agency's traffic control policy manual and/or specifications.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
7B.05 – School Speed Limit Signs and Plaques	October 15, 2024	11701
Supplement Team	**Status**	
7-Schools	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 7B.05 describes the means of posting School Speed Limit signs but does not direct readers to available Oregon-specific resources, references, and laws related to school speed limit zones. Paragraph 05 lacks guidance on where a shorter school speed limit zone may be appropriate in certain contexts, and ORS 811.111 gives specific conditions for the types of school speed limit zones. This proposes to
1) Direct readers to ODOT's Speed Zone Manual, ODOT's Guide to School Area Safety, and several pertinent ORS,
2) Add an option to start a school speed limit zone closer than 200 feet from school grounds/school crossing, and
3) Add an option to allow a SCHOOL DAYS plaque or an ALL YEAR plaque on School Speed Limit assemblies.

Problem

Section 7B.05 describes the means of posting School Speed Limit signs but does not direct readers to available Oregon-specific resources, references, and laws that are important to understand when setting up a reduced school speed limit.

Section 7B.05 Paragraph 5 states that "The beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds or a school crossing". While some guidance is given for lengthening that distance later in this same paragraph, no guidance is given for considering a distance less than 200 feet.

ORS 811.111 limits school speed zones that are 7AM–5PM to days when school is in session, but there is no allowance in 7B.05 Paragraph 7 for the addition of a SCHOOL DAYS plaque to a speed zone sign assembly. Also, Figure 7B-1 and the language of 7B.05 Paragraph 7 limits the use of the ALL YEAR plaque (S4-7P) so that it can only be used with the School warning sign (S1-1) but not with the school speed limit assembly.

Discussion

School Speed Limit Zone Resources

Before selecting a particular set of signs for a reduced school speed limit zone as described in Section 7B.05, readers should be familiar with several Oregon-specific resources, references, and laws. The ODOT Guide to School Area Safety describes the various types of school speed zones that are allowed under Oregon Revised Statutes (ORS). The guide also includes information related to Safe Routes to School programs, street and parking design strategies, and general traffic control elements that are important to understand when implementing a reduced school speed limit zone.

The ODOT Speed Zone Manual also contains guidance for when reduced school speed limit zones are generally recommended, when they are conditionally recommended, and when they are generally discouraged. For example, ORS 811.111 specifies the types of school zones (i.e., 7 AM – 5 PM, When Flashing, When Children are Present) that may be used near schools and at school crosswalks in Oregon, and ORS 811.235 establishes the condition of increasing fines in school zones.

The requirements, constraints, and options established and supported by these references, resources, and laws can play important roles when establishing a reduced school speed limit zone.

Location of School Speed Limit Zone

While drivers should have ample opportunity to decelerate prior to entering a school speed limit zone, some conditions call for a shorter distance than the 200 feet minimum specified in Section 7B.05 Paragraph 5. Conditions that might support placing the beginning of a reduced school speed zone closer than 200 feet include:

- Low speeds;
- Short block sizes;
- Desire to exclude an intersecting street from the zone; and
- Locations where students are not likely to cross the street due to a fence or other non-traversable barrier.

Without clear allowance for considering factors that might support installing a reduced school speed zone closer than the recommended distance of 200 feet from the school grounds or school crosswalk, engineers may feel compelled to meet the 200-foot recommendation. This may result in school zones that are overly long, overly complex, less effective (e.g. encompassing unnecessary nearby intersections).

School Speed Limit Zones in Oregon Law

Section 7B.05 P7 states that "The static School Speed Limit assembly shall consist of a top plaque (S4-3P) with the legend SCHOOL, a Speed Limit (R2-1) sign, and a bottom plaque (S4-1P, S4-2P, S4-4P, or S4-6P) indicating the specific periods of the day and/or days of the week that the special school speed limit is in effect.

ORS 811.111 limits the 7 am – 5 pm school speed zone to "days when school is in session," but neither the S4-1P plaque (7AM – 5 PM) nor the S4-6P plaque (MON-FRI) conveys the message that the speed zone is only in effect on school days. An option is desired to allow the use of a "SCHOOL DAYS" plaque when S4-1P is used. The Oregon Sign Policy and Guidelines include a plaque (OS4-8) reading "SCHOOL DAYS | 7 AM – 5 PM" that conveys the needed message.

811.111 Violating a speed limit; penalty.

(1) A person commits the offense of violating a speed limit if the person:

[Subsections (a) through (d) not shown.]

(e) Drives a vehicle in a school zone at a speed greater than 20 miles per hour if the school zone is:

(A) A segment of highway described in ORS 801.462 (1)(a) and:

(i) The school zone has a flashing light used as a traffic control device and operated as provided under ORS 810.243; or

(ii) If the school zone does not have a flashing light used as a traffic control device, the person drives in the school zone between 7 a.m. and 5 p.m. on a day when school is in session.

(B) A crosswalk described in ORS 801.462 (1)(b) and:

(i) A flashing light is used as a traffic control device and operated as provided under ORS 810.243; or

(ii) Children are present, as described in ORS 811.124.

[Sections (2) through (14) not shown.]

[2003 c.819 §4; 2003 c.819 §4a; 2005 c.573 §1; 2005 c.770 §6; 2007 c.367 §4; 2015 c. 139 §2; 2015 c.283 §5; 2015 c.746 §1; 2016 c.1 §1; 2019 c.515 §2; 2023 c.9 §53]

Figure 7B-1 shows the "ALL YEAR" plaque (S4-7P) as only being used with the S1-1 School Warning sign; there is interest in allowing the "ALL YEAR" plaque (S4-7P) to be used as an additional top plaque with the School Speed Limit Assembly. That location for the plaque is expected to help draw attention and to improve driver adherence to the reduced school speed limit.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 7B. SIGNS

Section 7B.05 School Speed Limit Signs and Plaques

Support:

01a The "Speed Zone Manual" published by ODOT provides guidance on the establishment of reduced school speed limit zones in Oregon. The Guide to School Area safety, also published by ODOT, provides additional guidance and explanations related to the application of school speed zones and other safety treatments near schools in Oregon. ORS 811.111 and ORS 811.235 address school speed zones.

Standard:

01 **A School Speed Limit assembly (see Figure 7B-1) or a School Speed Limit When Flashing (S5-1) sign (see Figure 7B-1) shall be used to indicate the speed limit where a reduced school speed limit zone has been established based upon an engineering study or where a reduced school speed limit is specified for such areas by statute. The School Speed Limit assembly or School Speed Limit When Flashing sign shall be placed at or as near as practicable to the point where the reduced school speed limit zone begins (see Figures 7B-2 and 7B-4).**

02 **If a reduced school speed limit zone has been established, a School (S1-1) sign shall be installed in advance (see Table 2C-3 for advance placement guidelines) of the first School Speed Limit sign assembly or S5-1 sign that is encountered in each direction as traffic approaches the reduced school speed limit zone (see Figures 7B-2 and 7B-4).**

03 **Except as provided in Paragraph 4 of this Section, the downstream end of an authorized and posted reduced school speed limit zone shall be identified with an END SCHOOL SPEED LIMIT (S5-3) sign (see Figures 7B-1, 7B-2, and 7B-4).**

Option:

04 If a reduced school speed limit zone ends at the same point as a designated school zone (see Section 7B.02), an END SCHOOL ZONE (S5-2) sign may be used instead of an END SCHOOL SPEED LIMIT (S5-3) sign. A standard Speed Limit sign showing the speed limit for the section of highway that is downstream from the authorized and posted reduced school speed limit zone may be mounted on the same post above the END SCHOOL SPEED LIMIT (S5-3) sign or the END SCHOOL ZONE (S5-2) sign.

Guidance:

05 *Except as provided in Paragraph 05a of this section, the ~~The~~ beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds or a school crossing; however, this 200-foot distance should be increased if the reduced school speed limit is 30 mph or higher. The maximum beginning point of a reduced school speed limit zone should not be greater than 500 feet in advance of the school grounds or a school crossing.*

Option:

05a The beginning point of a reduced school speed limit zone may be less than 200 feet in advance of the school grounds or a school crossing in areas with short block spacing, low speeds, or barriers that effectively prohibit student crossings.

Standard:

06 **The School Speed Limit assembly shall be either a static sign assembly, a blank-out sign, or a changeable message sign (see Chapter 2L).**

07 **The static School Speed Limit assembly shall consist of a top plaque (S4-3P) with the legend SCHOOL, a Speed Limit (R2-1) sign, and a bottom plaque (S4-1P, S4-2P, S4-4P, or S4-6P) indicating the specific periods of the day and/or days of the week that the special school speed limit is in effect (see Figure 7B-1).**

08 **When a School Speed Limit When Flashing (S5-1) sign or a Speed Limit (R2-1) sign with a supplemental WHEN FLASHING (S4-4P) plaque is used, a Speed Limit Sign Beacon (see Section 4S.04) shall be used to identify the periods that the school speed limit is in effect.**

09 **Fluorescent yellow-green pixels shall be used when the "SCHOOL" message is displayed on a changeable message sign for a school speed limit.**

Option:

09a The ALL YEAR plaque (S4-7P) may be added to the School Speed Limit Assembly as a top plaque with the SCHOOL (S4-3P) plaque if the school operates on a 12-month schedule.

09b A SCHOOL DAYS bottom plaque may be used in combination with the S4-1P bottom plaque indicating specific periods of the day that the special school speed limit is in effect per Oregon law.

Support:

09c ORS 811.111 defines the different conditions for reduced school speed limit zones in Oregon.

Option:

10 Changeable message signs may use blank-out messages or other methods in order to display the school speed limit only during the periods it applies.

11 A Vehicle Speed Feedback (W13-20aP) plaque that displays the speed of approaching drivers (see Sections 2B.21 and 2C.13), that is part of a School Speed Limit assembly or a School Speed Limit When Flashing (S5-1) sign, may be used in a school speed limit zone.

Guidance:

12 *If used, the Vehicle Speed Feedback (W13-20aP) plaque should only be used during the time period when the school speed limit is in effect.*

13 *A Reduced School Speed Limit Ahead (S4-5or S4-5a) sign (see Figure 7B-1) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates that advance notice would be appropriate.*

Standard:

14 **If used, the Reduced School Speed Limit Ahead sign shall be followed by a School Speed Limit sign or a School Speed Limit assembly.**

15 **The speed limit displayed on the Reduced School Speed Limit Ahead sign shall be identical to the speed limit displayed on the subsequent School Speed Limit sign or School Speed Limit assembly.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
7D.01 – Adult Crossing Guards	October 01, 2024	11702
Supplement Team	**Status**	
7-Schools	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 7D.01 states that jurisdictions should have policies and procedures for the qualification, selection, and training of adult crossing guards. This proposes adding a statement to direct readers to the "Oregon Traffic Patrol Manual for Schools," which the Oregon Department of Education developed for this specific purpose.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Section 7D.01 states that jurisdictions should have policies and procedures for the qualification, selection, and training of adult crossing guards. A statement is needed to direct readers to material that is available for jurisdictions in Oregon.

Discussion

The Oregon Department of Education publishes the Oregon Traffic Patrol Handbook for Schools to help school districts organize and operate effective school patrol programs. This is a resource that local traffic engineers and school officials should consult when setting up traffic patrol programs. Including a reference to it in the Oregon Supplements will help promote its use.

Proposed Supplement Content

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CHAPTER 7D. CROSSING SUPERVISION

Section 7D.01 Adult Crossing Guards

Option:

01 Adult crossing guards may be used to provide gaps in traffic at school crossings where an engineering study has shown that adequate gaps need to be created, and where authorized by law.

Support:

02 Adult crossing guards can also add conspicuity at the crossing where children, who are typically smaller in stature, might not be as visible.

03 High standards for selection of adult crossing guards are essential because they are responsible for the safety of and the efficient crossing of the street by schoolchildren within and in the immediate vicinity of school crosswalks.

Guidance:

04 *Jurisdictions should have policies and procedures for the qualifications, selection, and training of adult crossing guards.*

Support:

05 The "Oregon Traffic Patrol Manual for Schools" published by the Oregon Department of Education provides information regarding the organization, administration, and operation of school traffic patrol programs in Oregon.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
7D.02 – Operating Procedures for Adult Crossing Guards	October 01, 2024	11703
Supplement Team	**Status**	
7-Schools	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 7D.02 limits crossing guards to the use of a STOP paddle as the only allowable hand signaling device; there is no allowance for the use of a SCHOOL flag which would be more appropriate at a signal-controlled intersection. This supplement proposes adding an allowance that would allow school crossing guards to use either a SCHOOL flag or a STOP paddle. This supplement adds a statement prohibiting the use of a STOP paddle at a signal-controlled intersection.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Section 7D.02 limits crossing guards to the use of a STOP paddle as the only allowable hand signaling device; there is no allowance for the use of a SCHOOL flag which would be more appropriate at a signal-controlled intersection.

Discussion

It is more appropriate for school crossing guards to use the SCHOOL flag (rather than a STOP paddle) at signalized intersections due to the potential for driver confusion if a crossing guard unintentionally directs a STOP paddle at vehicular traffic. While school guards are instructed to only enter a signalized crosswalk when the WALK signal is on (and are thereby only stopping turning conflicts in the crosswalk), an unintentional display of a STOP sign to vehicular traffic while that traffic has a green light could be confusing to drivers. Equipping these crossing guards (at signalized intersections) with only SCHOOL flags will reduce potential driver confusion when a school crossing guard is present at a traffic signal.

ORS 811.265 has an allowance for a driver to follow the directions of a police officer instead of traffic signal indications at a traffic signal, but it does not have such an allowance for school crossing guards. School crossing guards are intended to support the operation of the traffic signal, not supersede or preempt normal traffic signal operation. This expectation supports the use of a SCHOOL flag rather than a STOP paddle.

811.265 Driver failure to obey traffic control device; penalty.

(1) A person commits the offense of driver failure to obey a traffic control device if the person drives a vehicle and the person does any of the following:
  (a) Fails to obey the directions of any traffic control device.
  (b) Fails to obey any specific traffic control device described in ORS 811.260 in the manner required by that section.

(2) A person is not subject to this section if the person is doing any of the following:
  (a) Following the directions of a police officer.
  (b) Driving an emergency vehicle or ambulance in accordance with the privileges granted those vehicles under ORS 820.300.
  (c) Properly proceeding on a red light as authorized under ORS 811.360.
  (d) Driving in a funeral procession led by a funeral lead vehicle or under the direction of the driver of a funeral escort vehicle.
  (e) Properly entering an intersection or executing a turn at a stop sign as authorized under ORS 814.414.
  (f) Properly entering an intersection or executing a turn at a flashing red signal as authorized under ORS 814.416.

(3) The offense described in this section, driver failure to obey a traffic control device, is a Class B traffic violation.

[1983 c.338 §608; 1991 c.482 §13; 2015 c.147 §3; 2019 c.683 §5]

Proposed Supplement Content

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CHAPTER 7D. CROSSING SUPERVISION

Section 7D.02 Operating Procedures for Adult Crossing Guards

Standard:

01 **Law enforcement officers performing school crossing supervision and adult crossing guards shall wear high-visibility retroreflective safety apparel labeled as ANSI 107-2020 standard performance for Class 2, Type R, as described in Section 6C.05.**

02 **Adult crossing guards shall not direct traffic in the usual law enforcement regulatory sense. In the control of traffic, they shall pick opportune times to create a sufficient gap in the traffic flow. At these times, they shall stand in the roadway to indicate that pedestrians are about to use or are using the crosswalk, and that all vehicular traffic must stop.**

03 **Adult crossing guards shall use either SCHOOL flags or a STOP paddle approved by the Oregon Department of Education. Adult crossing guards shall not use a STOP paddle at a crosswalk controlled by a traffic control signal. ~~The STOP paddle shall be the primary hand-signaling device.~~**

03a **Traffic control devices, systems, and practices approved by the Oregon Department of Education shall be consistent with the design and application of Standards contained in this Manual.**

Support:

03b ORS 811.260 and 811.265 outline proper driver response to a traffic control signal. Changes in Paragraph 03 ensure that adult crossing guards do not conflict with Oregon law.

03c The Oregon Department of Education regulates traffic patrol programs for schools and monitors requirements for flagging devices including SCHOOL flags and safety vests per ORS 339.650 through 339.665.

Standard:

04 **The STOP paddle shall comply with the provisions for a STOP/SLOW paddle (see Section 6D.02) except both sides shall be a STOP face.**

05 **The paddle shall be retroreflective or illuminated when used during hours of darkness.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8A.01 – Introduction, 8A.03 – Systems and Practices at Grade Crossings, 8A.05 – Engineering Studies at Grade Crossings	October 15, 2024	11801
Supplement Team	**Status**	
8-Rail	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes retaining ODOT Rail Division authority language in Part 8 as authorized in ORS 824.200 through 824.256.

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Problem

The federal MUTCD does not name the statutory authority in Oregon for regulating traffic control for railroad and light rail transit grade crossings. For example, Part 8 has many instances where it says a particular standard, guidance, or support statement is, "…as determined by a diagnostic team" or "…be determined based on an engineering study conducted by a diagnostic team." Therefore, the Supplement must clarify the diagnostic team's role and authority when practicing in Oregon.

Discussion

Statutory Authority at Grade Crossings in Oregon

Users of the MUTCD Part 8 need to know the statutory authority in Oregon to correctly and efficiently use and implement information contained in Part 8. The proposed language is currently in the 2009 Oregon Supplement to the MUTCD.

ORS 824.200 through ORS 824.256 vests exclusive authority in the State through the Rail Division of the Oregon Department of Transportation to control and regulate the construction, alteration, and protection of highway-rail and highway-LRT grade crossings (in semi-exclusive alignments). The recommendations/determinations/engineering studies produced by any diagnostic team cannot override this statutory authority.

Authority Continuity 2009 Supplement to 11th Edition

The 2009 Oregon Supplement included several changes to reiterate when a diagnostic team recommendation, crossing order, and/or approval from the ODOT Rail Division is necessary for each specific statement throughout Part 8.

The changes proposed for the 11th Edition Supplement in Sections 8A.01, 8A.03, and 8A.05 cover the high-level Oregon statutory authority requirements and apply to all Part 8 content so there is no need to reiterate these authorities for each specific statement in Part 8. Therefore, the following 2009 Supplements that reference a diagnostic team, crossing order, and/or rail division approval are not being moved forward in the Oregon Supplement to the 11th Edition:

1. 8A.02
2. 8A.03
3. 8A.05
4. 8B.04
5. 8B.06
6. 8B.09
7. 8B.27
8. 8B.28

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 8A. GENERAL

Section 8A.01 Introduction

Support:

01 Where the acronym "LRT" is used in Part 8, it refers to "light rail transit."

02 Chapters 8A, 8B, 8C, and 8D describe the traffic control devices that are used at highway-rail and highway-LRT grade crossings. Unless otherwise provided in the text or on a figure or table, the provisions of Part 8 are applicable to both highway-rail and highway-LRT grade crossings. Where the phrase "grade crossing" is used by itself without the prefix "highway-rail" or "highway-LRT," it refers to both highway-rail and highway-LRT grade crossings.

03 Chapter 8E describes the traffic control devices that are used at pathway and sidewalk grade crossings.

04 Traffic control for grade crossings includes all signs, signals, markings, other warning devices, and their supports along highways approaching and at grade crossings. The function of this traffic control is to promote safety and provide effective operation of rail and/or LRT and highway traffic at grade crossings.

05 For purposes of design, installation, operation, and maintenance of traffic control devices at grade crossings, it is recognized that the crossing of the highway and rail tracks is situated on a right-of-way available for the joint use of both highway traffic and railroad or LRT traffic.

06 Grade crossings and the traffic control devices that are associated with them are unique in that in many cases, the highway agency or authority with jurisdiction, the regulatory agency with statutory authority (if applicable), and the railroad company or transit agency are jointly involved in the development of engineering judgment or the performance of an engineering study. This joint process is accomplished through the efforts of a Diagnostic Team made up of the highway agency with jurisdiction, the regulatory agency with statutory authority (if applicable), and the railroad company and/or transit agency (if applicable).

07 In Part 8, the combination of traffic control devices selected or installed at a specific grade crossing is referred to as a "traffic control system."

08 The combination of railroad or LRT active traffic control devices used to inform road users at a grade crossing of the approach or presence of rail traffic and the necessary control equipment for the devices are referred to as a "grade crossing warning system." The "2023 AREMA Communications and Signals Manual" published by the American Railway Engineering and Maintenance-of-Way Association (AREMA) contains further information about grade crossing warning systems.

Standard:

09 **Except at grade crossings of privately-owned roadways, pathways, and sidewalks, the traffic control devices, systems, and practices described in this Manual shall be used at all grade crossings open to public travel, consistent with Federal, State, and local laws and regulations.**

Support:

10 23 CFR 655.603 contains information on the applicability of this Manual at private grade crossings.

Standard:

11 **Authority to alter, construct, or eliminate a highway-rail or highway-LRT grade crossing, including those traffic control devices in approach to and at the crossing that affect the safety of the crossing, shall be obtained from the State through issuance of a Crossing Order by the Rail Division of the Oregon Department of Transportation.**

Support:

12 ORS 824.200 through ORS 824.256 vests exclusive authority in the State through the Rail Division of the Oregon Department of Transportation to control and regulate the construction, alteration, and protection of highway-rail and highway-LRT grade crossings (in semi-exclusive alignments).

Section 8A.03 Traffic Control Systems and Practices at Grade Crossings

Support:

01 Because of the large number of significant variables to be considered, no single standard system of traffic control devices is universally applicable for all grade crossings.

Standard:

02 **Before any new grade crossing traffic control system is installed or before modifications are made to an existing system, approval shall be obtained from the highway agency with jurisdiction, the regulatory agency with statutory authority (if applicable), and the railroad company and/or transit agency.**

03 **The Diagnostic Team members shall make a recommendation, documented in an engineering study (see Section 8A.05), on new grade crossing traffic control systems and on proposed changes to an existing grade crossing traffic control system. The Diagnostic Team recommendation shall be made based on the Diagnostic Team's site visits, meetings, conference calls, or a combination of some or all of these methods.**

04 **Except as provided in Paragraph 7 of this Section, operational changes made to a grade crossing traffic control system shall be evaluated by a Diagnostic Team.**

05 **Among the types of changes at a grade crossing for which a Diagnostic Team shall conduct an engineering study are: additions, removals, or modifications of the lanes approaching or traversing the grade crossing; addition or removal of tracks; significant changes in the number or speed of trains; significant changes in the number or speed of vehicles; addition of vehicle access near the grade crossing; additions or modifications to sidewalks; additions or modifications to bicycle lanes, especially if a counterflow bicycle lane is added on a one-way street; changes to roadway use, including conversion to or from one-way operation or reversible lanes; and the installation of or significant operational changes to traffic control signals that might affect the grade crossing.**

Option:

06 A Diagnostic Team may conduct an engineering study and make recommendations as part of the Quiet Zone establishment process (see Section 8A.11).

07 Where determined by the responsible public agency, the railroad company, and/or the transit agency, general maintenance activities or minor operational changes to the grade crossing traffic control system that do not have a negative impact on the overall operation of the traffic control system may be made without a review and determination by a Diagnostic Team.

Support:

08 Many other details of grade crossing traffic control systems that are not set forth in Part 8 are contained in publications such as the "2023 AREMA Communications and Signals Manual" published by the American Railway Engineering and Maintenance-of-Way Association (AREMA), the Third Edition of "Highway-Rail Crossing Handbook" published by the FHWA and the FRA, and the 2nd Edition of "Preemption of Traffic Signals Near Railroad Crossings" published by the Institute of Transportation Engineers (ITE).

Standard:

09 **Recommendations and Engineering Studies produced by the diagnostic team are not binding and do not constitute final approval of the statutory authority.**

Support:

10 ORS 824.200 through ORS 824.256 vests exclusive authority in the State through the Rail Division of the Oregon Department of Transportation via the issuance of a Crossing Order to control and regulate the construction, alteration, and protection of highway-rail and highway-LRT grade crossings (in semi-exclusive alignments).

Section 8A.05 Engineering Studies at Grade Crossings

Standard:

01 **The appropriate traffic control system to be used at a grade crossing shall be determined based on an engineering study conducted by a Diagnostic Team involving the highway agency with jurisdiction, the regulatory agency with statutory authority (if applicable), and the railroad company and/or transit agency (as applicable).**

~~Option:~~

02 **The regulatory agency with statutory authority ~~(if applicable) may~~ shall approve the grade crossing traffic control system.**

Guidance:

03 *Among the factors that should be considered in the determination by a Diagnostic Team of which traffic control devices would be appropriate to install at a grade crossing are road geometrics, stopping sight distance, clearing sight distance, the proximity of nearby roadway intersections (including the traffic control devices at the intersections), adjacent driveways, traffic volume across the grade crossing, extent of queuing upstream or downstream from the grade crossing, train volume, pedestrian and bicycle volumes, operation of passenger trains, presence of nearby passenger station stops, maximum allowable train speeds, variable train speeds, accelerating and decelerating trains, multiple tracks, high-speed train operation, number of school buses or hazardous material haul vehicles, and the crash history at or near the location.*

Option:

04 The engineering study may include the Highway-Rail Intersection (HRI) components of the National Intelligent Transportation Systems (ITS) architecture, which is a USDOT accepted method for linking the highway, vehicles, and traffic management systems with rail operations and wayside equipment.

Support:

05 More detail on Highway-Rail Intersection components is available from the USDOT's Federal Railroad Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590, or www.fra.dot.gov.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8B.28 – Railroad Stop Sign (Proposed New Section)	October 15, 2024	11802
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes to add a new section for railroad STOP sign information per OAR 741-110-0030(2)(a), OAR 741-110-0040(2), and OAR 741-110-0060(1).

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- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

It is necessary to provide information about the Railroad STOP sign in the Oregon Supplement so it is easily accessible to all users.

Discussion

OAR 741-110-0030(2)(a), 741-110-0040(2), and 741-110-0060(1) specify railroad STOP sign information that is a good fit for the Oregon Supplement. The proposed language matches current practice for providing this signing at grade crossings.

OAR 741-110-0030 – Standard Protective Devices

(1) The devices listed in the MUTCD and the devices listed in Sections (2), (3), (4), (5), (6), and (7) of this rule are "standard protective devices."

(2) Passive Devices:

(a) Railroad STOP Sign Figure 1 is a fixed rectangular sign that shall bear the word "STOP" in white reflective letters on red reflective material.

(b) Stop Clearance Line is a stop line as defined in Section 1A.13 of the MUTCD, which is 24 inches wide.

(c) "Illumination" (Figure 4) is a system of luminaires arranged in a unique pattern to provide direct lighting on the side of railroad equipment occupying a grade crossing during hours of darkness.

(3) Active Devices at Grade Crossings:

(a) Flashing-Light Signal is as set forth in Section 8C.02 of the MUTCD, which has an audible warning device. For additional specifications for Flashing-light signals, refer to subsections (e) and (f) of this section.

(b) Cantilevered Flashing-Light Signal is as set forth in Section 8C.02 of the MUTCD, which has an audible warning device. For additional specifications on cantilevered Flashing-light signals, refer to subsections (e) and (f) of this section.

(c) Pedestrian Flashing-Light Signal is as set forth in Section 8D.06 of the MUTCD. For additional specifications on Pedestrian Flashing-light signals, refer to subsections (e) and (f) of this section.

(d) Automatic Gate is as set forth in Section 8C.04 of the MUTCD.

(e) Light units on Flashing-light signals, Cantilevered Flashing-light signals, and Pedestrian Flashing-light signals shall be aligned so that insofar as it is practical to do so, at least one full 12-inch diameter red light shall be visible when viewed from any point on the roadway within the safe stopping distance.

(f) Unless otherwise specified, 12-inch diameter roundels (lenses) on Flashing-light signals, Cantilevered Flashing-light signals, and Pedestrian Flashing-light signals, if incandescent bulbs are used, shall be as follows:

(A) Front light units: roundel rated with a 30-degree horizontal and 15-degree downward spread.

(B) Back light units: roundel rated with a 70-degree horizontal spread.

(C) Cantilevered front and back light units: roundel rated with a 20-degree horizontal and 32-degree downward spread.

(4) Auxiliary Devices. The Department may authorize the installation of auxiliary signs and signals at a crossing. Such devices shall be installed so as not to obscure other crossing signs or signals at the crossing.

(5) Advance Warning Devices:

(a) Train-Activated Advance Warning Device (Figure 3) is a signal that shall alternately flash two yellow lights along the highway in advance of a crossing, to provide warning of an approaching train.

(b) Skewed Angle Bicycle Warning sign is the skewed crossing (W10-12) sign in Section 8B.25 of the MUTCD. If used at pathway-rail grade crossings, the sign size depicted in Table 9B-1 of the MUTCD for a shared-use path shall be used.

(6) Guardrail is as depicted in Oregon Standard Drawing No. RD445.

(7) Curb is a standard curb as depicted in Oregon Standard Drawing No. RD700.

OAR 741-110-0040 - Location of Protective Devices

(1) Standard Protective Devices shall be located as set forth in Part 8 of the MUTCD.

(2) Railroad STOP signs (Figure 1) shall be located adjacent to the track on which the stopping requirement applies not closer than six feet nor further than 25 feet from the nearest edge of the roadway.

(3) The stop clearance line described in OAR 741-110-0030(2)(b) shall be located in accordance with the MUTCD as adopted by OAR 734-020-0005.

(4) Grade Crossing Advance warning signs and grade crossing pavement markings shall be located in accordance with the MUTCD as adopted by OAR 734-020-0005.

(5) STOP AHEAD (W3-1 or W3-1a) signs, YIELD AHEAD (W3-2 or W3-2a) signs and train-activated advance warning signals shall be located not less than 100 feet in advance of the advance warning sign. See Figure 3.

(6) Guardrails shall be located so that the face of the guardrail, at a point perpendicular to the roadway centerline, shall coincide with the outside edge of the roadway. No part of the guardrail shall be closer than 10 feet from the centerline of the nearest track.

(7) Curb shall be located on the outside edge of the roadway. Curb shall commence not less than 10 feet from centerline of nearest track and must extend 50 feet in advance of the automatic protective device.

(8) Illumination Devices. The system of luminaires shall be located at the grade crossing, as determined by field conditions, to light the side of the train during hours of darkness. See Figure 4.

(9) Overhead Mounting of Signs and Signals. At the option of the public authority, or by Order of the Department, authorized signs and signals may be installed directly over a lane of traffic on the roadway.

8

OAR 741-110-0060 – Required Installation of Specified Protective Devices

Unless otherwise ordered by the Department, the following protective devices shall be installed at the grade crossings described below.

(1) One railroad STOP sign shall be installed, where physical circumstances permit, on each track approach to each crossing equipped with Flashing-light signals, Cantilevered Flashing-light signals, Pedestrian Flashing-light signals, and automatic gates when the minimum signal activation requirement of OAR 741 110-0070(1) cannot be met.

(2) Two Number of Tracks (R15-2P) plaques shall be installed at each grade crossing consisting of two or more tracks.

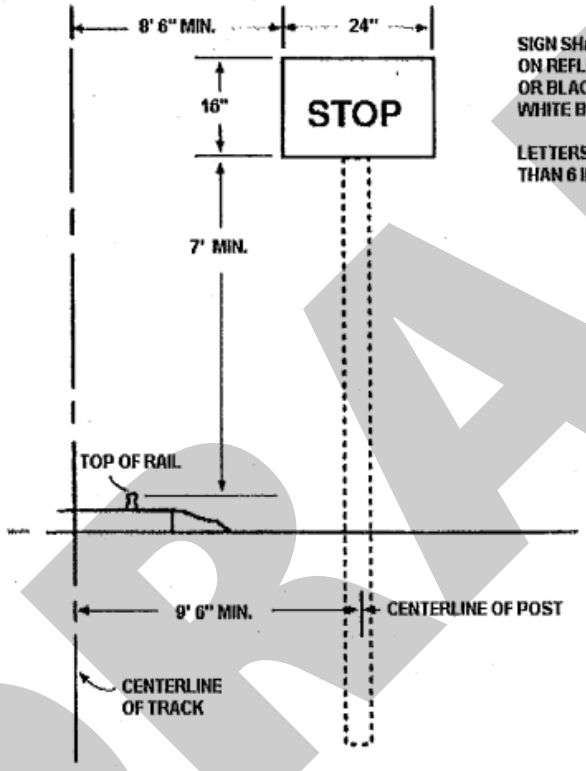
(3) Stop Clearance Lines. One stop clearance line shall be installed on each paved roadway approach lane at each grade crossing.

(4) Grade Crossing Advance Warning Signs. Appropriate grade crossing advance warning signs shall be installed on each roadway approach to each grade crossing.

(5) Grade Crossing Pavement Markings. Grade crossing pavement markings shall be installed on each paved vehicle approach lane to each grade crossing.

(6) Guardrail or Curb. Guardrail or curb, as appropriate, shall be installed at each crossing equipped with active protective devices.

RAILROAD STOP SIGN



SIGN SHALL HAVE WHITE LETTERS ON REFLECTIVE RED BACKGROUND OR BLACK LETTERS ON REFLECTIVE WHITE BACKGROUND.

LETTERS SHALL BE NOT LESS THAN 6 INCHES HIGH.

OAR 741-110-0030(2) (a)
OAR 741-110-0040(2)

FIGURE 1
MARCH 2013

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Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 8B. SIGNS

Section 8B.28 Railroad Stop Sign

Standard:

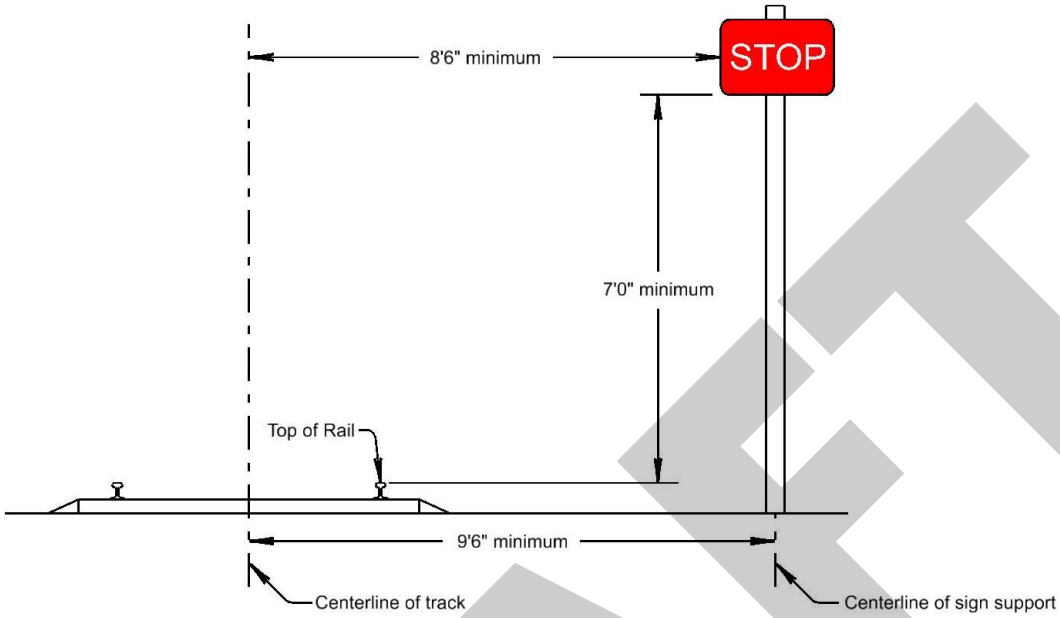
01 **When a train is required to stop prior occupying the grade crossing, a railroad stop sign (see Figure 8B-6(OR)) shall be used. The sign shall be located on each track approach as shown in Figure 8B-7(OR).**

Support:

02 Trains are required to stop prior to occupying the grade crossing when the grade crossing is equipped with flashing light signals and automatic gates and cannot meet the minimum signal activation requirements of OAR 741-110-0070(1).

Figure 8B-6(OR). Railroad Stop Sign

Figure 8B-7(OR). Railroad Stop Sign Placement



OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8B.29 – Private Crossing Sign (Proposed New Section)	October 15, 2024	11803
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	
Summary (2-3 sentences)		
This proposes adding a new section to cover private crossing sign information per OAR 741-115-0060.		

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

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Problem

It is necessary to provide information about the private crossing signs in the Oregon Supplement so that it is easily accessible to all users.

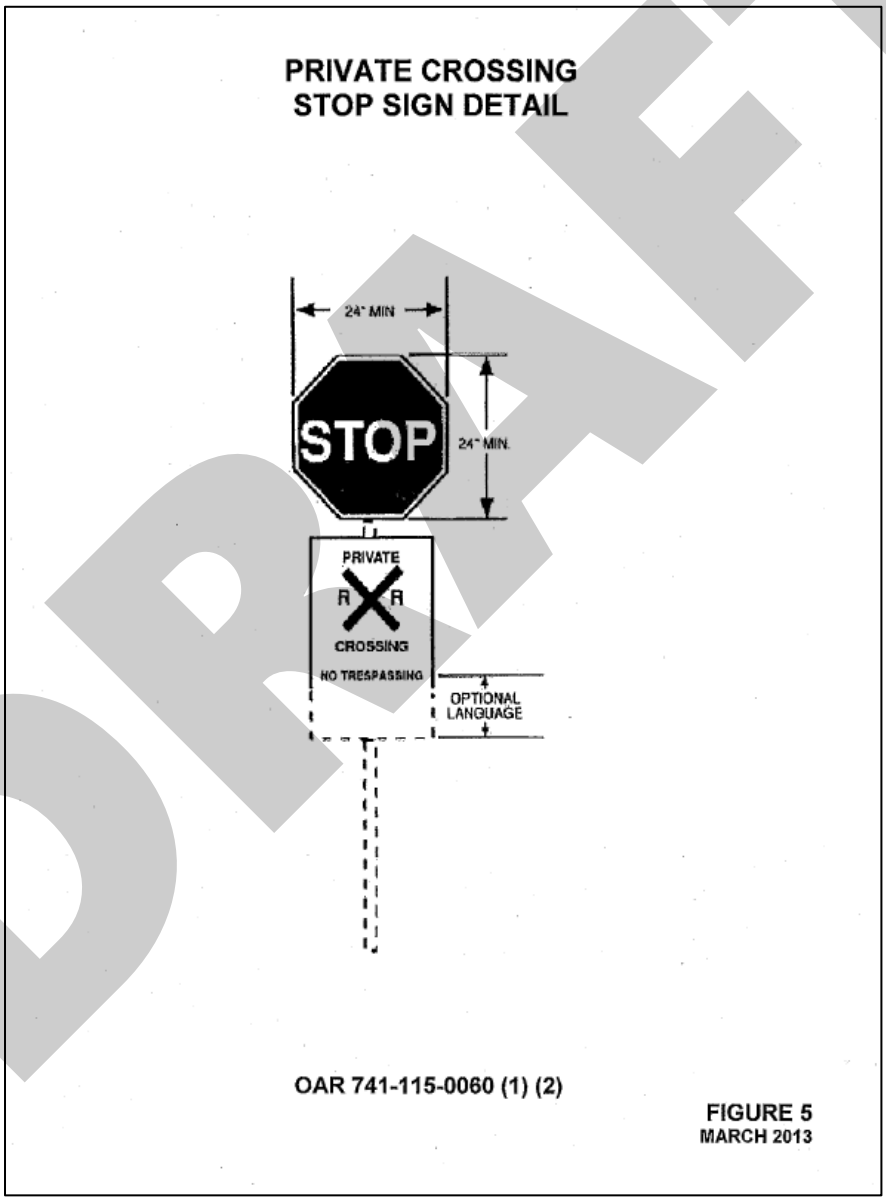
Discussion

OAR 741-115-0060 provides specific private crossing sign information in its Figure 5 that is a good fit for the Oregon supplement. The proposed language matches current practice for providing this signing at grade crossings.

OAR 741-115-0060 – Stop Signs at Private Crossings

(1) Unless otherwise ordered by the Department under ORS 824.224, the railroad shall cause to be installed one vehicle stop sign (24-inch minimum) on each side of any private or farm crossing at grade that is not equipped with automatic protective devices.

(2) The railroad shall also cause to be installed an auxiliary sign identifying the crossing as a private crossing by stating the words "PRIVATE CROSSING" in letters at least two inches high. The color of the sign shall be black letters on a white background (see Figure 5). Optional information such as the words "NO TRESPASSING," the name of the railroad from which permission must be secured for use of the crossing and permit number may be included on the auxiliary sign.



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Proposed Supplement Content

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CHAPTER 8B. SIGNS

Section 8B.29 Private Crossing Sign

Standard:

01 **Private crossings, including farm crossings, that are not equipped with flashing light signals or automatic gates shall install a STOP (R1-1) sign with private crossing sign (see Figure 8B-8(OR)) on each side of the crossing as shown in Figure 8B-9(OR).**

Support:

02 The statutory authority regulates private crossing sign requirements according to OAR 741-110-0060.

Figure 8B-8(OR). Private Crossing Sign

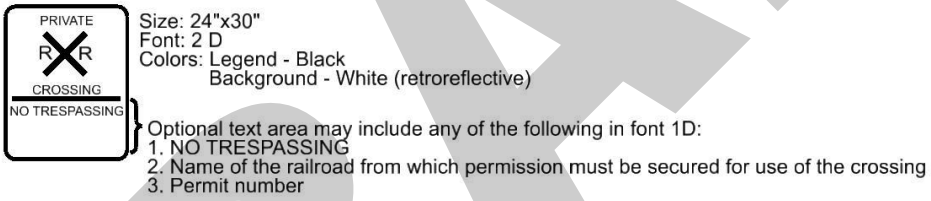
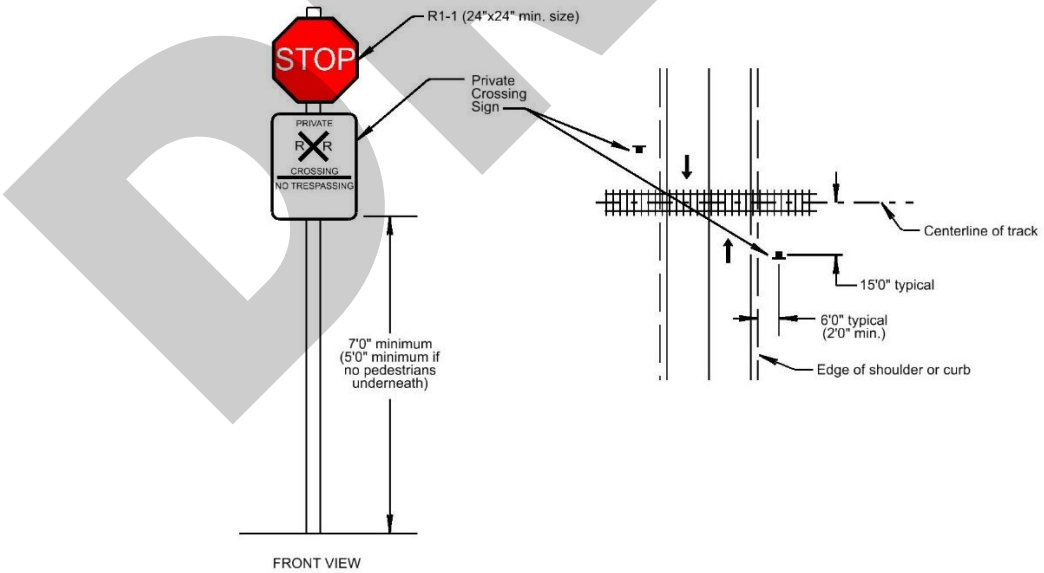


Figure 8B-9(OR). Private Crossing Sign Placement



OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8C.02 – Grade Crossing Pavement Markings	October 15, 2024	11804
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes changing rail grade crossing pavement marking standards per OAR 741-110-0060(5).

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

The Oregon Supplement should give more prescriptive information about rail grade crossing pavement warning markings so it is easily accessible to all users.

Discussion

OAR 741-110-0060(5) provides prescriptive information for rail grade crossing pavement markings that is a good fit for the Oregon Supplement. The proposed language matches current practice.

OAR 741-110-0060 – Required Installation of Specified Protective Devices

Unless otherwise ordered by the Department, the following protective devices shall be installed at the grade crossings described below.

(1) One railroad STOP sign shall be installed, where physical circumstances permit, on each track approach to each crossing equipped with Flashing-light signals, Cantilevered Flashing-light signals, Pedestrian Flashing-light signals, and automatic gates when the minimum signal activation requirement of OAR 741 110-0070(1) cannot be met.

(2) Two Number of Tracks (R15-2P) plaques shall be installed at each grade crossing consisting of two or more tracks.

(3) Stop Clearance Lines. One stop clearance line shall be installed on each paved roadway approach lane at each grade crossing.

(4) Grade Crossing Advance Warning Signs. Appropriate grade crossing advance warning signs shall be installed on each roadway approach to each grade crossing.

(5) Grade Crossing Pavement Markings. Grade crossing pavement markings shall be installed on each paved vehicle approach lane to each grade crossing.

(6) Guardrail or Curb. Guardrail or curb, as appropriate, shall be installed at each crossing equipped with active protective devices.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 8C. MARKINGS

Section 8C.02 Grade Crossing Pavement Markings

Standard:

01 **On paved roadways, grade crossing pavement markings shall consist of an X, the letters RR, a no-passing zone marking (on two-lane, two-way highways with center line markings in compliance with Section 3B.01), and certain transverse lines as shown with detailed dimensions in Figures 8C-1 and 8C-2.**

02 **Except as provided in Paragraph~~s~~ 3 ~~and 4~~ of this Section, grade crossing pavement markings shall be placed in each approach lane on all paved approaches to highway-rail grade crossings ~~where signals or automatic gates are located, and at all other grade crossings where the posted or statutory highway speed is 40 mph or higher~~.**

03 **Grade crossing pavement markings shall ~~not~~ be required at highway-rail grade crossings unless ~~where the posted or statutory highway speed is less than 40 mph if~~ the Diagnostic Team determines that other installed devices provide suitable warning and control.**

~~04 Grade crossing pavement markings shall not be required at highway-rail grade crossings in urban areas if the Diagnostic Team determines that other installed devices provide suitable warning and control.~~

05 **Grade crossing pavement markings shall be placed in each approach lane on all paved approaches to highway-LRT grade crossings where a Crossbuck sign is placed at the grade crossing.**

06 **If grade crossing pavement markings are used on a multi-lane approach to a grade crossing, identical markings shall be placed in each approach lane that crosses the tracks.**

07 **All grade crossing pavement markings shall be retroreflective white. All other markings shall be in accordance with Part 3.**

Guidance:

08 *Where grade crossing pavement markings are used, a portion of the X symbol should be directly opposite the Grade Crossing Advance Warning sign.*

Option:

09 Where determined by the Diagnostic Team, supplemental pavement marking symbol(s) may be placed between the Grade Crossing Advance Warning sign and the grade crossing.

Guidance:

10 *If supplemental pavement marking symbol(s) are placed between the Grade Crossing Advance Warning sign and the grade crossing, the downstream transverse line should be at least 50 feet upstream from the stop or yield line at the grade crossing.*

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8C.03 – Stop and Yield Lines	October 15, 2024	11805
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes to:

1) Omit the rail stop line when a nearby crosswalk can serve the same purpose,
2) Clarify use of a 24-inch-wide rail stop line, and
3) Require a stop line at every paved roadway approach.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

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Problem

OAR 741-110-0060(3) requires a rail stop line for each paved roadway approach lane. If the rail crossing is near a signalized intersection or a marked crosswalk, then the rail stop line in conjunction with a marked crosswalk (potentially with a crosswalk stop line), or an intersection stop line results in clutter and road users confused about where they need to stop.

It's also not clear how wide rail stop lines need to be. Figure 8C-1 is the only location that shows the rail stop line as 24 inches. Section 8C.03 only references section 3B.19 for information on the stop line. There is no text in Section 8C.03 or in Section 3B.19 that says the rail stop line shall be 24 inches wide. Relying only on Figure 8C-1 for this important information could result in installation errors.

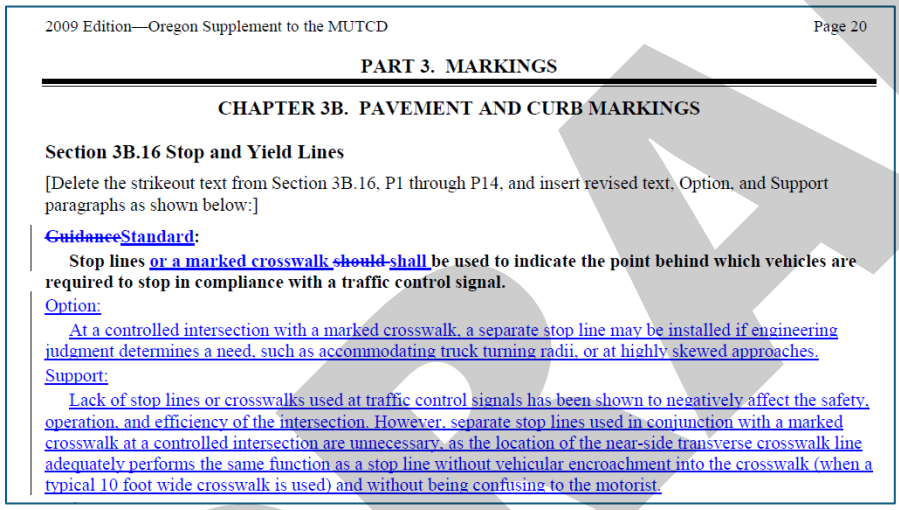
Discussion

Omitting Extra Stop Lines near a Marked Crosswalk

Certain grade crossing locations have a marked crosswalk near an automatic gate arm (typically at signalized, rail interconnected intersections). Example at unsignalized intersection in Newberg and example at signalized intersection in Hillsboro.

The Oregon Supplement to the 2009 MUTCD allows either a stop line or a marked crosswalk to show the point behind which vehicles are required to stop in compliance with a traffic control signal. Proposal No. 11302 proposes to continue this practice under the MUTCD 11th Edition. This Oregon standard practice and the desire to provide clear direction of a single stopping location is the reason for the proposed language.

Figure 1: Oregon Supplement to the 2009 MUTCD, Section 3B.16



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PART 3. MARKINGS

CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.16 Stop and Yield Lines

[Delete the strikeout text from Section 3B.16, P1 through P14, and insert revised text, Option, and Support paragraphs as shown below:]

~~Guidance~~Standard:

Stop lines or a marked crosswalk ~~should~~ shall be used to indicate the point behind which vehicles are required to stop in compliance with a traffic control signal.

Option:

At a controlled intersection with a marked crosswalk, a separate stop line may be installed if engineering judgment determines a need, such as accommodating truck turning radii, or at highly skewed approaches.

Support:

Lack of stop lines or crosswalks used at traffic control signals has been shown to negatively affect the safety, operation, and efficiency of the intersection. However, separate stop lines used in conjunction with a marked crosswalk at a controlled intersection are unnecessary, as the location of the near-side transverse crosswalk line adequately performs the same function as a stop line without vehicular encroachment into the crosswalk (when a typical 10 foot wide crosswalk is used) and without being confusing to the motorist.

OAR 741-110-0060(3) requires a rail stop line for each paved roadway approach lane. This means the Oregon Supplement should upgrade the guideline in 8C.03 Paragraphs 01 and 02 to a standard.

OAR 741-110-0060 – Required Installation of Specified Protective Devices

Unless otherwise ordered by the Department, the following protective devices shall be installed at the grade crossings described below.

(1) One railroad STOP sign shall be installed, where physical circumstances permit, on each track approach to each crossing equipped with Flashing-light signals, Cantilevered Flashing-light signals, Pedestrian Flashing-light signals, and automatic gates when the minimum signal activation requirement of OAR 741 110-0070(1) cannot be met.

(2) Two Number of Tracks (R15-2P) plaques shall be installed at each grade crossing consisting of two or more tracks.

(3) Stop Clearance Lines. One stop clearance line shall be installed on each paved roadway approach lane at each grade crossing.

(4) Grade Crossing Advance Warning Signs. Appropriate grade crossing advance warning signs shall be installed on each roadway approach to each grade crossing.

(5) Grade Crossing Pavement Markings. Grade crossing pavement markings shall be installed on each paved vehicle approach lane to each grade crossing.

(6) Guardrail or Curb. Guardrail or curb, as appropriate, shall be installed at each crossing equipped with active protective devices.

Wide Stop Line Clarification

Providing information on the 24-inch rail stop line requirement in the text of Section 8C.03 is an important redundancy to include.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 8C. MARKINGS

Section 8C.03 Stop and Yield Lines

~~*Guidance:*~~ **Standard:**

01 **Except as provided in Paragraph 02a of this section, on ~~On~~ paved roadway approaches to passive grade crossings where a STOP sign is installed in conjunction with the Crossbuck sign, a 24-inch-wide stop line ~~*should*~~ shall be installed to indicate the point behind which motor vehicles are required to stop or as near to that point as practicable.**

~~Option:~~

02 **Except as provided in Paragraph 02a of this section, on ~~On~~ paved roadway approaches to passive grade crossings where a YIELD sign is installed in conjunction with the Crossbuck sign, ~~a yield line (see Section 3B.19) or~~ a 24-inch wide stop line ~~may~~ shall be installed to indicate the point behind which motor vehicles are required to yield or stop or as near to that point as practicable.**

Option:

02a The stop line may be omitted if a marked crosswalk (transverse style only, see Figure 3C-1), stop line for a marked crosswalk, or stop line for a signalized approach is present and can serve the function of indicating where motor vehicles are required to stop for pedestrians/compliance with a traffic signal and the rail crossing.

Support:

02b Providing a single stop line location when a rail crossing is located very near to a crosswalk or signalized approach reduces pavement marking clutter and confusion to the driver.

Guidance:

03 *If a ~~yield line (see Figure 3B-16) or~~ stop line is used at a passive grade crossing, it should be a transverse line at a right angle to the traveled way and should be placed no closer than 15 feet in advance of the nearest rail.*

Standard:

04 **Except as provided in Paragraph 02a of this section, on ~~On~~ paved roadways at grade crossings that are equipped with active control devices such as flashing-light signals, automatic gates, or traffic control signals, a 24-inch-wide stop line (see Section 3B.19) shall be installed to indicate the point behind which motor vehicles are or might be required to stop.**

Guidance:

05 *If a stop line is used at an active grade crossing where road users are controlled by flashing-light signals, it should be a transverse line at a right angle to the traveled way and should be placed approximately 8 feet in advance of the flashing-light signals or automatic gate (if present), whichever is farther from the track(s), but no closer than 15 feet in advance of the nearest rail (see Figure 8C-1).*

06 *If a stop line is used at an active grade crossing where road users are controlled by a traffic control signal, it should be a transverse line at a right angle to the traveled way and should be placed no closer than 15 feet in advance of the nearest rail.*

Standard:

07 **If a stop line is used at an active grade crossing where road users are controlled by a traffic control signal, it shall be placed such that the lateral and longitudinal positions of the signal faces for the approach comply with the provisions of Sections 4D.07 and 4D.08.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8D.02 – Flashing-Light Signals	October 15, 2024	11806
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes to:

1) add a standard for flashing light signal systems per OAR 741-110-0030(3)(e), and
2) upgrade an option to a standard for rail audible warning devices per OAR 741-110-0030(3)(a).

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

The Oregon Supplement should provide more prescriptive information about the flashing light signals and rail audible warning devices so it is easily accessible to all users.

Discussion

OAR 741-110-0030(3)(a) and (e) provides prescriptive information for rail audible warning devices and flashing light signals that is a good fit for the Oregon supplement. The proposed language matches current practice.

OAR 741-110-0030 – Standard Protective Devices

(1) The devices listed in the MUTCD and the devices listed in Sections (2), (3), (4), (5), (6), and (7) of this rule are "standard protective devices."

(2) Passive Devices:

(a) Railroad STOP Sign Figure 1 is a fixed rectangular sign that shall bear the word "STOP" in white reflective letters on red reflective material.

(b) Stop Clearance Line is a stop line as defined in Section 1A.13 of the MUTCD, which is 24 inches wide.

(c) "Illumination" (Figure 4) is a system of luminaires arranged in a unique pattern to provide direct lighting on the side of railroad equipment occupying a grade crossing during hours of darkness.

(3) Active Devices at Grade Crossings:

(a) Flashing-Light Signal is as set forth in Section 8C.02 of the MUTCD, which has an audible warning device. For additional specifications for Flashing-light signals, refer to subsections (e) and (f) of this section.

(b) Cantilevered Flashing-Light Signal is as set forth in Section 8C.02 of the MUTCD, which has an audible warning device. For additional specifications on cantilevered Flashing-light signals, refer to subsections (e) and (f) of this section.

(c) Pedestrian Flashing-Light Signal is as set forth in Section 8D.06 of the MUTCD. For additional specifications on Pedestrian Flashing-light signals, refer to subsections (e) and (f) of this section.

(d) Automatic Gate is as set forth in Section 8C.04 of the MUTCD.

(e) Light units on Flashing-light signals, Cantilevered Flashing-light signals, and Pedestrian Flashing-light signals shall be aligned so that insofar as it is practical to do so, at least one full 12-inch diameter red light shall be visible when viewed from any point on the roadway within the safe stopping distance.

(f) Unless otherwise specified, 12-inch diameter roundels (lenses) on Flashing-light signals, Cantilevered Flashing-light signals, and Pedestrian Flashing-light signals, if incandescent bulbs are used, shall be as follows:

(A) Front light units: roundel rated with a 30-degree horizontal and 15-degree downward spread.

(B) Back light units: roundel rated with a 70-degree horizontal spread.

(C) Cantilevered front and back light units: roundel rated with a 20-degree horizontal and 32-degree downward spread.

(4) Auxiliary Devices. The Department may authorize the installation of auxiliary signs and signals at a crossing. Such devices shall be installed so as not to obscure other crossing signs or signals at the crossing.

(5) Advance Warning Devices:

(a) Train-Activated Advance Warning Device (Figure 3) is a signal that shall alternately flash two yellow lights along the highway in advance of a crossing, to provide warning of an approaching train.

(b) Skewed Angle Bicycle Warning sign is the skewed crossing (W10-12) sign in Section 8B.25 of the MUTCD. If used at pathway-rail grade crossings, the sign size depicted in Table 9B-1 of the MUTCD for a shared-use path shall be used.

(6) Guardrail is as depicted in Oregon Standard Drawing No. RD445.

(7) Curb is a standard curb as depicted in Oregon Standard Drawing No. RD700.

Proposed Supplement Content

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CHAPTER 8D. FLASHING-LIGHT SIGNALS, AUTOMATIC GATES, AND TRAFFIC CONTROL SIGNALS

Section 8D.02 Flashing-Light Signals

Support:

01 Section 8D.04 contains additional information regarding flashing-light signals at highway-LRT grade crossings in semi-exclusive and mixed-use alignments.

Standard:

02 **If used, the flashing-light signal assembly (shown in Figure 8D-1) on the side of the highway shall include a standard Crossbuck (R15-1) sign, and where there is more than one track, a supplemental Number of Tracks (R15-2P) plaque, all of which indicate to motorists, bicyclists, and pedestrians the location of a grade crossing.**

Guidance:

03 *The bottom of the Number of Tracks (R15-2P) plaque (when used) should be located as low as practicable above the flashing-light backgrounds. The Crossbuck (R15-1) sign should be located just above the Number of Tracks (R15-2P) plaque or, if no plaque is present, the bottom of the Crossbuck sign should be located as low as practicable above the flashing-light backgrounds.*

Support:

04 Additional information regarding sizes and clearances of components used on flashing-light signals can be found in Part 3 of the "2023 AREMA Communications and Signals Manual" published by the American Railway Engineering and Maintenance-of-Way Association (AREMA).

~~Option:~~ **Standard:**

05 **At highway-rail grade crossings, bells or other audible warning devices ~~may~~ shall be included in the assembly and ~~may be~~ operated in conjunction with the flashing-light signals to provide additional warning for pedestrians, bicyclists, and/or other non-motorized road users.**

Standard:

06 **When indicating the approach or presence of rail traffic, the flashing-light signal shall display toward approaching highway traffic two red lights mounted in a horizontal line flashing alternately.**

07 **If used, flashing-light signals shall be placed to the right-hand side of approaching highway traffic on all highway approaches to a grade crossing. They shall be located laterally with respect to the highway in compliance with Figure 8D-1 except where such location would adversely affect signal visibility.**

08 **If used at a grade crossing with highway traffic in both directions, back-to-back flashing-light signals shall be placed on each side of the tracks. On multi-lane one-way streets and divided highways, flashing-light signals shall be placed on the approach side of the grade crossing on both sides of the roadway or shall be placed above the highway.**

09 **Each red signal unit in the flashing-light signal shall flash alternately. The number of flashes per minute for each lamp shall be 35 minimum and 65 maximum. Each lamp shall be illuminated for approximately the same length of time. The total time of illumination of each pair of lamps shall be the entire operating time.**

09a **At least one red signal unit of the entire flashing light signal system used shall be visible to approaching traffic at all times when viewed from any point on the roadway within the safe stopping distance. Eliminating visual obstructions, specific aiming of the red signal units, and/or adding supplemental red signal units may be necessary.**

10 **Flashing-light units shall use either 8-inch or 12-inch nominal diameter lenses.**

Guidance:

11 *In choosing between the 8-inch or 12-inch nominal diameter lenses for use in grade crossing flashing-light signals, consideration should be given to the principles stated in Section 4E.02.*

12 *If flashing-light signals are used, at least one pair of flashing lights should be provided for each approach lane of the roadway.*

13 *The center-to-center distance between the two red lights in a flashing-light unit should be approximately 30 inches.*

14 *The mounting height of the flashing-light units, measured from the center of the flashing-light unit housing to the elevation of the crown of the roadway, should be between 8 feet and 9 feet.*

15 *The top of the support pole foundation should be no more than 4 inches above the surface of the ground and should be at the same elevation as the crown of the roadway.*

Standard:

16 **Grade crossing flashing-light signals shall operate at a low voltage using storage batteries either as a primary or stand-by source of electrical energy. Provision shall be made to provide a source of energy for charging batteries.**

Option:

17 Additional flashing-light signals may be mounted on the same supporting post and directed toward vehicular traffic approaching the grade crossing from other than the principal highway route, such as where there are approaching routes on highways closely adjacent to and parallel to the track(s).

Guidance:

18 *Where the storage distance for vehicles approaching a grade crossing is less than a design vehicle length, the Diagnostic Team should consider providing additional flashing-light signals aligned toward the movement turning toward the grade crossing.*

19 *The Diagnostic Team should consider the use of additional flashing-light signals to provide supplemental warning to pedestrians, especially on one-way streets and divided highways.*

Standard:

20 **References to lenses in this Section shall not be used to limit flashing-light signal optical units to incandescent lamps within optical assemblies that include lenses.**

Support:

21 Research has resulted in flashing-light signal optical units that are not lenses, such as, but not limited to, light-emitting diode (LED) flashing-light signal modules.

Option:

22 If a Diagnostic Team determines that it is appropriate, the flashing-light signals may be installed on overhead structures or cantilevered supports as shown in Figure 8D-1 where needed for additional emphasis, or for better visibility to approaching traffic, particularly on multi-lane approaches or highways with profile restrictions.

23 If it is determined by a Diagnostic Team that one flashing-light signal on the cantilever arm is not sufficiently visible to road users, one or more additional flashing-light signals may be mounted on the supporting post and/or on the cantilever arm.

Standard:

24 **Breakaway or frangible bases shall not be used on the supporting posts for overhead structures or cantilevered arms that support overhead flashing-light signals.**

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8D.15 – Use of LRT Signals for Control of LRT Vehicles at Highway-LRT Grade Crossings	October 15, 2024	11807
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes to add LRT/BRT signals for existing legacy installations.

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Problem

Oregon transit agencies have transit signals that were developed prior to their inclusion in the MUTCD. The Oregon Supplement should provide information on existing legacy LRT/BRT system signal indications to show different messages that are not possible to convey with the indications shown in the Figure 8D-3 in the 11th Edition of the MUTCD.

Discussion

When existing legacy LRT/BRT systems indications need to be replaced, replacement according to Figure 8D-3 should be considered when feasible. While national uniformity is important, in this case it has minimal benefit as these signals apply only to trained professional drivers that have been trained specifically by their LRT/BRT agency and only may operate within their LTR/BRT agency boundaries. The cost to make these changes at the end of service life is significant given the current budget issues of public agencies. The benefit cost ratio is too low to justify making a change to existing assets that are performing successfully. The proposed language is currently in the Oregon Supplement to the 2009 MUTCD.

All new LRT/BRT systems should use the Figure 8D-3.

Proposed Supplement Content

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CHAPTER 8D. FLASHING-LIGHT SIGNALS, AUTOMATIC GATES, AND TRAFFIC CONTROL SIGNALS

Section 8D.15 Use of LRT Signals for Control of LRT Vehicles at Highway-LRT Grade Crossings

Option:

01 LRT signal indications may be used at grade crossings and at intersections in mixed-use alignments in conjunction with standard traffic control signals where special LRT signal phases are used to accommodate turning LRT vehicles or where additional LRT clearance time is desirable.

02 LRT signal indications may be used at intersections where special signal phases are used for bus movements.

Standard:

03 **If the LRT crossing control is separate from the intersection control, the two shall be interconnected. The LRT signal phase shall not be terminated until after the LRT vehicle has cleared the crossing or intersection.**

04 **If a separate set of standard traffic control signal indications (red, yellow, and green circular and arrow indications) is used to control LRT movements, the indications shall be positioned so they are not visible to motorists, pedestrians, and bicyclists (see Section 4D.06).**

Guidance:

05 *If a signal face used to control LRT movements cannot be positioned where the indications are not visible to road users, the LRT signal indications shown in Figure 8D-3 should be used.*

Option:

05a LRT/BRT signal indications shown in Figures 8D-3(OR) through 8D-7(OR) may be used in existing legacy LRT/BRT systems only.

Support:

05b Figures 8D-3(OR) through 8D-7(OR) illustrate TriMet standards for LRT traffic control that were developed prior to their inclusion in the MUTCD, follow national LRT standards, and are used extensively throughout the Portland Metropolitan area. The white flashing triangle used per the 2009 MUTCD Figure 8C-3 remains an acceptable symbol to use for existing legacy systems.

Standard:

06 **If special LRT signal indications such as those shown in Figure 8D-3 are used, the color of the signal indications shall be white.**

Option:

07 *If used, individual LRT signal sections may be displayed to form clustered signal faces or multiple LRT signal indications may be displayed in an individual housing.*

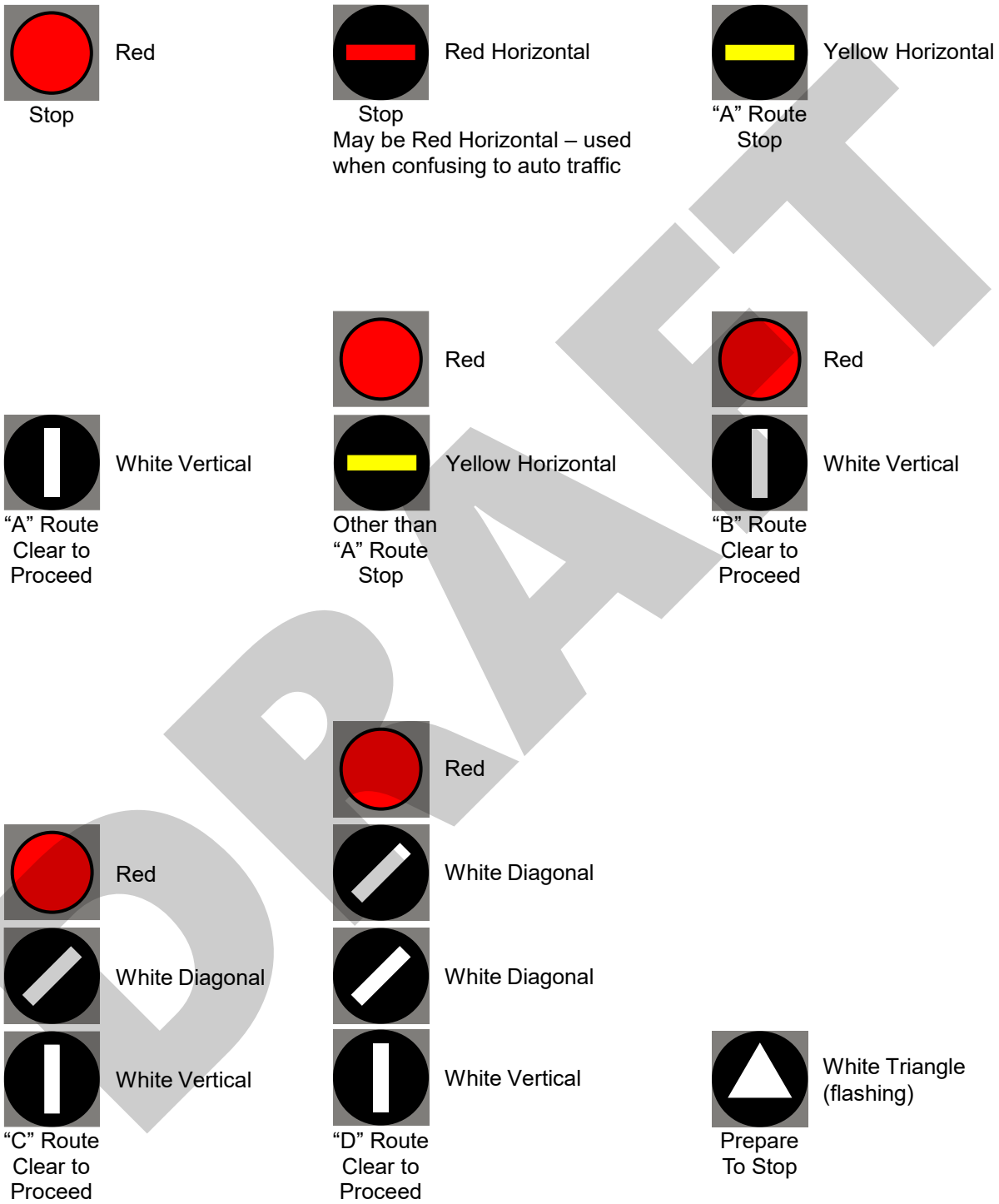
Guidance:

08 *LRT signal faces should be located at least 3 feet from the nearest highway traffic signal face for the same approach measured either horizontally perpendicular to the approach between the centers of the signal faces or vertically from the center of the lowest signal indication of the top signal face to the center of the highest signal indication of the bottom signal face.*

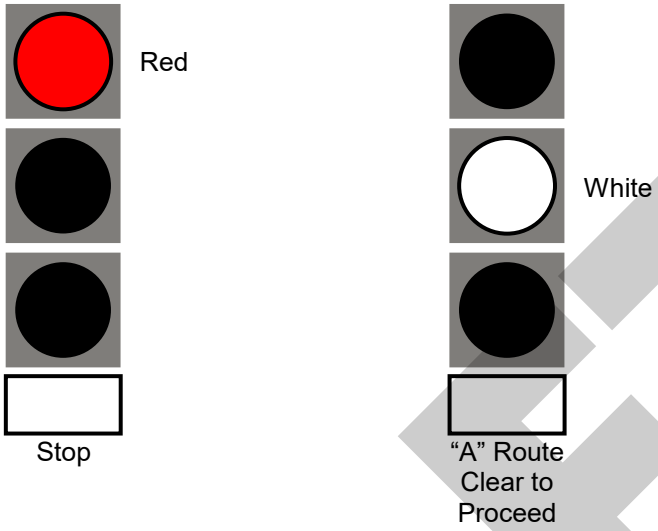
Support:

09 Section 4F.18 contains information about the use of the LRT signal indications shown in Figure 8D-3 for the control of exclusive bus movements at "queue jumper lanes" and for the control of exclusive bus rapid transit movements on mixed-use alignments.

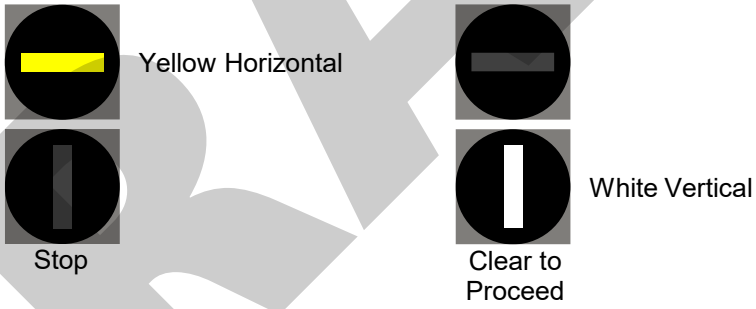
61 **Figure 8D-3(OR). Legacy Light Rail Transit and BRT Signal Indications**



62 **Figure 8D-4(OR). Legacy Signals M176A, M176B, M176C**



63 **Figure 8D-5(OR). Legacy Preempt Signals**



64 **Figure 8D-6(OR). Legacy Dwarf Signal M168**

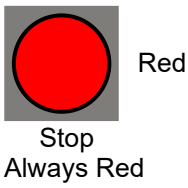
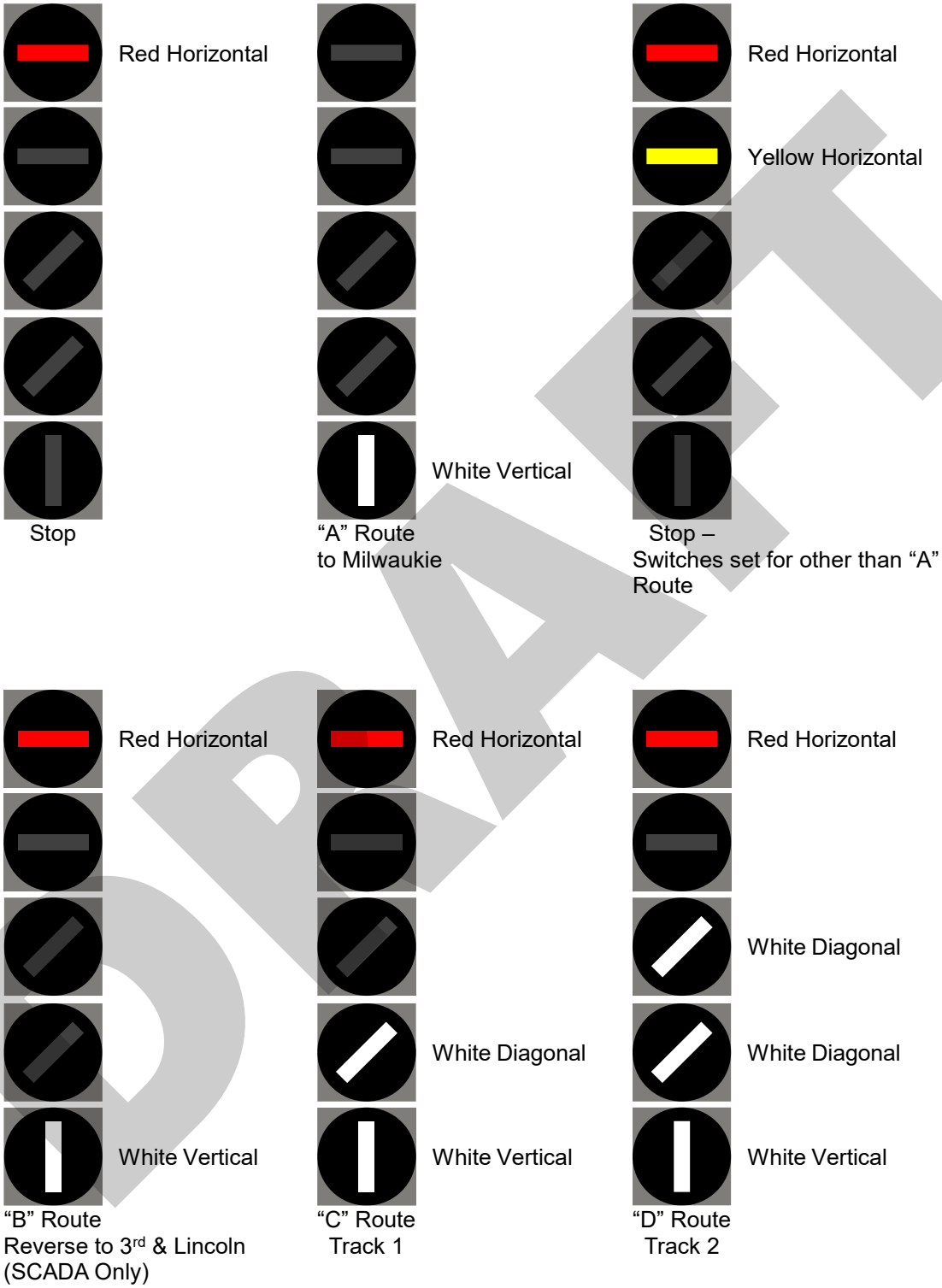


Figure 8D-7(OR). Legacy Signal M164



OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8E.03 – Pathway and Sidewalk Signs and Markings & 8E.07 – Active Traffic Control Systems	October 15, 2024	11808
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes modifications to use pedestrian-scaled signs and flashing red lights that are intended only to be viewed by sidewalk users at grade crossings.

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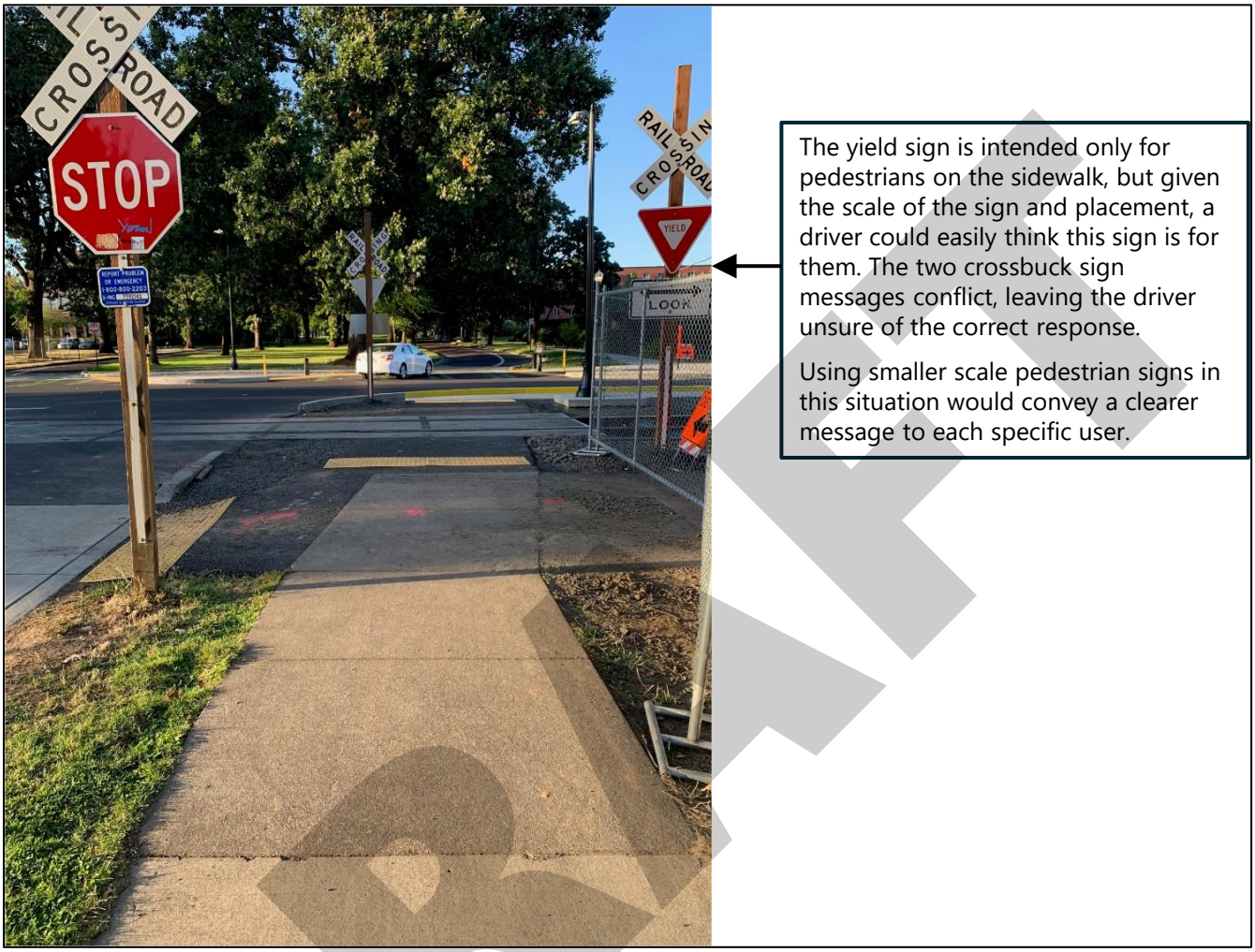
Problem

Railroad owners tend to discourage or try to deny use of smaller scale signs and flashing red lights intended for pedestrians only, citing maintenance stocking concerns. The Oregon Supplement should provide more prescriptive information about grade crossing signs and flashing red lights that only sidewalk users view.

Discussion

Smaller scale signs and flashing red lights are more visible and easier for pedestrian to read and react to than the larger standard size signs for vehicles traveling at speed. The smaller scale results in lower mounting heights that are at pedestrian eye level. In addition, the misuse of vehicle sized signs for pedestrian paths near vehicle lanes could result in confusing/conflicting sign messages to the driver which can lead to disrespect of these signs. See the picture below illustrating this issue.

Figure 1: Example Vehicle-Size Signs for Pedestrians at a Grade Crossing



Proposed Supplement Content

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CHAPTER 8E. PATHWAY AND SIDEWALK GRADE CROSSINGS

Section 8E.03 Pathway and Sidewalk Grade Crossing Signs and Markings

Standard:

01 **Pathway and sidewalk grade crossing signs shall be standard in shape, legend, and color.**

02 **The ~~minimum~~ maximum sizes of sidewalk grade crossing signs that are intended to be viewed only by sidewalk users and of pathway grade crossing signs shall be as shown in the shared-use path column in Table 9A-1.**

Guidance:

03 *No portion of a traffic control device or its support should protrude into the pathway or sidewalk grade crossing. Sidewalk and pathway grade crossing traffic control devices should be located such that all physical features of the device, including the support hardware, conform to clearance requirements provided by the railroad company and/or transit agency, and the regulatory agency with statutory authority (if applicable).*

04 *The minimum mounting height for post-mounted signs adjacent to pathways and sidewalks should be 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pathway or sidewalk surface (see Figure 9A-1).*

05 *If overhead traffic control devices are placed above pathways, the clearance from the bottom of the device to the pathway surface directly under the sign or device should be at least 8 feet.*

06 *If overhead traffic control devices are placed above pathways that are used by equestrians, the clearance from the bottom of the device to the pathway surface directly under the sign or device should be at least 10 feet.*

Standard:

07 **If overhead traffic control devices are placed above sidewalks, the clearance from the bottom of the device to the sidewalk surface directly under the sign or device shall be at least 7 feet.**

Guidance:

08 *Traffic control devices mounted adjacent to pathways at a height of less than 8 feet measured vertically from the bottom of the device to the elevation of the near edge of the pathway surface should have a minimum lateral offset of 2 feet from the near edge of the device to the near edge of the pathway (see Figure 9A-1).*

09 *If pathway users include those who travel faster than pedestrians, such as bicyclists or skaters, warning signs should be installed in advance of the pathway grade crossing (see Figure 8E-3).*

Option:

10 The Skewed Crossing (W10-12) sign (see Section 8B.22) may be used at a skewed pathway or sidewalk grade crossing to warn pathway or sidewalk users that the tracks are not perpendicular to the pathway or sidewalk.

11 The LOOK (R15-8) sign (see Figure 8B-1) may be used at a pathway or sidewalk grade crossing to inform pathway or sidewalk users to look in both directions prior to crossing the track(s).

Guidance:

12 *If a LOOK (R15-8) sign is used at a pathway or sidewalk grade crossing, it should be mounted on a separate post that is farther from the pathway or sidewalk than the Crossbuck sign or Crossbuck Assembly.*

Section 8E.07 Active Traffic Control Systems

Standard:

01 **Except as provided in Paragraph 5 of this Section, at pathway-LRT and sidewalk-LRT grade crossings where LRT operating speeds on a semi-exclusive alignment exceed 25 mph, active traffic control systems shall be used.**

02 **Except as provided in Paragraph 5 of this Section, at pathway-LRT and sidewalk-LRT grade crossings where LRT operating speeds on a semi-exclusive alignment exceed 40 mph, active traffic control systems, including automatic gates, shall be used.**

03 **If used at a pathway or sidewalk grade crossing, an active traffic control system (see Section 8D.01) shall include flashing-light signals with a maximum diameter of 8 inches (see Figure 8E-7) on each approach to the crossing.**

Guidance:

04 *If used at a pathway or sidewalk grade crossing, an active traffic control system (see Section 8D.01) should include an audible device such as a bell that is operated in conjunction with the flashing-light signals.*

Option:

05 Flashing-light signals, bells, and other audible warning devices may be omitted at pathway or sidewalk grade crossings that are located within 25 feet of an active warning device at a grade crossing that is equipped with those devices.

06 Additional pairs of flashing-light signals, bells, or other audible warning devices may be installed on the active traffic control devices at a grade crossing for pathway or sidewalk users approaching the grade crossing from the back side of those devices.

Guidance:

07 *Where railroad or LRT tracks in a semi-exclusive alignment are parallel and immediately adjacent to a roadway and if adequate space exists, a pedestrian refuge area or island should be provided between the tracks and the roadway to permit pedestrians to stand clear of the tracks while waiting to cross the roadway and to stand clear of the roadway while waiting to cross the tracks. If a pedestrian refuge area or island is provided at a signalized crossing of the roadway, additional pedestrian features (see Chapter 4I), such as signal heads, signing, and detectors, should be installed in the refuge area or on the island.*

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8B.04 – Crossbuck Assemblies with YIELD or STOP Signs at Passive Grade Crossings	October 15, 2024	11809
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

This proposes correcting a suspected error/oversight in the 11th Edition of the MUTCD to ensure proper application of a standard.

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Problem

Figure 8B-2 in the 11th Edition is not clear on whether a reflective strip is required or optional (regardless of the color used).

Discussion

Oregon believes the intent of Section 8B.04 Paragraph 19 is to only offer a choice on the color of reflective strip used (red or white) and NOT a choice for omitting the reflective strip altogether. Uniformity and enhanced conspicuity of the sign support for crossbuck signs at ALL passive grade crossings has been an important feature based on a review of past MUTCD history:

- 2009 MUTCD Section 8B.04 Paragraph 17is a standard had the same language as the 11th Edition Section 8B.04 Paragraph 19. However, the corresponding 2009 MUTCD Figure 8B-2 clearly showed the requirement of a red or white reflective strip on the front.
- The federal register for the 11th Edition does not mention any intentional changes or reasons for adding the "optional" to Figure 8B-2.
- The federal register for the Millennium Edition added the requirement for installation of a white reflective strip for ALL crossbuck sign supports at passive grade crossings.

Figure 1: MUTCD 2009 Edition, Figure 8B-2

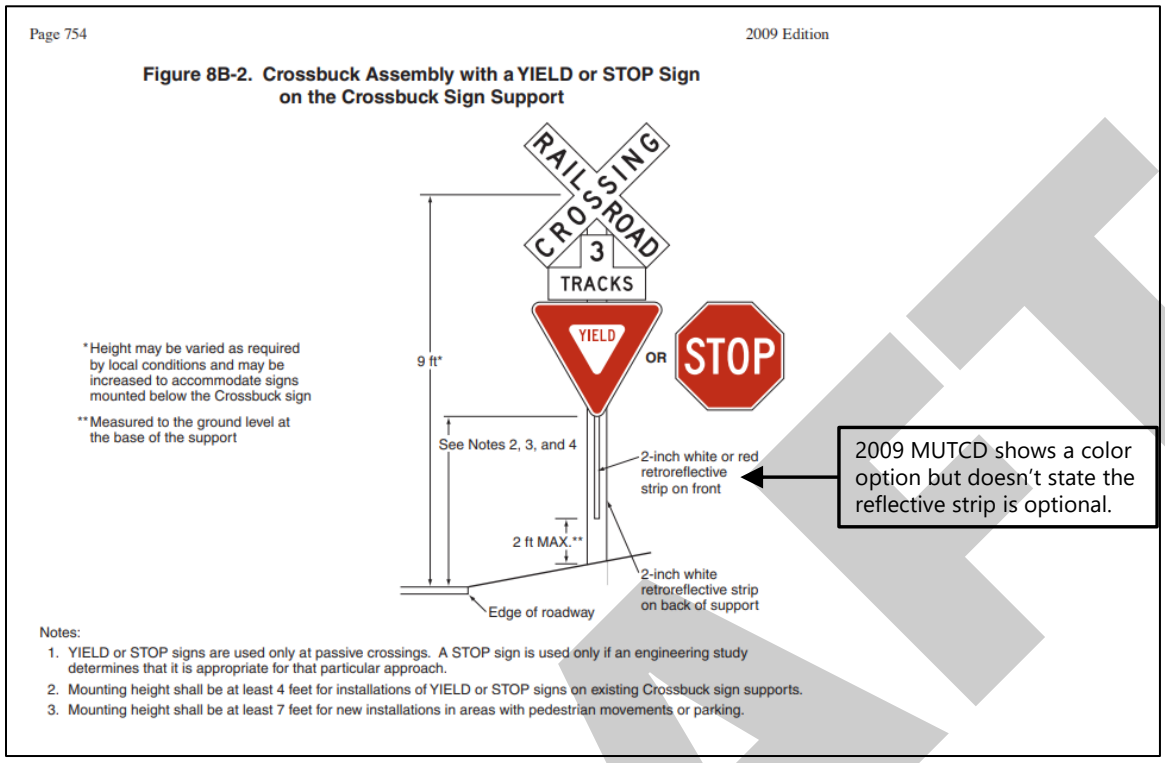
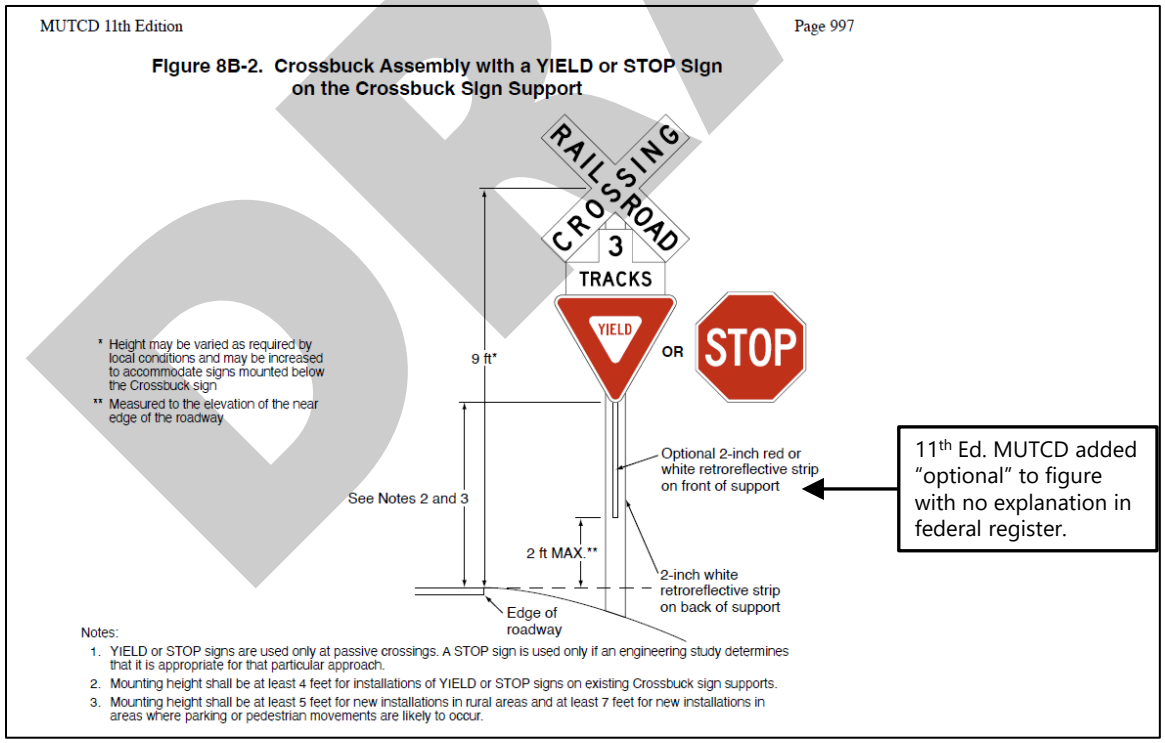


Figure 2: MUTCD 11th Edition, Figure 8B-2



Proposed Supplement Content

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CHAPTER 8B. SIGNS

Section 8B.04 Crossbuck Assemblies with YIELD or STOP Signs at Passive Grade Crossings

[No changes proposed in Paragraphs 01 through 16.]

Standard:

17 **A vertical strip of retroreflective white material, not less than 2 inches in width, shall be used on each Crossbuck support at passive grade crossings for the full length of the back of the support from the Crossbuck sign or Number of Tracks plaque to within 2 feet above the near edge of the roadway, except as provided in Paragraph 18 of this Section. A white retroreflective strip wrapped around a round support for the full length of the support from the Crossbuck Sign or Number of Tracks plaque to within 2 feet above the near edge of the roadway shall satisfy this requirement as long as the round support has an outside diameter of at least 2 inches.**

Option:

18 The vertical strip of retroreflective material may be omitted from the back sides of Crossbuck sign supports installed on one-way streets and at pathway or sidewalk grade crossings (see Section 8E.05).

Standard:

19 **If a YIELD or STOP sign is installed on the same support as the Crossbuck sign, a vertical strip of red (see Section 2A.11) or white retroreflective material that is at least 2 inches wide ~~may~~ shall be used on the front of the support from the YIELD or STOP sign to within 2 feet above the near edge of the roadway.**

Standard:

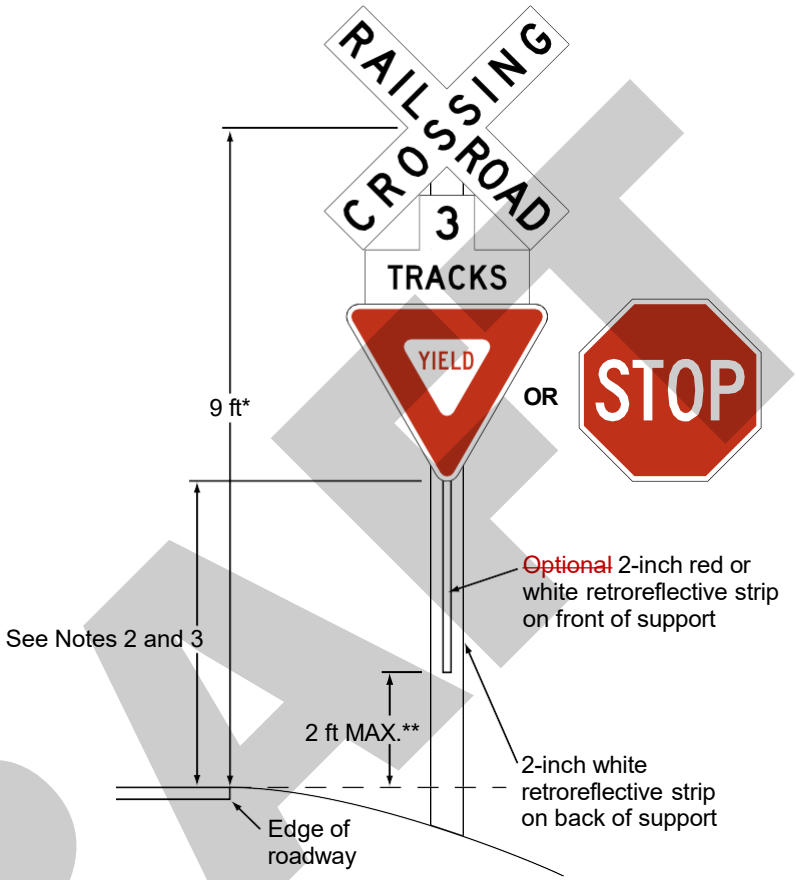
20 **If a Crossbuck sign support at a passive grade crossing does not include a YIELD or STOP sign (either because the YIELD or STOP sign is placed on a separate support or because a YIELD or STOP sign is not present on the approach), a vertical strip of retroreflective white material, not less than 2 inches in width, shall be used for the full length of the front of the support from the Crossbuck sign or Number of Tracks plaque to within 2 feet above the near edge of the roadway. A white retroreflective strip wrapped around a round support for the full length of the support from the Crossbuck Sign or Number of Tracks plaque to within 2 feet above the near edge of the roadway shall satisfy this requirement as long as the round support has an outside diameter of at least 2 inches.**

21 **At all grade crossings where YIELD or STOP signs are installed, Yield Ahead (W3-2) or Stop Ahead (W3-1) signs shall also be installed if the criteria for their installation in Section 2C.35 is met.**

Support:

22 Section 8C.03 contains provisions regarding the use of stop lines or yield lines at grade crossings.

Figure 8B-2. Crossbuck Assembly with a YIELD or STOP Sign on the Crossbuck Sign Support



* Height may be varied as required by local conditions and may be increased to accommodate signs mounted below the Crossbuck sign

** Measured to the elevation of the near edge of the roadway

Notes:

1. YIELD or STOP signs are used only at passive crossings. A STOP sign is used only if an engineering study determines that it is appropriate for that particular approach.
2. Mounting height shall be at least 4 feet for installations of YIELD or STOP signs on existing Crossbuck sign supports.
3. Mounting height shall be at least 5 feet for new installations in rural areas and at least 7 feet for new installations in areas where parking or pedestrian movements are likely to occur.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
8B.06 – Grade Crossing Advance Warning Signs, 8C.02 – Grade Crossing Pavement Markings 8C.03 – Stop and Yield Lines	October 15, 2024	11810
Supplement Team	**Status**	
8-Rall	OTCDC Review – 1st round	

Summary (2-3 sentences)

Placement of Yield Ahead (W3-2) or Stop Ahead (W3-1) in conjunction with a grade crossing advance warning sign (W10-1) – replacing Figure 8C-1 with Figure 8C-1(OR).

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

- Must conform to the Standard statements in the national MUTCD. FHWA may grant an exception because of requirements of a specific State law, provided information available and documentation provided by the state shows the non-conformance does not create a safety concern.
- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

It is necessary to retain the placement of the STOP AHEAD (W3-1) or YIELD AHEAD (W3-2) signs as shown in Figure 8B-06(OR) and stated in OAR 741-110-0040(5).

OAR 741-110-0040 Location of Protective Devices

[Sections (1) thru (4) not shown.]

(5) STOP AHEAD (W3-1 or W3-1a) signs, YIELD AHEAD (W3-2 or W3-2a) signs and train-activated advance warning signals shall be located not less than 100 feet in advance of the advance warning sign. See Figure 3.

[Sections (6) thru (9) not shown.]

Discussion

Figure 8B-06(OR) in the 2009 Oregon Supplement to the MUTCD has been used in Oregon for 25+ years. Comparing MUTCD 11th Edition Figure 8C-1 to Figure 8B-06(OR) showed four differences, highlighted in yellow in Table 1. This proposes only to address Design Standard 4.

Table 1: Differences between 2009 Figure 8B-6(OR) and 11th Ed. Figure 8C-1

Design Standard	Figure 8B-6(OR) (2009 Supplement)	Figure 8C-1 (11th Edition)	Difference?	Retain Figure 8B-6(OR) standard?
1. Stop line placement	12′ min. from nearest rail or 1′ in advance of gate	15′ min from nearest rail or approximately 8′ in advance of gate	Yes	No – OAR will be changed
2. W10-1 sign placement from stop line	Based on safe stopping distances (SSD) from AASHTO	Refers to MUTCD table 2C-3 which now uses the same AASHTO SSD distance (for the potential stop condition)	No	N/A
3. RxR pavement marking symbol placement	24″ white bar at the top of the pavement marking symbol should be directly opposite the W10-1 sign	Any portion of the pavement marking symbol should be directly opposite the W10-1 sign	Yes	No
4. W3-1 or W3-2 sign placement	Placed 100′ min. in advance of the W10-1 sign	Refers to MUTCD table 2C-3 for the potential stop condition (AASHTO SSD from the stop line). The W10-1 sign would then be placed in advance of the W3-1 or W3-2 sign (note 6 of Table 2C-6 recommends 100′ min sign spacing)	Yes	Yes – see proposed supplement content
5. Dynamic envelope distance from tracks	6′	Refers to MUTCD figure 8C-3: In accordance with the railroad company or transit agency requirements	Yes	No

Design Standard 1 – Stop Line Placement

No documentation was found for the basis of the stop line placement shown in Figure 8B-06(OR). Several staff recall the reasoning may have been an attempt to increase the sight distance along the tracks for a driver stopped at the stop line looking for an approaching train, especially when vegetation is close to the road or not maintained. However, the MUTCD stop line placement has been in effect for a long time and used successfully in other states. In addition, the MUTCD stop line placement gives drivers a better view of the railroad flashing lights. Therefore, we found no compelling reasons to continue using stop line placement as shown in Figure 8B-06(OR) for future installations.

Design Standard 2 – W10-1 Sign Placement

No difference.

Design Standard 3 – RxR Pavement Marking Placement

The MUTCD provides more flexibility in the placement of the RxR pavement marking symbol than Figure 8B-06(OR) which was deemed acceptable for future installations.

Design Standard 4 – W3-1 or W3-2 Sign Placement

Again, no documentation was found for the placement of the W3-1 or W3-2 signs as shown in Figure 8B-06(OR). There are approximately 805 existing assets that would require swapping the W3-1 or W3-2 sign with the W10-1 sign. This then requires moving the existing railroad pavement marking symbol to the new W10-1 sign location and extending the centerline no-pass striping as well. This work is estimated to be approximately $4,500 per asset, for a total of $3.6 million to address all assets. While national uniformity is important, in this case it has minimal benefit as there is no data to show swapping the sign location results in an improvement and drivers would likely not even notice or remember a difference in the order of these signs. The cost to make these changes at the end of service life is significant given the current budget issues of public agencies. The benefit cost ratio is too low to justify making a change to existing assets that are performing successfully.

Design Standard 5 – Dynamic Envelope Distance

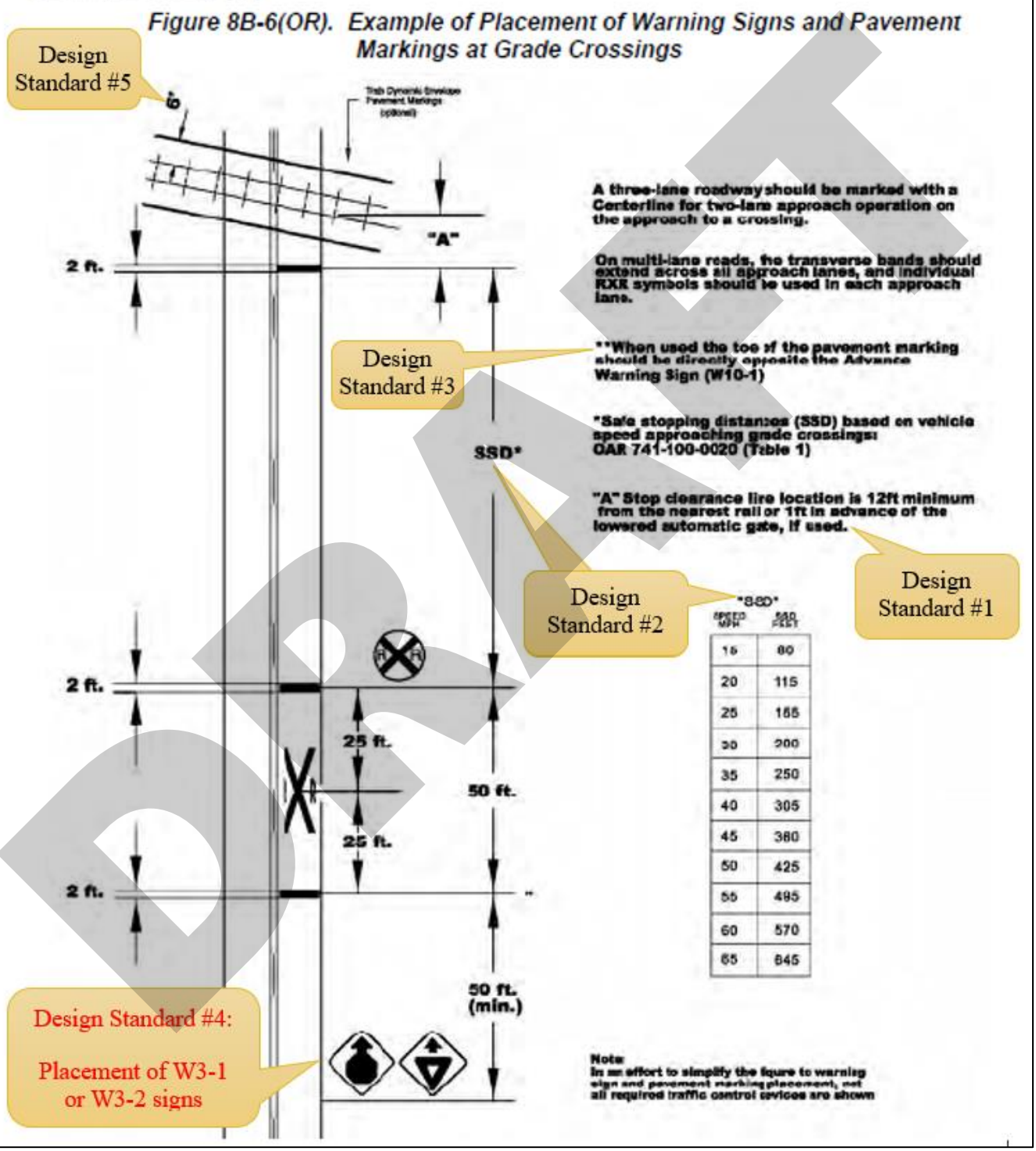
The dynamic envelope marking 6 feet from the tracks appears to be a typical distance used (e.g., 2009 MUTCD Figure 8B-8 states this value). The 11th Edition MUTCD Figure 8C-3 now provides more accurate and flexible guidance which was deemed acceptable for future installations.

Figure 1: Notes on 2009 Oregon Supplement Figure 8B-6(OR)

2009 Edition—Oregon Supplement to the MUTCD Page 42

[Insert Figure 8B-6(OR):]

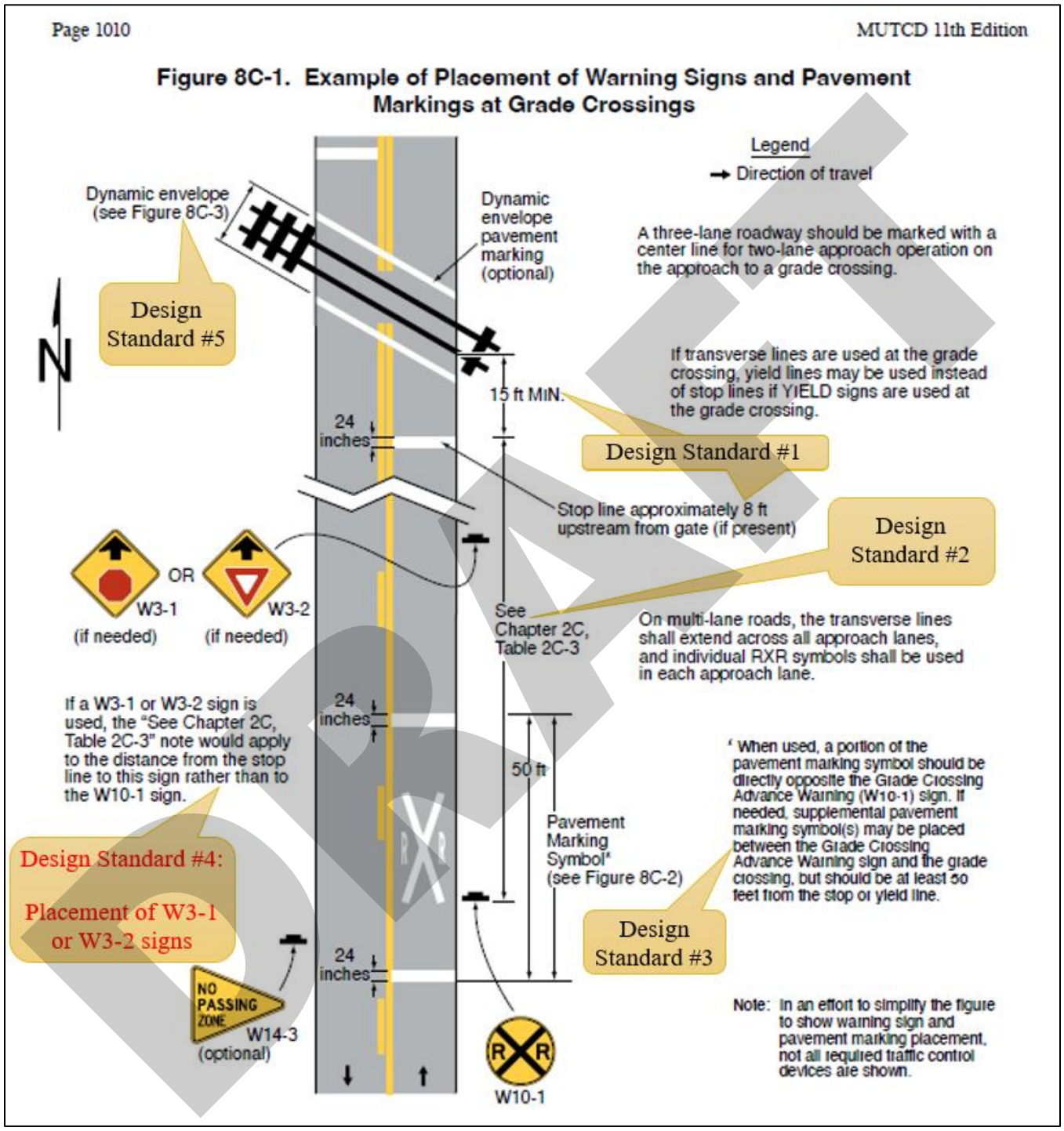
Figure 8B-6(OR). Example of Placement of Warning Signs and Pavement Markings at Grade Crossings



*SSD

15	80
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

Figure 2: Notes on 11th Edition Figure 8C-1



Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 8B. SIGNS

Section 8B.06 Grade Crossing Advance Warning Signs (W10-1 through W10-4)

Standard:

01 **A Grade Crossing Advance Warning (W10-1) sign (see Figure 8B-4) shall be used on each highway in advance of every grade crossing, except in the following circumstances:**

- **A. On an approach to a grade crossing from an intersection with a parallel highway if the distance from the nearest rail of the tracks to the edge of the parallel roadway is less than 100 feet and W10-2, W10-3, or W10-4 signs are used on the approaches of the parallel highway (see Paragraph 5 of this Section);**
- **B. On low-volume, low-speed highways crossing minor spurs or other tracks that are infrequently used and road users are directed by an authorized person on the ground to not enter the crossing at all times that approaching rail traffic is about to occupy the crossing;**
- **C. In business or commercial areas where active grade crossing traffic control systems are in use;**
- **D. Where physical conditions do not permit even a partially effective display of the sign; or**
- **E. At highway-LRT grade crossings where Crossbuck signs are not used (see Section 8B.03).**

02 **The placement of the Grade Crossing Advance Warning sign shall be in accordance with Section 2C.04 and Table 2C-3.**

03 **If a YIELD or STOP sign is present at a passive grade crossing, a Yield Ahead (W3-2) or Stop Ahead (W3-1) Advance Warning sign shall also be installed if the criteria for their installation given in Section 2C.35 is met. If a Yield Ahead or Stop Ahead sign is installed on the approach to the crossing, the W10-1 sign shall be installed ~~upstream~~ downstream from the Yield Ahead or Stop Ahead sign. The Yield Ahead or Stop Ahead sign shall be located in accordance with ~~Table 2C-3~~ Figure 8C-1(OR). The minimum distance between the signs shall be in accordance with Section 2C.04 and Table 2C-3.**

Option:

04 On divided highways and one-way streets, an additional W10-1 sign may be installed on the left-hand side of the roadway.

Standard:

05 **If the distance between the tracks and a parallel highway, from the nearest rail of the tracks to the edge of the parallel roadway, is less than 100 feet, a W10-2, W10-3, or W10-4 sign (see Figure 8B-4) shall be installed on each approach of the parallel highway to warn road users making a turn that they will encounter a grade crossing soon after making a turn, and a W10-1 sign for the approach to the tracks shall not be required to be between the tracks and the parallel highway.**

06 **If the W10-2, W10-3, or W10-4 sign is used, sign placement in accordance with the guidelines for Intersection Warning signs in Table 2C-3 using the speed of through traffic shall be measured from the highway intersection.**

Guidance:

07 *If the distance between the tracks and the parallel highway, from the nearest rail of the tracks to the edge of the parallel roadway, is 100 feet or more, a W10-1 sign should be installed in advance of the grade crossing, and the W10-2, W10-3, or W10-4 sign should not be used on the parallel highway.*

CHAPTER 8C. MARKINGS

Section 8C.02 Grade Crossing Pavement Markings

Standard:

01 **On paved roadways, grade crossing pavement markings shall consist of an X, the letters RR, a no-passing zone marking (on two-lane, two-way highways with center line markings in compliance with Section 3B.01), and certain transverse lines as shown with detailed dimensions in Figures ~~8C-1~~ 8C-1(OR) and 8C-2.**

02 **Except as provided in Paragraphs 3 and 4 of this Section, grade crossing pavement markings shall be placed in each approach lane on all paved approaches to highway-rail grade crossings where signals or automatic gates are located, and at all other grade crossings where the posted or statutory highway speed is 40 mph or higher.**

03 **Grade crossing pavement markings shall not be required at highway-rail grade crossings where the posted or statutory highway speed is less than 40 mph if the Diagnostic Team determines that other installed devices provide suitable warning and control.**

04 **Grade crossing pavement markings shall not be required at highway-rail grade crossings in urban areas if the Diagnostic Team determines that other installed devices provide suitable warning and control.**

05 **Grade crossing pavement markings shall be placed in each approach lane on all paved approaches to highway-LRT grade crossings where a Crossbuck sign is placed at the grade crossing.**

06 **If grade crossing pavement markings are used on a multi-lane approach to a grade crossing, identical markings shall be placed in each approach lane that crosses the tracks.**

07 **All grade crossing pavement markings shall be retroreflective white. All other markings shall be in accordance with Part 3.**

Guidance:

08 *Where grade crossing pavement markings are used, a portion of the X symbol should be directly opposite the Grade Crossing Advance Warning sign.*

Option:

09 Where determined by the Diagnostic Team, supplemental pavement marking symbol(s) may be placed between the Grade Crossing Advance Warning sign and the grade crossing.

Guidance:

10 *If supplemental pavement marking symbol(s) are placed between the Grade Crossing Advance Warning sign and the grade crossing, the downstream transverse line should be at least 50 feet upstream from the stop or yield line at the grade crossing.*

Section 8C.03 Stop and Yield Lines

Guidance:

01 *On paved roadway approaches to passive grade crossings where a STOP sign is installed in conjunction with the Crossbuck sign, a stop line should be installed to indicate the point behind which motor vehicles are required to stop or as near to that point as practicable.*

Option:

02 On paved roadway approaches to passive grade crossings where a YIELD sign is installed in conjunction with the Crossbuck sign, a yield line (see Section 3B.19) or a stop line may be installed to indicate the point behind which motor vehicles are required to yield or stop or as near to that point as practicable.

Guidance:

03 *If a yield line (see Figure 3B-16) or stop line is used at a passive grade crossing, it should be a transverse line at a right angle to the traveled way and should be placed no closer than 15 feet in advance of the nearest rail.*

Standard:

04 **On paved roadways at grade crossings that are equipped with active control devices such as flashing-light signals, automatic gates, or traffic control signals, a stop line (see Section 3B.19) shall be installed to indicate the point behind which motor vehicles are or might be required to stop.**

Guidance:

05 *If a stop line is used at an active grade crossing where road users are controlled by flashing-light signals, it should be a transverse line at a right angle to the traveled way and should be placed approximately 8 feet in advance of the flashing-light signals or automatic gate (if present), whichever is farther from the track(s), but no closer than 15 feet in advance of the nearest rail (see ~~Figure 8C-1~~ Figure 8C-1(OR)).*

06 *If a stop line is used at an active grade crossing where road users are controlled by a traffic control signal, it should be a transverse line at a right angle to the traveled way and should be placed no closer than 15 feet in advance of the nearest rail.*

Standard:

07 **If a stop line is used at an active grade crossing where road users are controlled by a traffic control signal, it shall be placed such that the lateral and longitudinal positions of the signal faces for the approach comply with the provisions of Sections 4D.07 and 4D.08.**

~~Figure 8C-1. Examples of Placement of Warning Signs and Pavement Markings at Grade Crossings~~

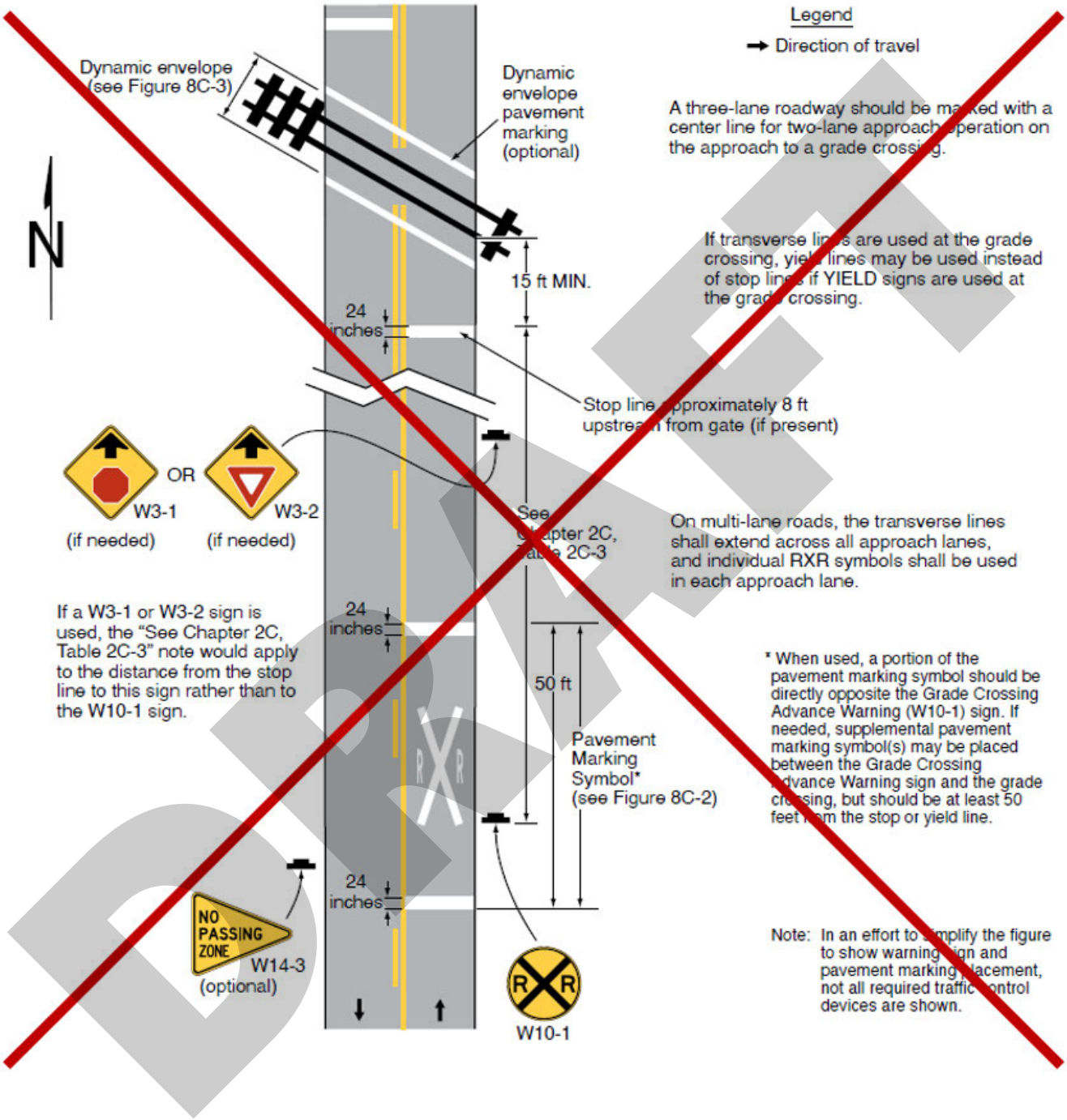
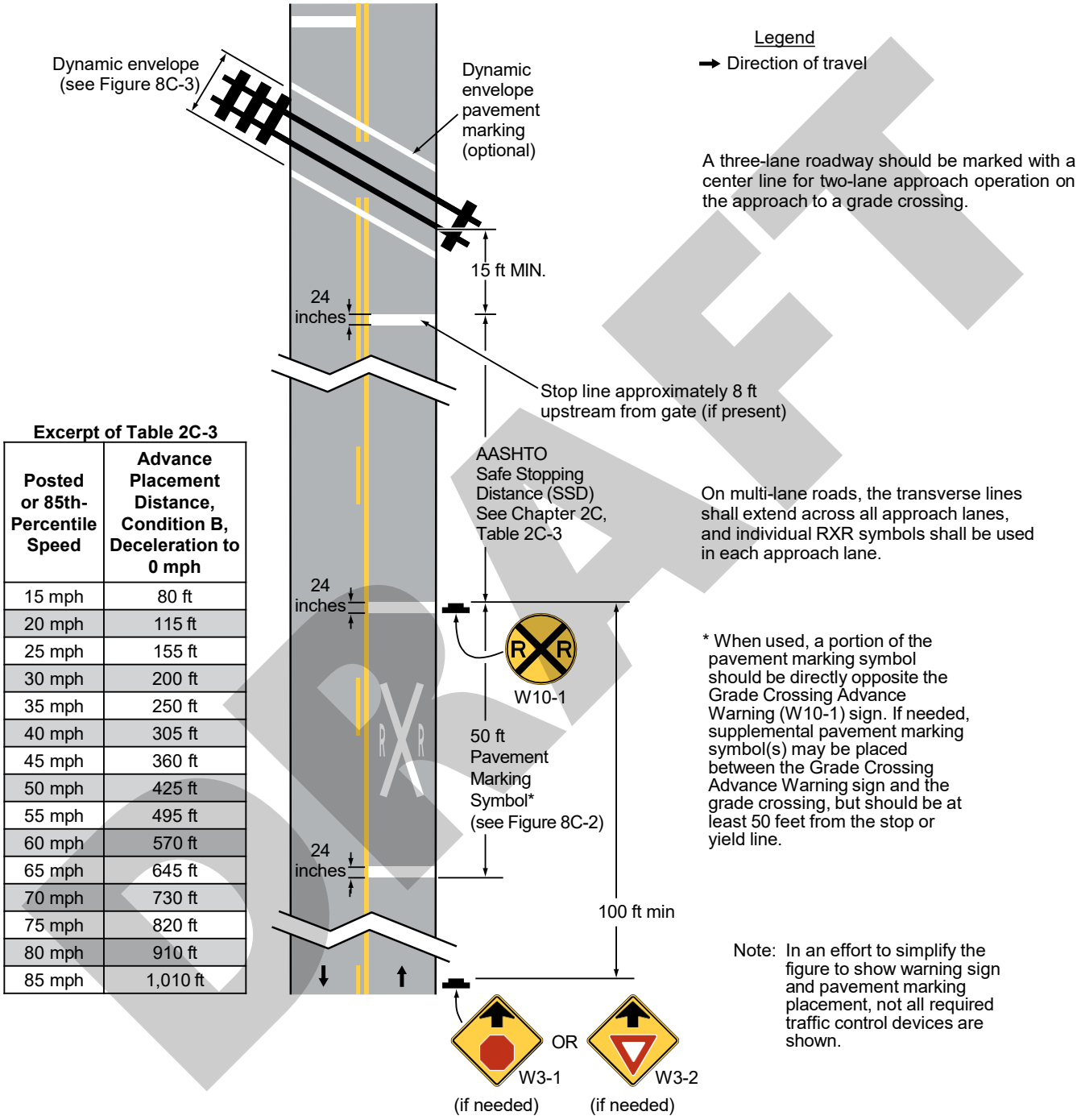


Figure 8C-1(OR). Example of Placement of Warning Signs and Pavement Markings at Grade Crossings



Excerpt of Table 2C-3

Posted or 85th-Percentile Speed	Advance Placement Distance, Condition B, Deceleration to 0 mph
15 mph	80 ft
20 mph	115 ft
25 mph	155 ft
30 mph	200 ft
35 mph	250 ft
40 mph	305 ft
45 mph	360 ft
50 mph	425 ft
55 mph	495 ft
60 mph	570 ft
65 mph	645 ft
70 mph	730 ft
75 mph	820 ft
80 mph	910 ft
85 mph	1,010 ft

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9B.01 – STOP and YIELD Signs	October 15, 2024	11901
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

Bicyclists do not always have to stop for a stop sign at an intersection in Oregon, and there are cases where bicycle-specific stop and yield signs will be visible to road users, even if the stop or yield condition doesn't apply to motor vehicles. This proposes to address locations where bicyclists can continue without stopping for a stop sign under ORS 814.414 and carry forward provisions for bicycle-specific stop and yield signs (OBR1-1 and OBR1-2) from the 2009 Oregon Supplement.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Section 9B.01 Paragraph 01 requires STOP (R1-1) signs on bicycle facilities where bicyclists must stop. However, bicyclists do not always have to stop for a stop sign at an intersection in Oregon.

Also, where users of a shared-use path or separated bikeway must stop or yield, but not roadway users, Section 9B.01 Paragraph 05 recommends shielding or placing the STOP or YIELD sign, so it is not readily visible to roadway users. Shielding or finding an alternate location is not always a practical solution given the alignment of some paths or separated bikeways in Oregon.

Discussion

Stop as Yield

ORS 814.414 describes conditions where bicyclists can treat STOP signs as YIELD signs at intersections. The standard in MUTCD 9B.01 Paragraph 01 only describes locations on bicycle facilities where bicyclists must stop. This proposes to add locations where bicyclists can continue without stopping for a stop sign under ORS 814.414.

ORS 814.414 only describes intersections controlled by stop signs – it does not describe railroad grade crossings nor intersections controlled by traffic signals.

ORS 814.414 Improper entry into intersection controlled by stop sign; penalty.

(1) A person operating a bicycle who is approaching an intersection where traffic is controlled by a stop sign may, without violating ORS 811.265, do any of the following without stopping if the person slows the bicycle to a safe speed:

  (a) Proceed through the intersection.

  (b) Make a right or left turn into a two-way street.

  (c) Make a right or left turn into a one-way street in the direction of traffic upon the one-way street.

(2) A person commits the offense of improper entry into an intersection where traffic is controlled by a stop sign if the person does any of the following while proceeding as described in subsection (1) of this section:

  (a) Fails to yield the right of way to traffic lawfully within the intersection or approaching so close as to constitute an immediate hazard;

  (b) Disobeys the directions of a police officer or flagger, as defined in ORS 811.230;

  (c) Fails to exercise care to avoid an accident; or

  (d) Fails to yield the right of way to a pedestrian in an intersection or crosswalk under ORS 811.028.

(3) The offense described in this section, improper entry into an intersection where traffic is controlled by a stop sign, is a Class D traffic violation.

Bicycle Stop and Yield Signs (OBR1-1 and OBR1-2)

This also proposes to add bicycle-specific stop and yield signs (OBR1-1 and OBR1-2). This is for situations where a STOP or YIELD sign is meant for path or bikeway users only, but a road authority cannot place the sign without it also being visible to road users, such as the example below in Milwaukie, Oregon. The 2009 Oregon Supplement included the signs for this purpose. This proposes to carry this provision forward to the 11th Edition Oregon Supplement.

Figure 1: Example of OBR1-1 Installation

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9B. REGULATORY SIGNS

Section 9B.01 STOP and YIELD Signs (R1-1 and R1-2)

Standard:

01 **STOP (R1-1) signs (see Figure 9B-1) shall be installed on bicycle facilities at points where bicyclists are required to stop or yield to conflicting traffic per ORS 814.414.**

02 **YIELD (R1-2) signs (see Figure 9B-1) shall be installed on bicycle facilities at points where bicyclists have an adequate view of conflicting traffic as they approach the sign, and where bicyclists are required to yield the right-of-way to that conflicting traffic.**

03 **A STOP sign or a YIELD sign shall not be installed in conjunction with a bicycle signal face (see Chapter 4H).**

Option:

04 Larger signs may be used on shared-use paths and separated bikeways for added emphasis.

Guidance:

05 *Where conditions require shared-use path users or bicyclists on separated bikeways, but not roadway users, to stop or yield, the STOP or YIELD sign should be placed or shielded so that it is not readily visible to roadway users or a BICYCLE STOP (OBR1-1) or BICYCLE YIELD (OBR1-2) sign should be used.*

Figure 9B-1(OR) Regulatory Signs and Plaques for Bicycle Facilities

OBR1-1

OBR1-2

06 *When the placement of STOP or YIELD signs is being considered, the priority at a shared-use path/roadway intersection should be assigned with consideration of the following:*

A. Relative speeds of shared-use path and roadway users,
B. Relative volumes of shared-use path and roadway traffic, and
C. Relative importance of shared-use path and roadway.

07 *Speed should not be the sole factor used to determine priority, as it is sometimes appropriate to give priority to a high-volume shared-use path that crosses a low-volume street, or to a regional shared-use path that crosses a minor collector street.*

08 *When priority is assigned (see Sections 2B.06 and 2B.08), the least-restrictive control that is appropriate should be placed on the lower-priority approaches. STOP signs should not be used where YIELD signs would provide adequate control.*

Support:

09 ORS 814.414 describes conditions when a bicyclist can proceed through, or make turns at, an intersection without stopping for a stop sign. This does not apply to railroad grade crossings.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9B.12 – Bicycles Yield to Peds Sign	October 15, 2024	11902
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 9B.12 added a new standard for the Bicycles Yield to Peds sign (R9-6) that prohibits the sign in bicycle corridors to establish a programmatic regulation where no yielding point exists. However, this programmatic regulation exists through ORS 814.410, which requires people riding bicycles on sidewalks to yield the right of way to all pedestrians on sidewalks. This proposes to allow the R9-6 sign to remind path users of programmatic regulation established in ORS 814.410, not just at yield point.

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Problem

FHWA added a standard in Section 9B.12 Paragraph 03 prohibiting use of the Bicycles Yield to Peds sign (R9-6) to establish a programmatic regulation in bicycle corridors where no yielding point exits. However, ORS 814.410 establishes this programmatic regulation by requiring bicyclists riding on sidewalks to yield the right of way to all pedestrians on sidewalks.

Section 9B.12 also allows optional use of the Bicycles Yield to Peds sign at a point where bicyclists must cross a facility used by pedestrians and must yield to pedestrians. ORS 811.028 and ORS 814.400 require bicyclists to stop for – instead of yield to –a pedestrian in these cases.

Figure 1: MUTCD Sign R9-6

Discussion

Transportation agencies in Oregon currently use the Bicycles Yield to Peds sign (R9-6) on shared-use paths as allowed under 2009 MUTCD Section 9B.11 Paragraph 05. Examples are in Figure 1. ORS 814.410 supports this regulatory sign by requiring people on bicycles riding on sidewalks to yield the right of way to all pedestrians on sidewalks.

However, in the 11th Edition, FHWA prohibited the sign from establishing a programmatic regulation in bicycle corridors where no yielding point exists. FHWA explained this decision in their Summary of Final Rule Disposition as promoting uniformity in the use of the sign (Notice of Proposed Amendments Item 594).

This proposes to continue allowing the sign as an option to promote safe interaction between path or sidewalk users as specified in ORS 814.410.

Figure 2: Bicycles Yield to Peds Sign on Paths in Oregon

Figure 3: FHWA Final Rule Disposition on Section 9B.12

594	FHWA proposes to add a new section numbered and titled, "Section 9B.12 Bicycles Yield to Peds Sign (R9–6)." While this sign exists in Section 9B.11 of the 2009 MUTCD, FHWA proposes to add additional Standard paragraphs regarding the application and use of this sign, along with a new figure, to provide practitioners with additional information and to promote uniformity in its use.	The new Section is adopted as proposed. The proposed figure is not adopted.

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Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9B. REGULATORY SIGNS

Section 9B.12 Bicycles Yield to Peds Sign (R9-6)

Option:

01 The Bicycles Yield to Peds (R9-6) sign (see Figure 9B-1) may be used at locations where a bicyclist is required to ~~cross or~~ share a facility used by pedestrians and is required to yield to the pedestrians.

Standard:

~~02 Where the Bicycles Yield to Peds sign is supported by a yield line pavement marking (see Section 3B.19) to establish the yielding point, the sign and the pavement marking shall be installed adjacent to each other.~~

~~03 The Bicycles Yield to Peds sign shall not be used in bicycle corridors to establish a programmatic regulation where no yielding point exists.~~

04 **The Bicycles Yield to Peds sign shall not be used in conjunction with a STOP or YIELD sign, Yield Here to Pedestrians Sign, or a Stop Here for Pedestrians Sign.**

Support:

05 ORS 811.028 requires drivers of vehicles and people operating a bicycle to stop for pedestrians. ORS 814.410 requires a person operating a bicycle on a sidewalk to yield the right of way to all pedestrians on the sidewalk.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9B.15 – Bicycle Passing Clearance Sign	October 15, 2024	11903
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

Section 9B.15 allows use of the Bicycle Passing Clearance Sign (R4-19) where a law defines a specific clearance. Oregon's passing clearance law describes a "safe distance" instead of a specific numeric clearance. To clarify applicability of this section in Oregon, this proposes to change Section 9E.15 and add an optional Oregon-specific bicycle passing clearance sign.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

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- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Section 9B.15 allows use of the Bicycle Passing Clearance Sign (R4-19) "in jurisdictions that have defined in law or ordinance a specific clearance to be provided by motor vehicles when they pass bicycles." Oregon's passing clearance law does not give a specific clearance.

Figure 1: Sign R4-19

Discussion

ORS 811.065 defines bicycle passing clearance under certain conditions. The statute does not give a specific numerical distance, rather a description of a "safe distance."

To clarify applicability of this section in Oregon, this proposes to change Section 9E.15, add an Oregon-specific passing clearance sign, and explain why Oregon changes this section of the MUTCD.

811.065 Unsafe passing of person operating bicycle; penalty.

(1) A driver of a motor vehicle commits the offense of unsafe passing of a person operating a bicycle if the driver violates any of the following requirements:

(a) The driver of a motor vehicle may only pass a person operating a bicycle by driving to the left of the bicycle at a safe distance and returning to the lane of travel once the motor vehicle is safely clear of the overtaken bicycle. For the purposes of this paragraph, a "safe distance" means a distance that is sufficient to prevent contact with the person operating the bicycle if the person were to fall into the driver's lane of traffic. This paragraph does not apply to a driver operating a motor vehicle:

(A) In a lane that is separate from and adjacent to a designated bicycle lane;

(B) At a speed not greater than 35 miles per hour; or

(C) When the driver is passing a person operating a bicycle on the person's right side and the person operating the bicycle is turning left.

(b) The driver of a motor vehicle may drive to the left of the center of a roadway to pass a person operating a bicycle proceeding in the same direction only if the roadway to the left of the center is unobstructed for a sufficient distance to permit the driver to pass the person operating the bicycle safely and avoid interference with oncoming traffic. This paragraph does not authorize driving on the left side of the center of a roadway when prohibited under ORS 811.295, 811.300 or 811.310 to 811.325.

(c) The driver of a motor vehicle that passes a person operating a bicycle shall return to an authorized lane of traffic as soon as practicable.

(2) Passing a person operating a bicycle in a no passing zone in violation of ORS 811.420 constitutes prima facie evidence of commission of the offense described in this section, unsafe passing of a person operating a bicycle, if the passing results in injury to or the death of the person operating the bicycle.

(3) The offense described in this section, unsafe passing of a person operating a bicycle, is a Class B traffic violation. [2007 c.794 §2]

Proposed Supplement Content

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CHAPTER 9B. REGULATORY SIGNS

Section 9B.15 Bicycle Passing Clearance Sign (R4-19)

~~Option:~~

~~01 The Bicycle Passing Clearance (R4-19) sign (see Figure 9B-1) may be used in jurisdictions that have defined in law or ordinance a specific clearance to be provided by motor vehicles when they pass bicycles.~~

~~02 The specific clearance displayed on the Bicycle Passing Clearance (R4-19) sign may be adjusted to reflect the applicable law or ordinance.~~

~~Standard:~~

~~03 **The Bicycle Passing Clearance (R4-19) sign shall not be used in jurisdictions that do not have a specific passing clearance to be provided by motor vehicles passing bicycles, as defined in law or ordinance.**~~

~~*Guidance:*~~

~~04 *The Bicycle Passing Clearance (R4-19) sign should not be used on roadways with bicycle lanes or with shoulders usable for bicycle travel.*~~

Option:

05 The Oregon Bicycle Passing Clearance (OR4-19) sign (see Figure 9B-1(OR)) may be used to remind drivers to give extra space when they pass bicycles in accordance with ORS 811.065.

Standard:

06 **The Bicycle Passing Clearance (R4-19) shall not be used in Oregon.**

07 **The Oregon Bicycle Passing Clearance (OR4-19) sign shall not be used where the motor vehicle lane is adjacent to a designated bicycle lane or where the posted speed limit is 35 miles per hour or less.**

Support:

08 Oregon does not have a specific passing clearance that drivers must provide when passing people on bicycles that can be displayed on Sign R4-19. Instead, ORS 811.065 describes this as "a distance that is sufficient to prevent contact with the person operating the bicycle if the person were to fall into the driver's lane of traffic." The passing clearance requirements in ORS 811.065 do not apply where the motor vehicle lane is adjacent to a designated bicycle lane, where the driver is traveling at 35 miles per hour or less, nor where a person on a bicycle is turning left and the driver passes on the right.

Figure 9B-1(OR)

OR4-19

OR4-19(ALTERNATE)

Note: Only one of these signs will be in the Supplement. The Part 9 Subcommittee prefers the sign with the yellow STATE LAW banner (alternate). If that sign doesn't work, the subcommittee is OK with the sign labeled OR4-19.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
4A.05 – Meaning of Bicycle Signal Indications, 4H.03 – Bicycle Signal Signs, 9B.22 – Bicycle Signal Signs.	October 15, 2024	11904
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

FHWA changed the meaning of bicycle signal indications to only allow movements on green that a regulatory sign, installed next to the bicycle signal, specifies. However, ORS 811.260(3) allows bicyclists facing a green bicycle signal to continue straight through or turn right or left unless a sign prohibits a movement, consistent with the meaning of circular vehicle signal indications. This proposes to align the meaning of bicycle signal indications with the Oregon Vehicle Code and allow the option of the bicycle signal sign from Interim Approval 16 where through, right, or left are allowed on a green bicycle signal.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

4A.05 Paragraph 01 says bicyclists facing a steady green bicycle signal indication are permitted to enter the intersection only to make movements indicated on bicycle signal signs installed next to the bicycle signal (R10-40 and R10-41 series, required in 4H.03 and 9B.22 with bicycle signals). However, ORS 811.260(3) allows bicyclists facing a green bicycle signal to continue straight through or turn right or left unless a sign prohibits either turn – the same as a motor vehicle driver facing a circular green indication.

Discussion

2009 MUTCD Interim Approval 16 – Bicycle Signals

Under the 2009 MUTCD, the interim approval for bicycle signals (IA-16) described the meaning of bicycle signal indications in Condition 2 as having the same meaning of circular signal indications for motor vehicles, except the bicycle signal only applied to bicyclists.

> 2. Meaning of Bicycle Signal Indications:
>
> Steady and flashing RED BICYCLE, YELLOW BICYCLE, and GREEN BICYCLE signal indications shall have the same meanings as described in Paragraph 3 of Section 4D.04 for steady and flashing CIRCULAR RED, CIRCULAR YELLOW, and CIRCULAR GREEN signal indications for motor vehicles, respectively, except that the bicycle signal indications shall only be applicable to bicyclists.

Condition 7 in IA-16 required a bicycle signal sign (R10-10b) be installed immediately adjacent to every bicycle signal to inform drivers that the signal is intended only for bicyclists. The sign did not include any elements regulating allowable movements on a green bicycle signal.

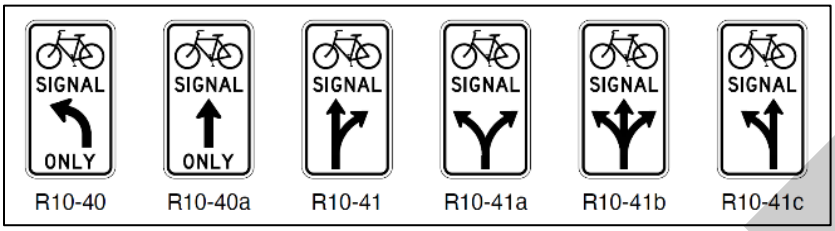
> 7. Regulatory Signing:
>
> A Bicycle SIGNAL (R10-10b) sign (see Attachment IA-16-3) shall be installed immediately adjacent to every bicycle signal face that is intended to control only bicyclists, including signal faces that are comprised of all bicycle symbol signal indications, all arrow signal indications, and every combination thereof. The purpose of the sign is to inform any motor vehicle drivers who can also see the signal face that these signal indications are intended only for bicyclists.
>
> Traffic signal designs are to minimize other signing and rely on the fact that bicycles are legally considered vehicles and their responsibility to comply with traffic control devices and yield to other vehicles and pedestrians is part of the bicycling task.

Figure 1: Bicycle Signal Sign R10-10b in IA-16

MUTCD 11th Edition

FHWA added bicycle signals to the 11th Edition of the MUTCD and added provisions about allowable movements to the meaning of the green bicycle signal indication. FHWA also added a new bicycle signal sign series (R10-40 and R10-41) in the 11th Edition to inform road users that the signal is for bicycles and show the movements allowed on a green bicycle signal.

Figure 2: R10-40 and R10-41 Series Signs in MUTCD 11th Edition



Oregon Vehicle Code

The Oregon Vehicle Code is consistent with IA-16's meaning of a green bicycle signal and is less restrictive than 11th Edition MUTCD meaning – if there is no sign regulating movements, bicyclists can continue without restrictions on movements.

ORS 811.260(3) describes proper responses to green bicycle signals in Oregon. It allows bicyclists to continue straight, turn right, or turn left unless a sign prohibits a movement – the same meaning as a circular green signal indication, just for a specific mode.

> **811.260 Appropriate driver responses to traffic control devices.**
>
> Except as provided in ORS 811.265 (2), a driver is in violation of ORS 811.265 if the driver makes a response to traffic control devices that is not permitted under the following:
>
> (1) Green signal. A driver facing a green light may proceed straight through or turn right or left unless a sign at that place prohibits either turn. A driver shall yield the right of way to other vehicles within the intersection at the time the green light is shown.
>
> …
>
> (3) Green bicycle signal. A bicyclist facing a green bicycle signal may proceed straight through or turn right or left unless a sign at that place prohibits either turn. The bicyclist shall yield the right of way to other vehicles within the intersection at the time the green bicycle signal is shown.

ORS 811.265 also requires drivers to obey the directions of any traffic control device. This extends to people operating bicycles, too – ORS 814.400 extends the same rights and duties of drivers to bicyclists concerning operating on highways and vehicle equipment.

811.265 Driver failure to obey traffic control device; penalty.

(1) A person commits the offense of driver failure to obey a traffic control device if the person drives a vehicle and the person does any of the following:

(a) Fails to obey the directions of any traffic control device.

(b) Fails to obey any specific traffic control device described in ORS 811.260 in the manner required by that section.

(2) A person is not subject to this section if the person is doing any of the following:

(a) Following the directions of a police officer.

(b) Driving an emergency vehicle or ambulance in accordance with the privileges granted those vehicles under ORS 820.300.

(c) Properly proceeding on a red light as authorized under ORS 811.360.

(d) Driving in a funeral procession led by a funeral lead vehicle or under the direction of the driver of a funeral escort vehicle.

(e) Properly entering an intersection or executing a turn at a stop sign as authorized under ORS 814.414.

(f) Properly entering an intersection or executing a turn at a flashing red signal as authorized under ORS 814.416.

(3) The offense described in this section, driver failure to obey a traffic control device, is a Class B traffic violation. [1983 c.338 §608; 1991 c.482 §13; 2015 c.147 §3; 2019 c.683 §5]

35

814.400 Application of vehicle laws to bicycles.

(1) Every person riding a bicycle upon a public way is subject to the provisions applicable to and has the same rights and duties as the driver of any other vehicle concerning operating on highways, vehicle equipment and abandoned vehicles, except:

(a) Those provisions which by their very nature can have no application.

(b) When otherwise specifically provided under the vehicle code.

(2) Subject to the provisions of subsection (1) of this section:

(a) A bicycle is a vehicle for purposes of the vehicle code; and

(b) When the term "vehicle" is used the term shall be deemed to be applicable to bicycles.

(3) The provisions of the vehicle code relating to the operation of bicycles do not relieve a bicyclist or motorist from the duty to exercise due care. [1983 c.338 §697; 1985 c.16 §335]

There are scenarios where bicyclists can enter the intersection with no restrictions on movements and a sign does not need to grant permission for that movement, or a sign would not clarify allowable movements. Examples include:

- One leg of a signalized intersection only carries bicycles (Figure 3).
- Bicycles cross diagonally or turn onto the intersecting street (Figure 4 and Figure 5).

There are also cases where other traffic control devices or the roadway design restricts movements without the need for an added sign showing the allowable movements. Examples include:

- Arrow markings show allowable movements (Figure 6).
- Arrow markings, green markings, and/or curbs show allowable movements (Figure 7 and Figure 8).

If the meaning of a green bicycle indication and a circular green indication are equivalent in the Oregon Vehicle Code (with one applying to bikes), then the meaning of the two indications should be equivalent in the MUTCD.

As stated in 4H.03 and 9B.22, one of the purposes of the Bicycle Signal signs are to inform road users that the signal indications in the bicycle signal face are intended only for bicyclists. In cases where arrows are not needed on the bike signal sign, the bicycle signal sign used in IA-16 (R10-10b) can inform road users that the bicycle signal is intended only for bicyclists without needing to regulate movements.

Figure 3: One Leg of Signalized Intersection Exclusively for Bicycles

Figure 4: Bicycles Cross Diagonally or Make Turns on Green Bicycle Signal

Figure 5: Bicycles Cross Diagonally or Make Turns on Green Bicycle Signal

Figure 6: Bicycle Signal Controlling Painted Bicycle Lane, Markings Showing Allowable Movements

Figure 7: Bicycle Signals Controlling Separated Bicycle Lanes, Markings and Geometry Showing Allowable Movements

Figure 8: Bicycle Signal Controlling Separated Bicycle Lanes, Markings and Geometry Showing Allowable Movements

Proposed Supplement Content

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CHAPTER 4A. GENERAL

Section 4A.05 Meanings of Bicycle Symbol Signal Indications

Standard:

01 **The following meanings shall be given to bicycle symbol signal indications for bicyclists:**

A. Bicyclists facing a steady GREEN BICYCLE signal indication are permitted to enter the intersection ~~only to make the movement indicated~~ to proceed straight through or turn right or left except as such movement is modified by the lane-use arrow(s) displayed on the Bicycle Signal sign (see Section 9B.22) that is located immediately adjacent to the signal face, turn prohibition signs, lane markings, roadway design, or other traffic control devices. Bicyclists proceeding into the intersection during the display of the steady GREEN BICYCLE signal indication shall yield the right-of-way to:

1. **Pedestrians lawfully within an associated crosswalk, and**
2. **Other vehicles lawfully within the intersection.**

B. Bicyclists facing a steady YELLOW BICYCLE signal indication are thereby warned that the related green movement is being terminated and that a steady RED BICYCLE signal indication will be displayed immediately thereafter when bicyclists shall not enter the intersection. The rules set forth concerning bicycle operation under the movement being terminated shall continue to apply while the steady YELLOW BICYCLE signal indication is displayed.

C. Bicyclists facing a steady RED BICYCLE signal indication shall not enter the intersection to make the movement indicated by the lane-use arrow(s) displayed on the Bicycle Signal sign (see Section 9B.22) that is located immediately adjacent to the signal face and, unless entering the intersection to make another movement permitted by another bicycle symbol signal indication, shall stop at a clearly marked stop line; but if there is no stop line, before entering the crosswalk on the near side of the intersection; or if there is no crosswalk, then before entering the intersection; and shall remain stopped until a GREEN BICYCLE signal indication permitting the movement indicated by such RED BICYCLE signal indication is displayed.

Except when a traffic control device is in place prohibiting a turn on red, bicyclists facing a steady RED BICYCLE signal indication are permitted to enter the intersection to turn right if there are no approach lanes for motor vehicle traffic to their right. The right to proceed with the turn shall be subject to the rules applicable after making a stop at a STOP sign.

D. A flashing GREEN BICYCLE signal indication has no meaning and shall not be used.

E. A flashing YELLOW BICYCLE signal indication has no meaning and shall not be used.

F. Bicyclists facing a flashing RED BICYCLE signal indication shall stop at a clearly marked stop line; but if there is no stop line, before entering the crosswalk on the near side of the intersection; or if there is no crosswalk, at the point nearest the intersecting roadway where the bicyclist has a view of approaching traffic on the intersecting roadway before entering the intersection. The right to proceed in the direction indicated by the lane-use arrow(s) displayed on the Bicycle Signal sign (see Section 9B.22) that is located immediately adjacent to the signal face shall be subject to the rules applicable after making a stop at a STOP sign.

Support:

02 On a GREEN BICYCLE signal indication, ORS 811.260(3) allows bicyclists to proceed straight through or turn right or left, unless a sign prohibits a movement. ORS 811.265 and ORS 814.400 require bicyclists to obey the directions of any applicable traffic control device.

CHAPTER 4H. BICYCLE SIGNALS

Section 4H.03 Bicycle Signal Signs

Support:

01 The primary purposes of the Bicycle Signal (R10-40, R10-40a, R10-41, R10-41a, R10-41b) sign (see Section 9B.22) are to inform road users that the signal indications in the bicycle signal face are intended only for bicyclists, and to inform bicyclists which specific bicyclist movements are controlled by the bicycle signal face.

Standard:

02 **Except as provided in Paragraph 3 and Paragraph 4 of this Section, a Bicycle Signal (R10-40, R10-40a, R10-41, R10-41a, or R10-41b) sign shall be installed immediately adjacent to (including above or below) every bicycle signal face. The Bicycle Signal sign shall have a minimum size of 24 inches x 36 inches if it is placed next to an overhead-mounted bicycle signal face and shall have a minimum size of 12 inches x 21 inches if it is placed next to a post-mounted bicycle signal face.**

Option:

03 The Bicycle Signal sign may be omitted adjacent to a supplemental near-side bicycle signal face containing 4-inch indications.

04 The Bicycle Signal (OBR10-42) sign may be installed instead of a Bicycle Signal (R10-40, R10-40a, R10-41, R10-41a, or R10-41b) sign where bicyclists can proceed through the intersection in any direction on a GREEN BICYCLE signal indication, or where turn prohibition signs, lane markings, roadway design, or other traffic control devices inform bicyclists which specific movements are allowed on a GREEN BICYCLE signal indication.

Support:

05 On a GREEN BICYCLE signal indication, ORS 811.260(3) allows bicyclists to proceed straight through or turn right or left, unless a sign prohibits a movement. ORS 811.265 and ORS 814.400 require bicyclists to obey the directions of any applicable traffic control device.

CHAPTER 9B. REGULATORY SIGNS

Section 9B.22 Bicycle Signal Signs (R10-40, R10-40a, R10-41, R10-41a, R10-41b, and R10-41c)

Support:

01 The purposes of the Bicycle Signal signs (see Figure 9B-1) are to inform road users that the signal indications in the bicycle signal face are intended only for bicyclists, and to inform bicyclists which specific bicycle movements are controlled by the bicycle signal face.

02 Section 4H.03 contains information on signs that are used in conjunction with bicycle signal faces.

Standard:

03 **Except as provided in Paragraph 4, the ~~The~~ Bicycle Signal – Mandatory Movement (R10-40 or R10-40a) sign or the Bicycle Signal – Optional Movement (R10-41. R10-41a, R10-41b, or R10-41c) sign shall require bicycles to turn, shall permit turns where such turns would otherwise not be allowed, shall require a bicycle to stay in the same lane and proceed straight through an intersection, or shall indicate allowed movements when a GREEN BICYCLE signal indication is displayed on a bicycle signal face.**

Option:

04 The Bicycle Signal (OBR10-42) sign may be installed instead of a Bicycle Signal (R10-40, R10-40a, R10-41, R10-41a, or R10-41b) sign where bicyclists can proceed through the intersection in any direction on a GREEN BICYCLE signal indication, or where turn prohibition signs, lane markings, roadway design, or other traffic control devices inform bicyclists which specific movements are allowed on a GREEN BICYCLE signal indication.

Support:

05 On a GREEN BICYCLE signal indication, ORS 811.260(3) allows bicyclists to proceed straight through or turn right or left, unless a sign prohibits a movement. ORS 811.265 and ORS 814.400 require bicyclists to obey the directions of any applicable traffic control device.

Figure 9B-1(OR). Regulatory Signs and Plaques for Bicycle Facilities

OBR10-42

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9D.01 – Bicycle Destination Signs	October 15, 2024	11905
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)
FHWA added guidance in Section 9D.01 that travel times should not be used on bicycle destination signs - without supporting evidence that travel times affect safety. Oregon developed its own bicycle destination sign prior to its introduction in the MUTCD and Oregon's road authorities have used it extensively. This proposes to remove guidance about travel time and retain OBD1-1c, OBD1-2c, and OBD1-3c in the Oregon Supplement to keep Oregon's bicycle wayfinding system consistent.

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- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

FHWA added guidance in Section 9D.01 that travel times should not be used on bicycle destination signs. FHWA made this change without supporting evidence that travel times on these signs affect safety. Oregon developed its own bicycle destination sign prior to its introduction in the MUTCD and Oregon's road authorities have used it extensively. Removing Oregon's bicycle destination sign would create inconsistency in the state's existing bicycle wayfinding system.

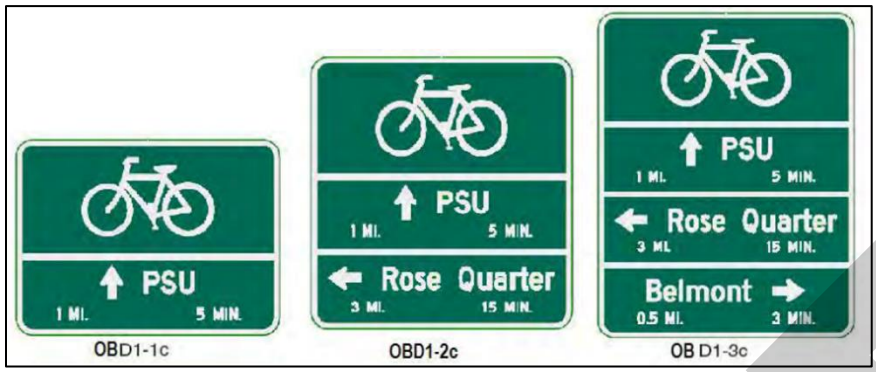
Discussion

2009 Oregon Supplement to the MUTCD

Before bicycle destination and distance signs appeared in the MUTCD, Oregon agencies developed design details for these types of signs. The latest iterations currently appear in Figure 9B-4(OR) in the Oregon Supplement to the 2009 MUTCD (Figure 1) and road authorities use them extensively in the state.

These signs include distance and travel times. Some agencies use a speed of 10 mph to calculate travel time but there is no official guidance on how to do this in the Supplement.

Figure 1: Bicycle Destination Signs in the Oregon Supplement to the 2009 MUTCD



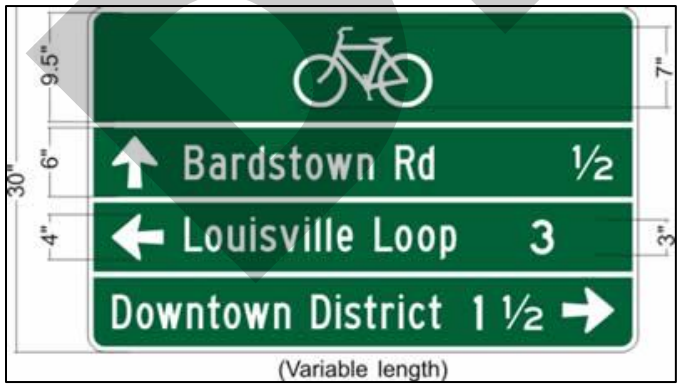
MUTCD 11th Edition

FHWA added provisions in the 11th Edition Section 9D.01 that allow for modifications to the MUTCD Bicycle Destination Signs to be like Oregon's versions (OBD1-1c, OBD1-2c, OBD1-3c). Specifically, Section 9D.01 Paragraph 14 allows an oversized bicycle symbol as the top line of a Bicycle Destination sign instead of individual bicycle symbols for each of the destination/distance lines.

FHWA also added guidance in Paragraph 19 that travel times should not be used on Bicycle Destination signs, explaining in Paragraph 20 that travel times can vary for bicyclists based on a variety of factors including individual speed, bicycle type, and type of facility. While useful to advertise that bicycle travel is faster than some may think, FHWA's explanation is true, especially with the rise of e-bikes and other electric micromobility devices since the 2009 MUTCD.

Figure 2 shows an example of what a bicycle destination sign could look like under the 11th Edition (this is from FHWA's Official Interpretation 9(09)-20(I)). Figure 3 shows a version of Oregon's bicycle destination signs that would be consistent with the 11th Edition MUTCD.

Figure 2: Example Sign from FHWA Official Interpretation 9(09)-20(I)



Keep Oregon's Bicycle Destination Signs

Oregon's road authorities have been extensively using the bicycle destination sign from the 2009 Oregon Supplement to the MUTCD. This has brought consistency for bicycle wayfinding throughout the state. Examples shown below in Table 1. The bicycle destination signs in the 2009 Oregon Supplement should continue to be available to Oregon's road authorities because changing to a new design would make Oregon's existing bicycle wayfinding system inconsistent during the sign's long service life.

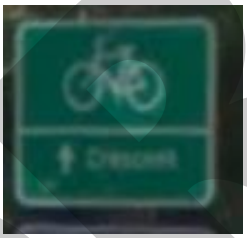
To keep Oregon's existing bicycle wayfinding sign, the new guidance that travel times should not be used on bicycle destination signs should be removed in the Supplement. Travel times add context for people on bicycles who are unfamiliar with bicycle travel. This can help them decide whether they can reach a destination by bicycle. Adding travel time does not affect safety. No studies have examined the safety effects of showing travel time to bicycle destination signs to support the new guideline in the MUTCD. The signs are scaled for non-motorized traffic and add contextual information for navigation.

The NACTO Urban Bikeway Design Guide (Bike Route Wayfinding Signing and Marking System) recommends adding travel times to these signs, saying this may help minimize the tendency to overestimate the time it takes to travel by bicycle. FHWA recognizes and supports use of the NACTO Urban Bikeway Design Guide as a resource for complete streets design (https://www.fhwa.dot.gov/design/altstandards/index.cfm).

While mobile mapping apps like Google Maps also provide distance and travel time by bicycle, not all road users have access to a mobile device, and providing travel time on the sign can help keep bicyclists' attention on the street instead of their mobile device.

The Oregon Supplement should leave the method to calculate travel time to engineering judgement and inform that judgement by referencing research on bicycle travel behavior. As the MUTCD's new support paragraph 20 says, travel times can vary based on a variety of factors. The NACTO Urban Bikeway Design Guide recommends using a 10-mph bicycle speed for travel time calculations, a speed supported by a 2008 study of bicycle travel time and route choice by Portland State University (OTREC-RR-08-03). This speed can change based on a route's grade, among several other factors, so this design detail should be left to engineering judgement. The Portland State University research can also be a resource for other aspects of these signs, such as route choice, trip purpose, and trip distance.

Oregon Location	Example	Link
Brookings		17300 Oregon Coast Hwy - Google Maps

Oregon Location	Example	Link
Corvallis		1540 NW 11th St - Google Maps
Eugene		20 E 13th Ave - Google Maps
Gilchrist		The Dalles-California Hwy - Google Maps
Joseph		62873 Wallowa Lake Hwy - Google Maps

Oregon Location	Example	Link
Milwaukie		9515 SE 17th Ave - Google Maps
Monmouth		380 OR-99W - Google Maps
Portland		2997 S Moody Ave - Google Maps
Rickreall		S Pacific Hwy W - Google Maps

Oregon Location	Example	Link
Roseburg		382 W Harvard Ave - Google Maps
Salem		799 Court St NE - Google Maps

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Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9D. GUIDE AND SERVICE SIGNS

Section 9D.01 Bicycle Destination Signs (D1-1b, D1-1c, D1-2b, D1-2c, D1-3b, D1-3c, D2-1a, D2-2a, and D2-3a)

Support:

01 The purpose of Bicycle Destination (D1-1b, D1-1c, D1-2b, D1-2c, D1-3b, ~~and~~ D1-3c, OBD1-1c, OBD1-2c, and OBD1-3c) signs (see Figure 9D-1 and Figure 9D-1(OR)) and Bicycle Distance (D2-1a, D2-2a, and D2-3a) signs (see Figure 9D-1) is to provide guidance to bicyclists traveling along a bikeway network directing them to typical bicycle destinations or points of interest. The smaller size of Bicycle Destination and Distance signs can deemphasize the messages to motorists, especially when the direction(s) or destination(s) displayed provides access to routes or pathways where the use of motor vehicles is prohibited or discouraged. Examples include, but are not limited to:

A. Bicycles can go in a direction counter to conventional traffic,
B. Access to a separated bikeway or shared-use path from a street,
C. Access to a bicycle route,
D. Bicycles are directed to another roadway or bikeway that facilitates a parallel or alternative route to the same destination, or
E. Access to a sidewalk that provides connectivity between bicycle facilities.

02 Section 2D.36 contains information on Destination signs used for when the destinations listed would apply to both motorists and bicyclists.

03 Section 2D.43 contains information on Distance signs used for when the destinations listed would apply to both motorists and bicyclists.

Standard:

04 **Because of their smaller size, Bicycle Destination and Distance signs shall not be used as a substitute for vehicular destination signs when the message is also intended to be applicable to motorists.**

Option:

05 Bicycle Destination and Distance (D1-1b, D1-1c, D1-2b, D1-2c, D1-3b, D1-3c, D2-1a, D2-2a, ~~and~~ D2-3a, OBD1-1c, OBD1-2c, and OBD1-3c) signs may be installed to provide direction, destination, and distance information as needed for bicycle travel. If several destinations are to be shown at a single location, they may be placed on a single sign with an arrow (and the distance, if desired) for each name. If more than one destination lies in the same direction, a single arrow may be used for the destinations.

06 Destination (D1-1 and D1-1a) signs (see Section 2D.36) and Street Name (D3-1) signs (see Section 2D.45) may be installed instead of or in addition to Bicycle Destination signs as needed if the Destination or Street Name sign applies to motorists and bicyclists.

07 Distance (D2-1 through D2-3) signs (see Section 2D.43) may be installed instead of, or in addition to, Bicycle Distance (D2-1a through D2-3a) signs, as needed, if the destination and distance information applies to motorists and bicyclists.

Guidance:

08 *Adequate separation should be made between any destination or group of destinations in one direction and those in other directions by suitable design of the arrow, spacing of lines of legend, heavy lines entirely across the sign, or separate signs.*

09 *Where a Bicycle Destination sign with distance information is located less than ½ mile from the destination, the distance displayed should be to the nearest ¼ mile. Where the distance to be displayed on a Bicycle Destination sign is less than ¼ mile, the distance should be displayed in feet, rather than miles, to the nearest 50 feet.*

Option:

10 Distances may be displayed in fractions of a mile to the nearest 1⁄10 mile to communicate distance information on Bicycle Destination signs where the distance to a destination is desired to be more precise than ¼-mile increments.

Support:

11 Section 2A.08 contains provisions on the display of fractions on guide signs.

Standard:

12 **An arrow pointing to the right, if used, shall be at the extreme right-hand side of the sign. An arrow pointing left or up, if used, shall be at the extreme left-hand side of the sign. The distance numerals, if used, shall be placed to the right of the destination names.**

13 **Except as provided in Paragraph 14 of this Section, a bicycle symbol shall be placed next to each destination or group of destinations.**

Option:

14 An oversized bicycle symbol may be displayed as the top line of a Bicycle Destination sign instead of individual bicycle symbols for each of the destination/distance lines.

Standard:

15 **If an arrow is at the extreme left, the bicycle symbol shall be placed to the right of the respective arrow.**

Guidance:

16 *Where the arrow is at the extreme right, the bicycle symbol should be to the left of the destination legend.*

17 *Unless a sloping arrow will convey a clearer indication of the direction to be followed, the directional arrows should be either horizontal or vertical.*

18 *If several individual name signs are assembled into a group, all of the signs in the assembly should have the same horizontal width.*

~~19 *Travel times should not be used on Bicycle Destination signs.*~~

Support:

20 Travel times can vary greatly for bicyclists based on a variety of factors including individual speed, bicycle type, and type of facility. Research on bicycle travel time, trip purpose, and route choice is available from Portland State University at http://dx.doi.org/10.15760/trec.151.

21 State and local agencies in Oregon developed design details for Bicycle Destination signs prior to their introduction in the MUTCD. Figure 9D-1(OR) shows examples of these signs.

Figure 9D-1(OR). Guide Signs for Bicycle Facilities

OBD1-1c

OBD1-2c

OBD1-3c

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9D.06 – Non-Numbered Bicycle Route Signs	October 15, 2024	11906
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

Oregon has developed non-numbered bicycle route signs to show named bicycle routes in the state. These signs are consistent with the provisions in Section 9D.06. In support of Paragraph 09 encouraging a statewide policy for non-numbered bicycle route signs, this proposes that the Supplement should show examples of these signs used for designated bicycle routes that cross jurisdictions. The Oregon Supplement to the 2009 MUTCD also included these signs.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

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- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Oregon has developed non-numbered bicycle route signs for its designated bicycle routes. These routes and cross jurisdiction boundaries. Including these signs in the Supplement with a designated sign number can improve consistency of these signs around the state.

Discussion

Oregon has developed non-numbered bicycle route signs to show named bicycle routes in the state. For example, the Oregon Parks and Recreation Department has named 17 state Scenic Bikeways. These are marked with sign OBM1-8a with SCENIC BIKEWAY at the top of the sign. Similarly, the Oregon Coast Bike Route uses a unique sign to show the route. Examples shown below.

These signs are consistent with the provisions in Section 9D.06. In support of Paragraph 09 encouraging a statewide policy for non-numbered bicycle route signs, the Supplement should show examples of these signs used for designated bicycle routes that cross jurisdictions. The Oregon Supplement to the 2009 MUTCD also included these signs.

Figure 1: Examples of Oregon Non-Numbered Bicycle Route Signs

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9D. GUIDE AND SERVICE SIGNS

Section 9D.06 Non-Numbered Bicycle Route Signs (M1-8b and M1-8c)

Standard:

01 **Except as provided in Paragraph 2 of this Section, Non-Numbered Bicycle Route (M1-8b and M1-8c) signs (see Figure 9D-1 and Figure 9D-1(OR)) used on roadways shall have a green background with a white border, and shall include words identifying the bicycle route or a legend consisting of words identifying the bicycle route and a pictograph or bicycle symbol.**

Option:

02 Words identifying the bicycle route may be omitted on Non-Numbered Bicycle Route (M1-8b and M1-8c) signs where a pictograph includes the likeness of a bicycle that clearly identifies the route as a bicycle route.

Support:

03 Bicycle routes are sometimes designated specifically by name or established using a distinctive route identity, but are not numbered or are intentionally excluded from an overall numbered bicycle route system.

04 Section 9D.02 contains information for Bicycle Route signs where no unique designation route is beneficial or desired.

Option:

05 Where a bicycle route is named instead of numbered, the Non-Numbered Bicycle Route sign may be used.

06 A green background or white border may be omitted on Non-Numbered Bicycle Route (M1-8b or M1-8c) signs used on shared-use paths.

Support:

07 Certain uninterrupted, long-distance interstate bicycle routes can largely be on shared-use paths, or other off-roadway facilities. In order to achieve continuity, these bicycle systems might have to share alignments with urban streets, rural highways, or water crossings.

08 Long-distance interstate bicycle routes can be administered by independent organizations serving other non-transportation objectives.

Guidance:

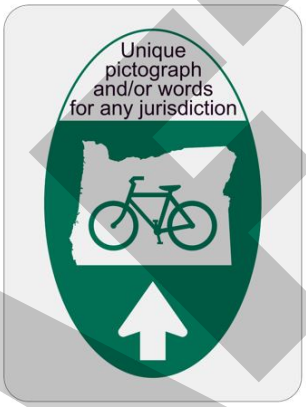
09 *In order to provide signing on a facility managed by a transportation agency, a statewide policy for encouraging independent organizations to adopt the Non-Numbered Bicycle Route sign should be established.*

Support:

10 State and local agencies in Oregon developed design details for Non-Numbered Bicycle Route signs prior to their introduction in the MUTCD. Figure 9D-1(OR) shows examples of these signs.

Figure 9D-1(OR). Guide Signs and Plaques for Bicycle Facilities

OBM1-8



OBM1-8a

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9E.01 – Bicycle Lanes	October 15, 2024	11907
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

Agencies in Oregon have consistently marked bicycle lanes with 8-inch-wide longitudinal white lines and bicyclist symbol markings with an arrow. The 11th Edition MUTCD requires 4-inch-wide longitudinal white lines for bicycle lanes, no longer uses the bicyclist symbol marking, and says the arrow marking is optional. This proposes a supplement to continue using 8-inch-wide lines and the helmeted bicyclist symbol with arrow to mark bicycle lanes in Oregon.

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- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

Agencies in Oregon have historically marked bicycle lanes with 8-inch-wide longitudinal white lines when used to separate motor vehicle lanes from bicycle lanes traveling in the same direction. Agencies have also marked bicycle lanes with the bicyclist symbol markings with a directional arrow. The 11th Edition MUTCD uses 4-inch-wide longitudinal white lines for bicycle lanes and no longer uses the bicyclist symbol marking.

Discussion

Longitudinal Bicycle Lane Markings

Prior to adopting the 2009 MUTCD, OAR 734-020-0055 specified 8-inch-wide longitudinal white lines. That provision moved to the Oregon Supplement to the 2009 MUTCD, and OAR 734-020-0055 was repealed, when the Oregon Transportation Commission adopted the 2009 MUTCD with supplements (HWD 14-2011).

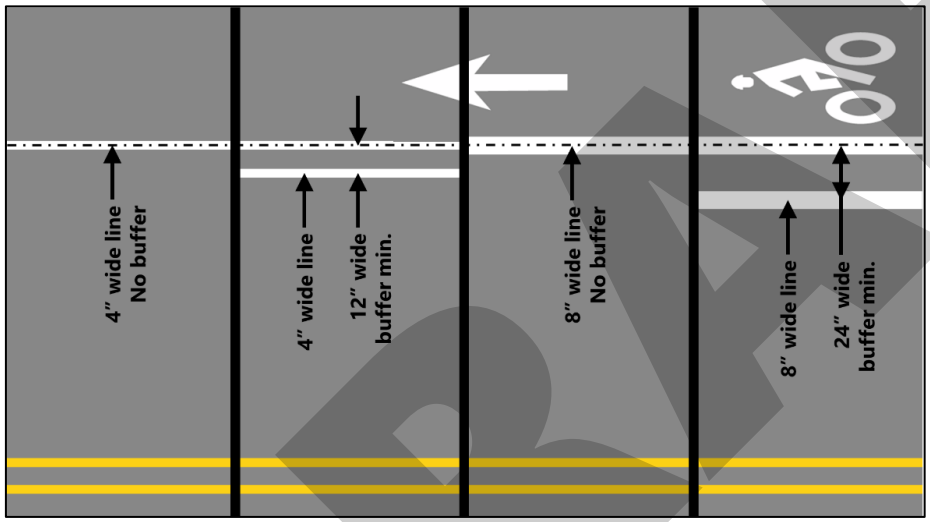
OAR 734-020-0055 Bicycle Lane Definition (repealed)

A bicycle lane as defined by ORS 801.155(6) shall be separated from the adjacent roadway by a single, solid eight-inch-wide white stripe.

This proposes continuing using an 8-inch-wide line for bicycle lanes in Oregon for added emphasis to discourage drivers from crossing the bicycle lane line.

FHWA added new guidance in Section 9E.06 Paragraph 08 that buffer spaces should be at least 3 times the width of the longitudinal line used to mark the buffer space. A 4-inch-wide line would mean buffers, when used, should be at least 12 inches wide – the same layout as Oregon's standard double yellow (no passing) line. Maintaining an 8-inch-wide line will mean buffers, when used, should be at least 24 inches wide.

Figure 1: Line and Buffer Widths



The Oregon Supplement to the 2009 MUTCD added a provision for marking counterflow bicycle lanes with a yellow double line. Section 9E.08 in the national MUTCD covers counterflow bicycle lanes now, so the Oregon Supplement no longer needs to address counterflow bicycle lanes.

Bicycle Lane Symbol and Word Markings

The 11th Edition of the MUTCD allows two types of bicycle lane markings as shown in Figure 9E-1 – bicycle symbol or BIKE LANE work markings.

Starting with the 2009 Edition, the Oregon Supplement to the MUTCD only allowed symbol markings for statewide consistency.

FHWA removed the helmeted bicyclist symbol marking in the 11th Edition – a symbol used extensively to mark bicycle lanes in Oregon and that had been in the MUTCD since at least the 1978 edition. FHWA's Summary of Dispositions for the 11th Edition explained this change under NPA Item No. 623.

Figure 2: FHWA Summary of Disposition No. 623

> FHWA proposes a revision to Figure 9E-1 to include a single symbol for bicycle symbol pavement markings to enable a single symbol used for bicycle signs and pavement markings thereby enhancing uniformity and recognition of bicycle symbols.

FHWA also added an option in Paragraph 04 allowing the use of arrow markings with the bicycle lane symbol or word markings. The 2009 Oregon Supplement to the MUTCD clarified that the bicycle lane symbol and arrow markings should be placed together to clarify travel direction in the bicycle lane. This improves understanding for all road users of which direction people on bicycles are supposed to ride and may lower the likelihood of a crash caused by wrong-way riding as described in the Oregon Bicycling Manual.

Figure 3: Excerpt from Oregon Supplement to the 2009 MUTCD, Markings for Bicycle Lanes Section 9C.04

> *Guidance:*
> *If used, bicycle lane ~~word~~, symbol, and ~~or~~ arrow markings (see Figure 9C-3) should be placed at the beginning of a bicycle lane and at periodic intervals along the bicycle lane based on engineering judgment.*

To continue uniformity and recognition of bicycle lane symbol markings in Oregon, this proposes to remove the BIKE LANE word marking and add the helmeted bicyclist symbol, as shown in the 2009 MUTCD, to the Oregon Supplement. This also proposes to change the option of using an arrow with the bicycle symbol to a recommendation, consistent with the existing 2009 Oregon Supplement.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9E. MARKINGS

Section 9E.01 Bicycle Lanes

Support:

01 Pavement markings designate that portion of the roadway for preferential use by bicyclists. Markings inform all road users of the restricted nature of the bicycle lane.

Standard:

02 **Longitudinal pavement markings and bicycle lane symbol ~~or word~~ markings (see Figure 9E-1) shall be used to define bicycle lanes. An 8-inch-wide longitudinal white line shall be used to separate motor vehicle lanes from bicycle lanes traveling in the same direction.**

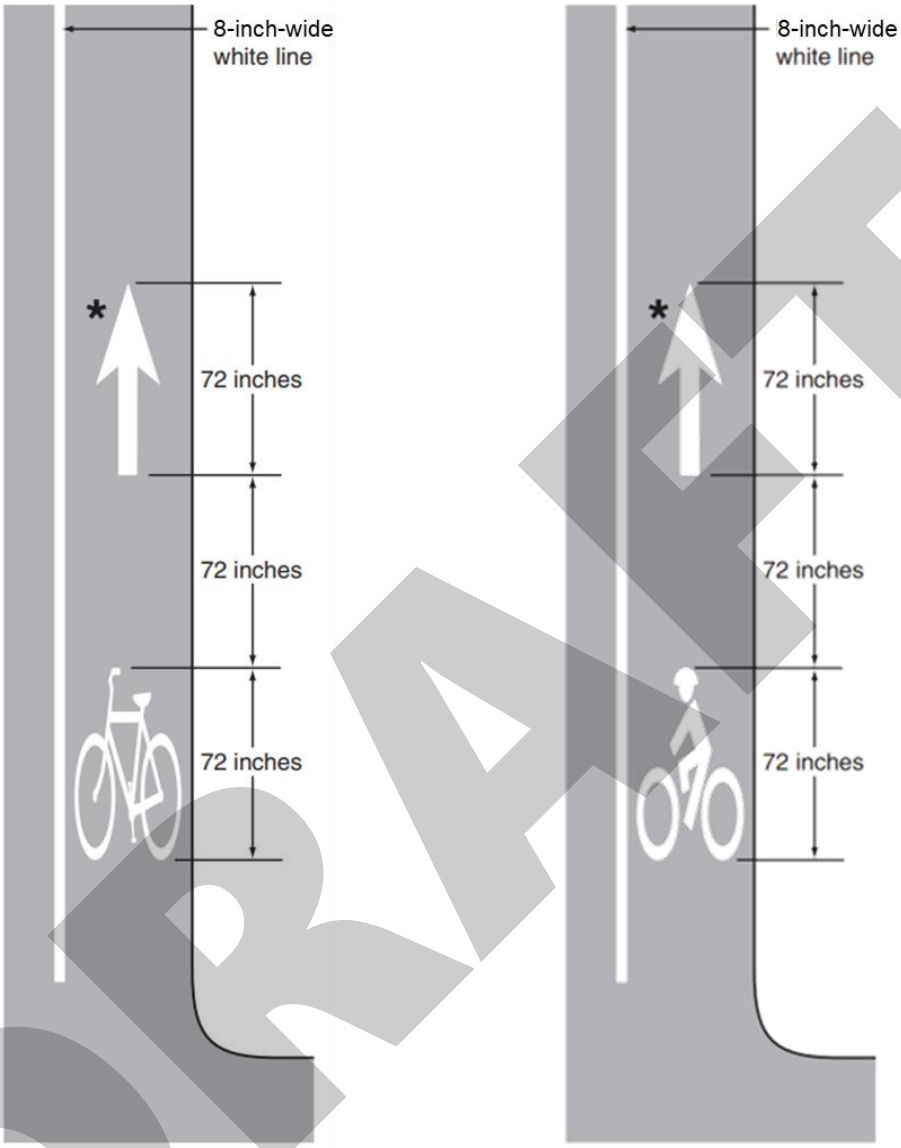
Guidance:

03 *The first symbol ~~or word~~ marking in a bicycle lane should be placed at the beginning of the bicycle lane and downstream symbol ~~or word~~ markings should be placed after major intersections. Additional symbol ~~or word~~ markings should be placed at periodic intervals along the bicycle lane based on engineering judgment.*

~~Option:~~

04 *An arrow marking (see Figure 9E-1) ~~may~~ should be used in conjunction with the bicycle lane symbol ~~or word~~ marking, placed downstream from the symbol or word marking.*

Figure 9E-1(OR). Symbol and Arrow Pavement Markings for Bicycle Lanes



A – Bike Symbol

B – Helmeted Bicyclist Symbol

Option:

05 Where the bicycle lane symbols ~~or word markings~~ are used, Bicycle Lane signs (see Section 9B.04) may also be used, but not necessarily adjacent to every set of pavement markings in order to avoid overuse of the signs.

Support:

06 Section 3H.06 contains information on green-colored pavement for use in bicycle lanes.

Standard:

07 **The bicycle symbol ~~or BIKE LANE pavement word~~ marking and the pavement marking arrow shall not be used in a shoulder.**

08 **A portion of the roadway shall not be established as both a shoulder and a bicycle lane.**

Support:

09 Where a shoulder is provided or is of sufficient width to meet the expectation of a highway user in that it can function as a space for emergency, enforcement, or maintenance activities, or avoidance or recovery maneuvers, Section 9B.16 contains information regarding the Bicycles Use Shoulder Only sign that can be used to denote locations on a freeway or expressway where bicycles are permitted on an available and usable shoulder.

10 Examples of pavement markings for bicycle lanes on a two-way street are shown in Figure 9E-2.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9E.02 – Bicycle Lanes at Intersection Approaches 9E.06 – Buffer-Separated Bicycle Lanes	October 15, 2024	11908
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

9E.02 Paragraph 11 recommends dotting bicycle lane lines on approaches to intersections where vehicles cross the path of bicycles. However, ORS 811.435 and ORS 811.440 do not allow for drivers to merge into the bicycle lane in preparation for a turn like in other states. This proposes modifying 9E.02 Paragraph 11 and adding a support paragraph to remain consistent with Oregon law.

9E.02 and 9E.06 only allow bicycle lanes to the outside of mandatory turn lanes if the conflict is signalized, ignoring this conflict at unsignalized intersections. This proposes modifying 9E.02 and 9E.06 to allow bicycle lanes to the outside of mandatory turn lanes provided other devices eliminate the conflict between bicycles and turning vehicles.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

FHWA added guidance for the 11th Edition in 9E.02 Paragraph 11 that bicycle lane lines should be dotted on approaches to intersections where turning vehicles are allowed to cross the path of through-moving bicycles. ORS 811.440 allows drivers to operate on a bicycle lane when making a turn, not when preparing to turn on the approach to an intersection.

FHWA also added content on separated bicycle lanes but did not clarify whether those types of bicycle lanes can be positioned to the right of a right turn lane or left of a left turn lane without signalization. Provisions in 9E.02 and 9E.06 only allow bicycle lanes to the outside of turn lanes if the conflict is signalized. This excludes potential solutions to make this configuration safer at unsignalized intersections, especially where the intersection does not meet warrants in Part 4.

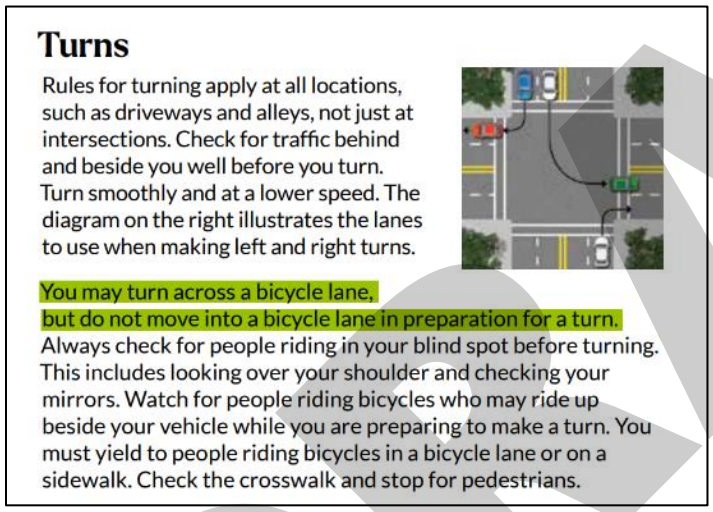
Discussion

Dotted Bicycle Lane Lines on Intersection Approaches

The MUTCD has shown dotted lines for bicycle lanes on approaches to intersections since before the 1988 Edition. However, FHWA added guidance language about that practice in the 11th Edition.

Oregon has historically used solid bicycle lane lines on approaches to intersections. Drivers are allowed to operate on a bicycle lane when making a turn under ORS 811.440 – not when preparing to make a turn on the approach to the intersection – and drivers must yield to bicyclists in the bicycle lane under ORS 811.050. Consistent with these statutes, Oregon's Drivers' Manual instructs drivers to not move into a bicycle lane in preparation for a turn. Keeping the line solid to the intersection encourages drivers to stay out of the bicycle lane until the intersection.

Figure 1: Excerpt from 2024-2025 Oregon Driver Manual, Page 38



Turns

Rules for turning apply at all locations, such as driveways and alleys, not just at intersections. Check for traffic behind and beside you well before you turn. Turn smoothly and at a lower speed. The diagram on the right illustrates the lanes to use when making left and right turns.

You may turn across a bicycle lane, but do not move into a bicycle lane in preparation for a turn. Always check for people riding in your blind spot before turning. This includes looking over your shoulder and checking your mirrors. Watch for people riding bicycles who may ride up beside your vehicle while you are preparing to make a turn. You must yield to people riding bicycles in a bicycle lane or on a sidewalk. Check the crosswalk and stop for pedestrians.

Other states allow drivers to merge into the bicycle lane when preparing to turn at an intersection. For example, California allows drivers to merge into the bicycle lane when preparing to turn within 200 feet from the intersection (California VEH 21209). The new guidance paragraph in the 11th Edition would apply to California's situation, but not Oregon's. This proposes to change the new guidance to be consistent with Oregon law and add a support paragraph explaining the modification.

811.050 Failure to yield to rider on bicycle lane; penalty.

(1) A person commits the offense of failure of a motor vehicle operator to yield to a rider on a bicycle lane if the person is operating a motor vehicle and the person does not yield the right of way to a person operating a bicycle, electric assisted bicycle, electric personal assistive mobility device, moped, motor assisted scooter or motorized wheelchair upon a bicycle lane.

(2) This section does not require a person operating a moped to yield the right of way to a bicycle or a motor assisted scooter if the moped is operated on a bicycle lane in the manner permitted under ORS 811.440.

(3) The offense described in this section, failure of a motor vehicle operator to yield to a rider on a bicycle lane, is a Class B traffic violation.

811.435 Operation of motor vehicle on bicycle trail; exemptions; penalty.

(1) A person commits the offense of operation of a motor vehicle on a bicycle trail if the person operates a motor vehicle upon a bicycle lane or a bicycle path.

(2) Exemptions to this section are provided under ORS 811.440.

(3) This section is not applicable to mopeds. ORS 811.440 and 814.210 control the operation and use of mopeds on bicycle lanes and paths.

(4) The offense described in this section, operation of a motor vehicle on a bicycle trail, is a Class B traffic violation.

811.440 When motor vehicles may operate on bicycle lane.

This section provides exemptions from the prohibitions under ORS 811.435 and 814.210 against operating motor vehicles on bicycle lanes and paths. The following vehicles are not subject to ORS 811.435 and 814.210 under the circumstances described:

(1) A person may operate a moped on a bicycle lane that is immediately adjacent to the roadway only while the moped is being exclusively powered by human power.

(2) A person may operate a motor vehicle upon a bicycle lane when:

(a) Making a turn;

(b) Entering or leaving an alley, private road or driveway; or

(c) Required in the course of official duty.

(3) An implement of husbandry may momentarily cross into a bicycle lane to permit other vehicles to overtake and pass the implement of husbandry.

(4) A person may operate a motorized wheelchair on a bicycle lane or path.

(5) A person may operate a motor assisted scooter on a bicycle lane or path.

(6) A person may operate an electric personal assistive mobility device on a bicycle lane or path.

Bicycle Lanes to the Outside of Turn Lanes

Section 9E.02 Paragraph 01 is a standard that prohibits a through bicycle lane from being positioned to the right of a right turn only lane or the left of a left turn only lane. Paragraph 02 is an option that allows this configuration if the conflict is controlled by a bicycle signal. Section 9E.06 includes a similar but different provision for buffer-separated bicycle lanes in Paragraph 07 that requires a bicycle signal and signs. This topic is not covered in Section 9E.07 for separated bicycle lanes.

The MUTCD option to position a bicycle lane to the outside of a turn lane – and how to treat that conflict – should be consistent across bicycle lane types. To accommodate variable urban site needs, including at unsignalized intersection, it should describe the desired outcome (elimination of conflicts for safety) and let the engineer apply the devices needed to achieve that outcome.

Figure 2: MUTCD 11th Edition, Section 9E.02 (Bicycle Lanes at Intersection Approaches)

Section 9E.02 Bicycle Lanes at Intersection Approaches

Standard:

01 **Except as provided in Paragraph 2 of this Section, a through bicycle lane shall not be positioned to the right of a right turn only lane or to the left of a left turn only lane.**

Option:

02 A through bicycle lane may be positioned to the right of a right turn only lane or to the left of a left turn only lane provided that the bicycle lane is controlled by a traffic signal that displays bicycle signal indications (see Chapter 4H).

Figure 3: MUTCD 11th Edition, Section 9E.07 (Buffer-Separated Bicycle Lanes)

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Standard:

06 **Except as provided in Paragraph 7 of this Section, a through buffer-separated bicycle lane shall not be positioned to the right of a mandatory right-turn lane or to the left of a mandatory left-turn lane.**

Option:

07 A buffer-separated bicycle lane may be placed to the right of a mandatory right-turn lane (or to the left of a mandatory left-turn lane) only if a bicycle signal face (see Section 4H.01) is used and the signal phasing and signing eliminates any potential conflicts between the bicycle movement and the turning movement.

There are cases where bicycle lanes – especially separated bicycle lanes – must be positioned to the right of a right turn lane or left of a left turn lane. Not all these cases require signalization, nor would all these cases meet warrants for signalization in Part 4. Figure 5 through Figure 7 show examples of these situations. In these cases, drivers must yield to bicyclists in the bicycle lane per ORS 811.050.

811.050 Failure to yield to rider on bicycle lane; penalty.

(1) A person commits the offense of failure of a motor vehicle operator to yield to a rider on a bicycle lane if the person is operating a motor vehicle and the person does not yield the right of way to a person operating a bicycle, electric assisted bicycle, electric personal assistive mobility device, moped, motor assisted scooter or motorized wheelchair upon a bicycle lane.

(2) This section does not require a person operating a moped to yield the right of way to a bicycle or a motor assisted scooter if the moped is operated on a bicycle lane in the manner permitted under ORS 811.440.

(3) The offense described in this section, failure of a motor vehicle operator to yield to a rider on a bicycle lane, is a Class B traffic violation. [1983 c.338 §698; 1985 c.16 §336; 1991 c.417 §4; 1997 c.400 §8; 2001 c.749 §23; 2003 c.341 §7]

While Sections 9E.02 and 9E.07 do not explicitly include an exception to the Paragraph 01 standard for separated bicycle lanes, 9E.02 Paragraphs 12-18, and 9E.07 Paragraph 19 says intersection treatments for separated bicycle lanes can vary depending on the geometric and operational conditions at the intersection, referring to Section 9E.02.

At signalized intersections, Section 9E.07 Paragraph 12 prohibits turns on red across separated bicycle lanes while bicyclists are allowed to continue straight through the intersection. In these cases, the intersection is already signalized so this clarifies operations at the signal.

ORS 814.420 allows bicyclists to move out of a bicycle lane to avoid turning conflicts if the bicycle lane is to the right of a right turn lane. Moving out of a bicycle lane – especially a separated bicycle lane – is not always possible. Traffic control devices (bicycle signal or signs/markings) can clarify who has priority and improve road user understanding of how to navigate these conflict points.

814.420 Failure to use bicycle lane or path; exceptions; penalty.

(1) Except as provided in subsections (2) and (3) of this section, a person commits the offense of failure to use a bicycle lane or path if the person operates a bicycle on any portion of a roadway that is not a bicycle lane or bicycle path when a bicycle lane or bicycle path is adjacent to or near the roadway.

(2) A person is not required to comply with this section unless the state or local authority with jurisdiction over the roadway finds, after public hearing, that the bicycle lane or bicycle path is suitable for safe bicycle use at reasonable rates of speed.

(3) A person is not in violation of the offense under this section if the person is able to safely move out of the bicycle lane or path for the purpose of:

(a) Overtaking and passing another bicycle, a vehicle or a pedestrian that is in the bicycle lane or path and passage cannot safely be made in the lane or path.

(b) Preparing to execute a left turn at an intersection or into a private road or driveway.

(c) Avoiding debris or other hazardous conditions.

(d) Preparing to execute a right turn where a right turn is authorized.

(e) Continuing straight at an intersection where the bicycle lane or path is to the right of a lane from which a motor vehicle must turn right.

(4) The offense described in this section, failure to use a bicycle lane or path, is a Class D traffic violation. [1983 c.338 §700; 1985 c.16 §338; 2005 c.316 §3]

Figure 4: MUTCD 11th Edition, Section 9E.07, Paragraphs 12-18

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Support:

12 Buffer-separated and separated bicycle lanes require additional considerations at intersections, including sight distances for bicycles and other road users, user expectations, and intersection geometry.

Option:

13 A buffer-separated or separated bicycle lane may be shifted closer to, or farther away from the adjacent general-purpose lane depending upon site-specific conditions (see Drawings D and E in Figure 9E-7).

Support:

14 A buffer-separated or separated bicycle lane shifted away from the adjacent general-purpose lane at an intersection can create space for a motor vehicle to queue between the general-purpose lane and the extension of the bicycle lane. This design can also improve the safety and comfort of bicyclists by reducing the speed of turning motor vehicles, improving sightlines, and creating additional buffer space prior to the conflict point with turning motor vehicles.

15 The purpose of shifting a buffer-separated or separated bicycle lane away from the adjacent general-purpose lane is to allow the driver of a turning vehicle to undertake the tasks of turning and scanning for bicycle cross traffic in isolation versus simultaneously. Sufficient sight distance for both drivers and bicyclists is important in this design (see Drawing E in Figure 9E-7).

16 The purpose of shifting a buffer-separated or separated bicycle lane toward the adjacent general-purpose lane is to improve the visibility of bicyclists to the adjacent traffic and avoid conflicts between turning motor vehicles and bicyclists (see Drawing D in Figure 9E-7).

17 Staggering stop lines (see Section 3B.19) so that general-purpose lanes stop further in advance from the intersection than the bicycle lane can improve the visibility of bicyclists for drivers of turning vehicles (see Drawing D in Figure 9E-7).

Option:

18 Where a general-purpose mandatory turn lane is provided at an intersection and the approach also includes a separated or buffer-separated bicycle lane, a mixing zone may be established to allow general-purpose turning traffic to share the roadway space with bicyclists (see Figure 9E-5).

Figure 5: Right-Turn Only Lane at "Protected" Intersection

Figure 6: Separated Bicycle Lane crossing an Exit Ramp

Figure 7: Separated Bicycle Lane (curb-separated) to the Right of a Right Turn Lane (right-in-right-out)

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9E. MARKINGS

Section 9E.02 Bicycle Lanes at Intersection Approaches

Standard:

01 **Except as provided in Paragraph 2 of this Section, a through bicycle lane shall not be positioned to the right of a right turn only lane or to the left of a left turn only lane.**

Option:

02 A through bicycle lane may be positioned to the right of a right turn only lane or to the left of a left turn only lane provided that traffic control devices, such as a bicycle signal (see Chapter 4H), eliminate any potential conflicts between the bicycle movement and the turning movement (see Sections 9B.01 and 9E.03). ~~the bicycle lane is controlled by a traffic signal that displays bicycle signal indications (see Chapter 4H).~~

Support:

03 Unless controlled by a bicycle signal indication or other traffic control device, a bicyclist continuing straight through an intersection from the right of a right turn only lane or from the left of a left turn only lane would be inconsistent with normal traffic behavior and would violate the expectations of right-turning or left-turning motorists. ORS 811.050 requires drivers to yield to bicyclists in a bicycle lane.

Guidance:

04 *When the right (left) through lane is dropped to become a mandatory right-turn (left-turn) lane, the bicycle lane markings should stop at least 100 feet before the beginning of the right-turn (left-turn) lane. Through bicycle lane markings should resume to the left (right) of the mandatory right-turn (left-turn) lane.*

05 *Except as provided in Paragraph 2 of this Section, an optional through-right (through-left) turn lane next to a mandatory right-turn (left-turn) lane should not be used where there is a through bicycle lane.*

Standard:

06 **A bicycle lane located on an intersection approach between general-purpose lanes for motor vehicle movements shall be marked with at least one bicycle symbol and at least one arrow pavement marking as provided in Paragraph 4 of Section 9E.01.**

07 **A bicycle lane shall not be marked within a general-purpose lane, either with dotted or any other line markings.**

Option:

08 Where there is insufficient width in the roadway to include both a bicycle lane and a general-purpose turn lane, bicycle travel may be accommodated within the turn lane or general-purpose lane using shared-lane markings.

Standard:

09 **Where a general-purpose turn lane is controlled by a traffic control signal, through bicycle movements shall not be accommodated in the turn lane unless the turning movement is always permitted to proceed simultaneously with the adjacent through movement.**

Support:

10 Examples of bicycle lane markings on approaches to intersections are shown in Figures 9E-3, 9E-4, and 9E-9.

Guidance:

11 *The longitudinal line defining a bicycle lane should be ~~dotted~~ solid on approaches to intersections ~~where turning vehicles are permitted to cross the path of through moving bicycles (see Figure 9D-7)~~.*

Support:

12 Buffer-separated and separated bicycle lanes require additional considerations at intersections, including sight distances for bicycles and other road users, user expectations, and intersection geometry.

12a ORS 811.435 and ORS 811.440 do not allow drivers to merge into a bicycle lane in preparation for a turn.

Option:

13 A buffer-separated or separated bicycle lane may be shifted closer to, or farther away from the adjacent general-purpose lane depending upon site-specific conditions (see Drawings D and E in Figure 9E-7).

Support:

14 A buffer-separated or separated bicycle lane shifted away from the adjacent general-purpose lane at an intersection can create space for a motor vehicle to queue between the general-purpose lane and the extension of the bicycle lane. This design can also improve the safety and comfort of bicyclists by reducing the speed of turning motor vehicles, improving sightlines, and creating additional buffer space prior to the conflict point with turning motor vehicles.

15 The purpose of shifting a buffer-separated or separated bicycle lane away from the adjacent general-purpose lane is to allow the driver of a turning vehicle to undertake the tasks of turning and scanning for bicycle cross traffic in isolation versus simultaneously. Sufficient sight distance for both drivers and bicyclists is important in this design (see Drawing E in Figure 9E-7).

16 The purpose of shifting a buffer-separated or separated bicycle lane toward the adjacent general-purpose lane is to improve the visibility of bicyclists to the adjacent traffic and avoid conflicts between turning motor vehicles and bicyclists (see Drawing D in Figure 9E-7).

17 Staggering stop lines (see Section 3B.19) so that general-purpose lanes stop further in advance from the intersection than the bicycle lane can improve the visibility of bicyclists for drivers of turning vehicles (see Drawing D in Figure 9E-7).

Option:

18 Where a general-purpose mandatory turn lane is provided at an intersection and the approach also includes a separated or buffer-separated bicycle lane, a mixing zone may be established to allow general-purpose turning traffic to share the roadway space with bicyclists (see Figure 9E-5).

Standard:

19 **Mixing zones shall be used only where the bicycle lane is one-way in the same direction of travel as the adjacent general-purpose lane.**

20 **Mixing zones with a yielding area shall have yield markings indicating where general-purpose traffic entering the shared space shall yield to bicyclists.**

21 **Where a mixing zone continues to the intersection itself sharing space between bicyclists and general purpose turning traffic, shared-lane markings and turn arrows shall be provided in the lane.**

Support:

22 Mixing zones require bicycles and general traffic to share space, interrupting a buffer-separated or separated bicycle lane where bicycle traffic is otherwise separated from general traffic. The preference is to provide a dedicated bicycle facility for the intersection approach, If that is not possible, the mixing zone needs to indicate that bicyclists and motorists are entering a shared condition.

Guidance:

23 *Where a mixing zone provides for the re-establishment of a bicycle lane after bicycles and general-purpose lanes cross paths, a buffered or physically-separated space should be provided between the bicycle lane and the adjacent general-purpose lane (see Drawing C in Figure 9E-5).*

Section 9E.06 Buffer-Separated Bicycle Lanes

Support:

01 Buffer-separated bicycle lanes provide additional lateral separation between a bicycle lane and a general purpose lane by a pattern of pavement markings without the presence of vertical elements. Providing a buffer space between a bicycle lane and a general-purpose lane creates more separation between motor vehicles and bicycles, can reduce vehicle encroachment into the bicycle lane, and can increase the comfort of bicyclists.

02 Providing a buffer space between a bicycle lane and a parking lane can reduce crashes involving bicycles and the opening of vehicle doors from the parking lane.

Standard:

03 **If used, and except as provided in Paragraph 5 of this Section, a buffer space shall be marked with a solid white line along both edges of the buffer space where crossing is discouraged.**

Guidance:

04 *Engineering judgment should be used to establish intermittent breaks or interruptions in the buffer space, such as for driveways, transit stops, or on-street parallel parking lanes, in order to convey access points or an otherwise general legal movement to cross the buffer space (see Figure 9E-6).*

Option:

05 Buffer spaces may be established without specific longitudinal lines if contiguous facilities have longitudinal lines or other pavement markings themselves that, when installed, automatically demarcate the buffer space (see Drawing D in Figure 9E-6).

Standard:

06 **Except as provided in Paragraph 7 of this Section, a through buffer-separated bicycle lane shall not be positioned to the right of a mandatory right-turn lane or to the left of a mandatory left-turn lane.**

Option:

07 A buffer-separated bicycle lane may be placed to the right of a mandatory right-turn lane (or to the left of a mandatory left-turn lane) only if traffic control devices, such as a bicycle signal face (see Section 4H.01), ~~is used and the signal phasing and signing~~ eliminate~~s~~ any potential conflicts between the bicycle movement and the turning movement (see Sections 9B.01 and 9E.03).

Guidance:

08 *The width of the buffer space should be at least 3 times the width of the normal or wide longitudinal line used to mark the buffer space.*

09 *Where a buffer space is 2 to 3 feet wide, chevron or diagonal markings (see Section 3B.25) should be applied within the buffer space.*

Option:

10 Where a buffer space is less than 2 feet wide, diagonal markings or no markings at all in the buffer space may be applied within the buffer space.

Standard:

11 **If used, diagonal markings shall slant away from traffic in the adjacent travel lane for motor vehicle traffic.**

Guidance:

12 *Where used, the spacing of chevrons or diagonal markings should be 10 feet or greater.*

Support:

13 Chevron and diagonal markings convey that the buffer space is not an additional bicycle lane or other travel lane open to traffic.

Standard:

14 **Where a buffer space is more than 3 feet wide, chevron or diagonal markings shall be applied within the buffer space.**

Guidance:

15 *Lane extension markings should be used to extend a buffer-separated bicycle lane across intersections and driveways.*

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9E.12 – Bicycle Box	October 15, 2024	11909
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)
Section 9E.12 Paragraph 05 says a bicycle box should not be contiguous with a crosswalk. This aligns the stop position of the bike box with the intersection stop line. However, the Oregon Supplement has historically allowed the marked crosswalk to be the intersection stop line, meaning the bike box and adjacent traffic lane would have different stop positions. This proposes to allow bike boxes to be contiguous to marked crosswalks so the box's stop position can be the intersection stop line.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

- Must conform to the Standard statements in the national MUTCD. FHWA may grant an exception because of requirements of a specific State law, provided information available and documentation provided by the state shows the non-conformance does not create a safety concern.
- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

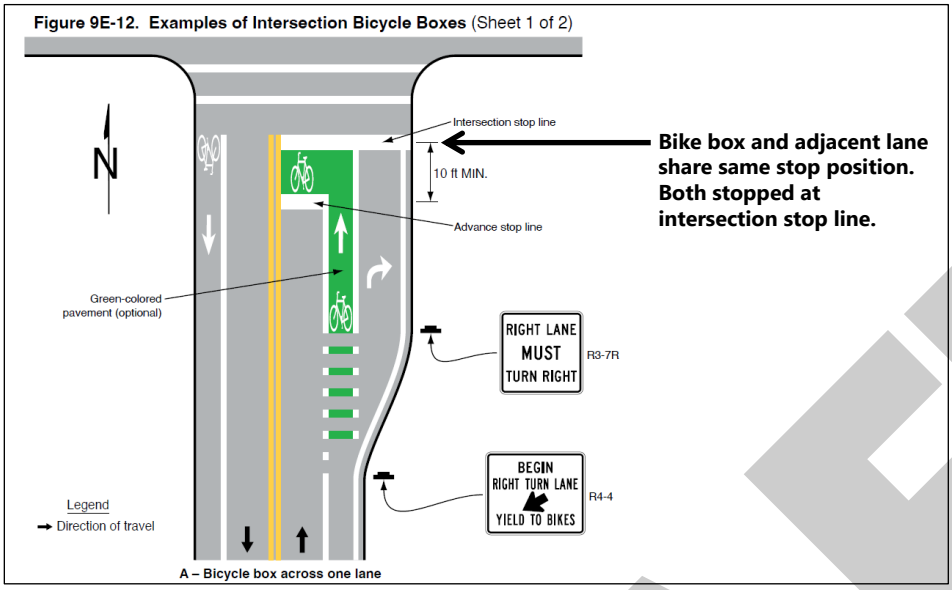
Problem

Section 9E.12 Paragraph 05 says a bicycle box should not be contiguous with a crosswalk, and a stop line on the downstream end of the bicycle box should be used to mark the location where bicycles are required to stop. However, Oregon has a long-standing practice (through Part 3 Oregon Supplement to the MUTCD) of using the marked crosswalk as the intersection's stop line.

Discussion

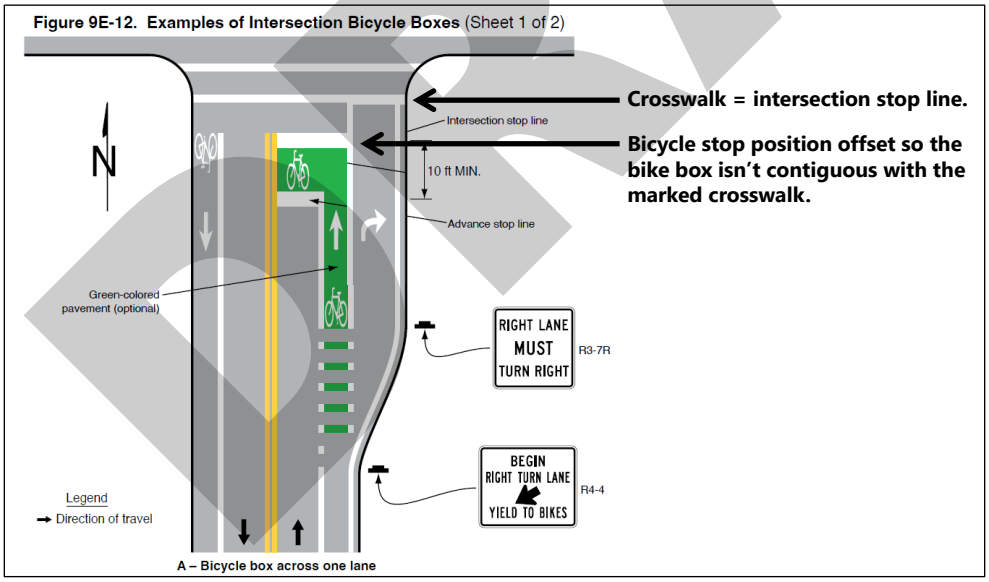
The guidance statement in 9E.12 Paragraph 05 aligns the top edge of the bicycle box (where bicycles are required to stop) with the adjacent lane's stop line, consistent with Section 3B.19 Paragraph 04, shown in Figure 1. The bike box and adjacent lane share the same stop position – the intersection stop line.

Figure 1: MUTCD layout, intersection stop line separate from marked crosswalk



However, Oregon has a long-standing practice (through Part 3 Oregon Supplement to the MUTCD, see Proposal No. 11302) of using the marked crosswalk as the intersection's stop line. If the marked crosswalk is the intersection's stop line, but the bike box should not be contiguous with the crosswalk (as recommended in Section 9E.12 Paragraph 05), then the stop line for bicycles should be further back than the intersection stop line, shown in Figure 2.

Figure 2: MUTCD layout, intersection stop line is the marked crosswalk



If the marked crosswalk is the intersection's stop line, then the Oregon Supplement should allow bike boxes to be contiguous with the marked crosswalk so the bike box and adjacent lane stop positions can share the same stop position – the intersection stop line – shown in Figure 3. This is how road authorities have installed bicycle boxes in Oregon to date. Figure 4 shows an example. This is also supported by the support statement in 9E.02 Paragraph 17: "Staggering stop lines (see Section 3B.19) so that general-purpose lanes stop further in advance from the intersection than the bicycle lane can improve the visibility of bicyclists for drivers of turning vehicles (see Drawing D in Figure 9E-7)."

Figure 3: Proposed Oregon Supplement layout, intersection stop line is the marked crosswalk

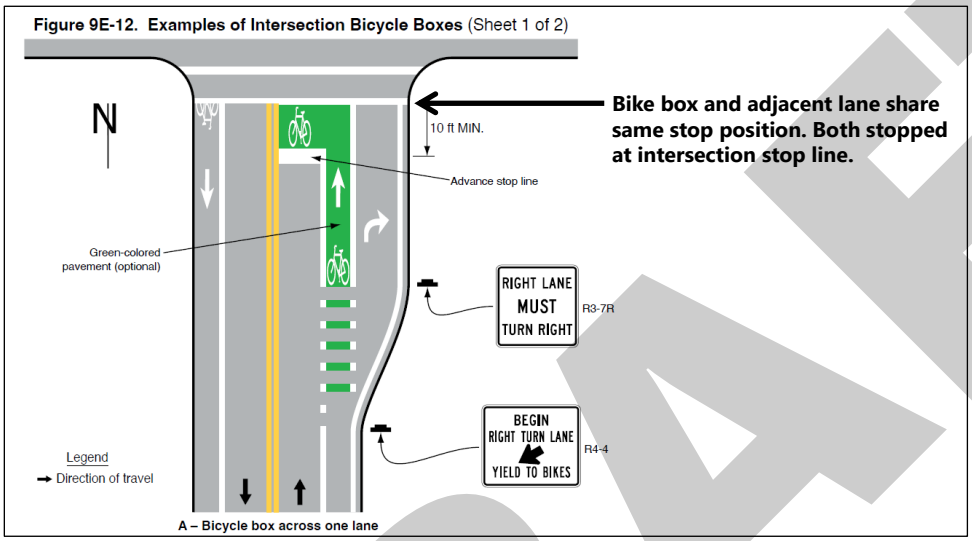
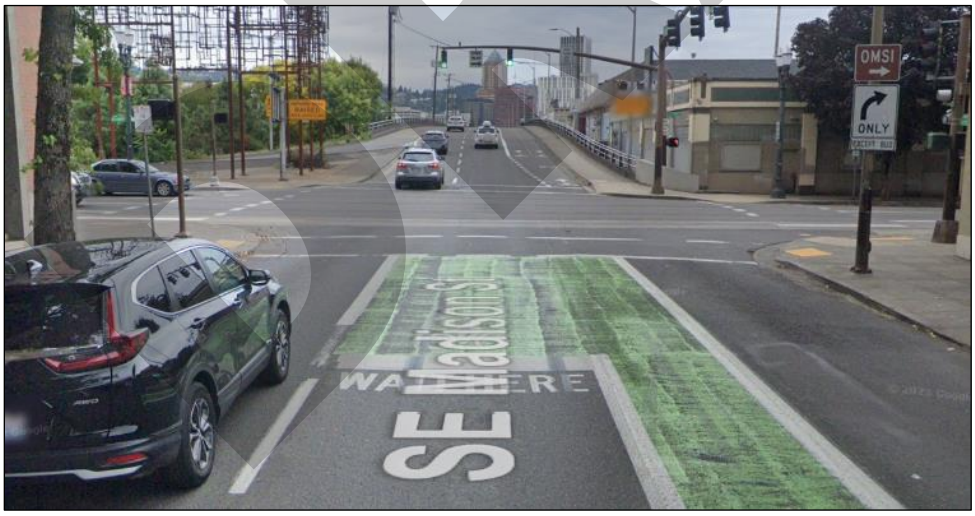


Figure 4: Example of existing bike box layout in Portland, intersection stop line is the marked crosswalk



Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9E. MARKINGS

Section 9E.12 Bicycle Box

Option:

01 A bicycle box (see Figure 9E-12) may be used to increase the visibility of stopped bicycles on the approach to a signalized intersection during the portion of the signal cycle when a red signal indication is being displayed to motor vehicles in the approach lane(s) that is behind the box.

Guidance:

02 *Providing a bicycle box on a signalized intersection approach where a discernible number of conflicts between vehicles turning across through bicycles in a bicycle lane has been demonstrated during the green interval of a signal should be evaluated based on engineering judgment or study.*

03 *Other treatments should be considered for conflicts between turning vehicles and through bicycles such as using leading or exclusive signal phases, or separating turning traffic from through traffic through mandatory turn lanes.*

04 *A bicycle lane should be used on the approach to a bicycle box.*

05 ~~*A bicycle box should not be contiguous with a crosswalk.*~~ *A stop line on the downstream end of the bicycle box should be used to mark the location where bicycles are required to stop.*

Standard:

06 **If used, the distance from the upstream edge of the bicycle box that is nearest to the stop line for motor vehicles to the downstream edge of the bicycle box that is nearest the crosswalk or intersection shall be at least 10 feet. At least one bicycle symbol marking (see Figure 9E-12) shall be used in the bicycle box.**

07 **Where an existing stop line for motor vehicles is relocated upstream to install a new bicycle box, the yellow change and red clearance intervals (see Section 4F.17) shall be recalculated and if necessary, reprogrammed to accommodate the length of the bicycle box.**

08 **Countdown pedestrian signals (see Section 4I.04) for the crosswalk or pedestrian crossing movement that crosses the approach shall accompany bicycle boxes that extend across more than one approach lane for motor vehicles. Countdown pedestrian signals used with bicycle boxes shall display the pedestrian change interval countdown without the need for actuation.**

09 **Turns on red shall be prohibited from the lane where a bicycle box is placed.**

Support:

10 Countdown pedestrian signals can inform bicyclists whether there is adequate time remaining to an adjacent lane before the onset of the green signal phase for that approach.

Guidance:

11 *Countdown pedestrian signals for the crosswalk or pedestrian crossing movement that crosses the approach should accompany single-lane bicycle boxes where it is demonstrated that bicycles arrive at the intersection at or near the end of the red signal indication being displayed to traffic in the approach lane(s) that is behind the box.*

Option:

12 Green-colored pavement may be used in a bicycle box.

Standard:

13 **If used, green-colored pavement shall be used in the full limits of the bicycle box.**

Support:

14 Section 9B.02 contains information on the EXCEPT BICYCLES (R3-7bP) regulatory plaque that can be used below the STOP HERE ON RED (R10-6 or R10-6a) sign (see Section 2B.59) to exempt bicyclists from the requirement of the advance stop line.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9E.13 – Shared Use Paths	October 15, 2024	11910
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

FHWA added a new standard in 9E.13 that where a shared-use path crosses a roadway, crosswalk markings shall be used. However, crosswalk markings are not necessary to create the crossing in all cases – crosswalks can be marked or unmarked at intersections in Oregon under ORS 801.220, bicyclists can cross in crosswalks under ORS 814.410, and pedestrians can cross where a crosswalk does not exist if the pedestrian yields to vehicles under ORS 814.040. This proposes to remove the standard and refer practitioners to other MUTCD sections that cover the application of crosswalk markings and assigning priority at shared-use path crossings. This also proposes to add details for smaller modal markings for shared-use paths.

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- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

FHWA added a new standard in 9E.13 that where a shared-use path crosses a roadway, crosswalk markings shall be used. However, crosswalk markings are not necessary to create the crossing in all cases – crosswalks can be marked or unmarked at intersections in Oregon under ORS 801.220, bicyclists can cross in crosswalks under ORS 814.410, and pedestrians can cross where a crosswalk does not exist if the pedestrian yields to vehicles under ORS 814.040.

Discussion

Shared-Use Path Crossings

Shared-use paths are used in a variety of contexts in Oregon:

- Urban core (e.g. Eastbank Esplanade in downtown Portland),

- Suburban (e.g. Hunsacker Path in Corvallis, Amazon Trail in Eugene, Leo Alder Parkway in Baker City, Bear Creek Greenway in the Rogue Valley), and
- Rural (e.g. Row River Trail in Lane County, Banks-Vernonia State Trail in Washington and Columbia Counties, Historic Columbia River Highway State Trail in Multnomah and Hood River Counties).

These facilities parallel streets and highways and can be on their own alignment. Shared-use paths often use the crosswalks at intersections to cross streets and highways. These intersection crosswalks can be marked or unmarked per ORS 801.220.

For example, the Hunsacker Path in Corvallis crosses at

- Signalized intersections (Figure 1) – The crosswalks at the signalized intersection are marked, consistent with the Oregon Supplement to the MUTCD, which specifies that stop lines or a marked crosswalk shall be used at a traffic signal.
- Stop-controlled intersections (Figure 2) – The shared-use path crossing is not marked because it crosses at the crosswalk for that leg of the intersection, consistent with ORS 801.220.
- Mid-block locations (Figure 3) – The shared-use path crossing is marked because it does not cross at an intersection. Crosswalks only exist in these locations if marked per ORS 801.220.

In these cases, ORS 811.028 and ORS 814.410 require drivers to stop for pedestrians and bicycles crossing in the crosswalk.

In other cases, a marked crosswalk may not be the best treatment to improve safety at a path crossing and guidance in 9B.01 would recommend priority be assigned to highway traffic. For example, there are mid-block path crossings on rural high-speed highways without crosswalk markings (Figure 4). Marking the location as a crosswalk is not necessary to allow pedestrians to cross – ORS 814.040 allows pedestrians to cross outside a crosswalk if they yield to vehicles on the roadway. Appropriately scaled STOP signs control bicycle traffic on the path.

Figure 1: Shared-use Path Crossing at Signalized Intersection

Figure 2: Shared-use Path Crossing at Stop-Controlled Intersection

Figure 3: Shared-use Path Crossing at Mid-block Location – With Crosswalk Markings

Figure 4: Shared-use Path Crossing at Mid-Block Location – No Crosswalk Markings

FHWA added a new standard in 9E.13 that where a shared-use path crosses a roadway, crosswalk markings shall be used. FHWA did not explain this change in the NPA for the 11th Edition, nor in the Summary of Dispositions for the 11th Edition (Item 635), just that the changes were adopted as proposed "to provide additional design options for pavement markings," even though the standard does not create an optional condition.

Figure 5: FHWA Summary of Final Rule Dispositions for MUTCD 11th Edition, Item 635

635	In Section 9E.13 (existing Section 9C.03), retitled, "Shared-Use Paths," FHWA proposes a new Option and Standard, and accompanying figure, to provide additional design options for pavement markings. FHWA also proposes a new Guidance that the crossing areas for bicyclists should use green-colored pavement in order to distinguish between the crosswalk for pedestrians and the crossing area for bicyclists. FHWA proposes this new Guidance in concert with the proposal to add green-colored pavement for bicycle facilities.	The changes are adopted as proposed.

Where a shared-use path crosses at an unsignalized intersection, the crosswalk can be marked or unmarked per ORS 801.220, so the application of crosswalk markings should be consistent with the provisions in Chapter 3C. The new standard in 9E.13 can be changed to improve safety and be consistent with ORS 801.220, ORS 814.040, ORS 814.410, and Section 9B.01, and Chapter 3C by referring practitioners to the provisions in Chapter 3C and Section 9B.01 instead of requiring the application of crosswalk markings.

Shared-Use Path Modal Markings

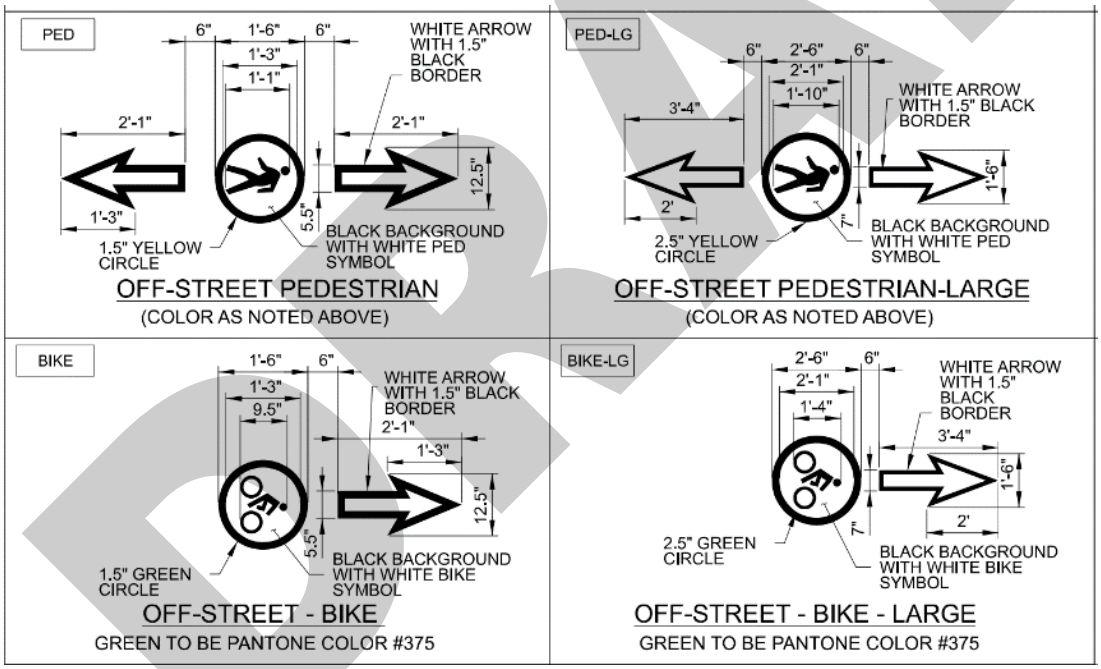
Shared-use paths sometimes separate different types of users, like in MUTCD Figure 9D-5 or in Figure 6. Section 9E.13 and 3B.20 allows this as an option, along with smaller word markings and symbols on shared-use paths. Section 3B.20 also recommends proportionally scaling pavement word, symbol, and arrow markings to fit within the width of the facility upon which they are applied. Section 3A.03 allows black markings to enhance the contrast of markings with light-colored pavements.

The City of Portland has developed modal markings for off-street use consistent with these provisions and other road authorities in Oregon are starting to use them. The uniform application of these markings improves user understanding and simplifies design, installation, and maintenance of the markings.

While a supplement is not necessary to continue using the markings, adding them to the Oregon Supplement would improve consistency in application across the state.

Figure 6: Shared-Use Path Modal Markings on Tilikum Crossing Bridge, Portland

Figure 7: City of Portland Shared-Use Path Modal Marking Details (Standard Drawing P-436)



Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9E. MARKINGS

Section 9E.13 Shared-Use Paths

Option:

01 Where shared-use paths are of sufficient width to designate two minimum width lanes, a solid yellow center line may be used to separate the two directions of travel where passing or traveling to the left of the line is not permitted. A broken yellow center line may be used where passing is permitted (see Figure 9E-13).

Guidance:

02 *Broken lines used on shared-use paths should have a nominal 3-foot segment with a 9-foot gap.*

Option:

03 A solid white line may be used on shared-use paths to separate different types of users in the same direction. The R9-7 sign (see Section 9B.13) may be used to supplement the solid white line.

04 Smaller size pavement word markings and symbols may be used on shared-use paths (see Figure 9E-14(OR)). Where arrows are needed on shared-use paths, half-size layouts of the arrows may be used (see Section 3B.20).

~~Standard:~~

05 ~~**Where a shared-use path crosses a roadway, crosswalk markings shall be used (see Chapter 3C).**~~

Support:

05a Chapter 3C has information about crosswalk markings. Section 9B.01 has information about assigning priority where shared-use paths cross roadways. Crosswalks can be marked or unmarked at intersections in Oregon under ORS 801.220. Bicyclists can cross in crosswalks under ORS 814.410. Pedestrians can cross where a crosswalk does not exist if the pedestrian yields to vehicles under ORS 814.040.

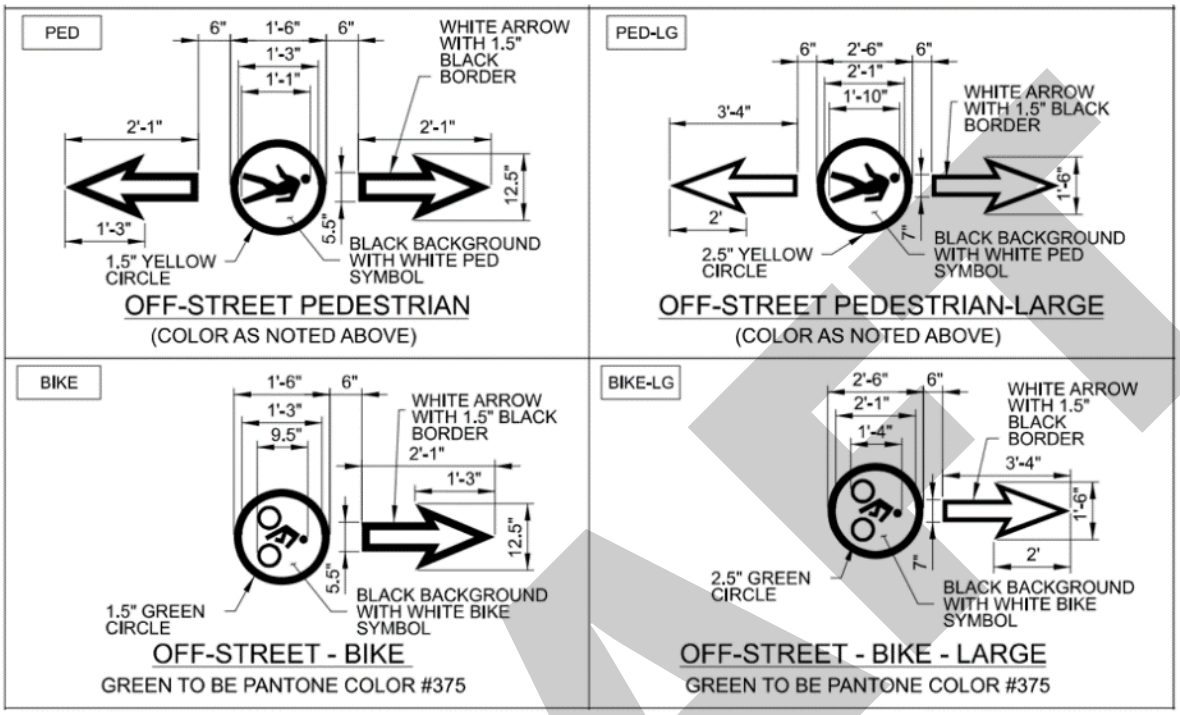
Option:

06 Where pedestrian and bicycle movements on a shared-use path are separated on the approach to a roadway crossing, parallel bicycle and pedestrian crossing markings may be used as shown in Figure 9E-14.

Guidance:

07 *If parallel bicycle and pedestrian crossing markings are used where a shared-use path crosses a roadway, crossing areas for bicycles should use green-colored pavement if the shared-use path crossing has a high volume of either mode.*

Figure 9E-14(OR). Optional Pavement Markings for a Shared-Use Path with Mode Separation



Editor's note: Figure 9E-14(OR) will be updated to show color consistent with other figures in the MUTCD, but design and dimensions will be incorporated in the figure as shown. This placeholder is a screenshot from PBOT's Standard Drawing P-436.

OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9E.15 - Bicycle Detector Symbol	October 15, 2024	11911
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

Road users had poor understanding of the optional bicycle detector marking in the 2009 MUTCD. The 11th Edition added text to improve understanding, but it makes the marking much larger than it needs to be for the intended user. A smaller alternate marking has been empirically tested, shown to improve user understanding and placement, and was recommended by the NCUTCD for the 11th Edition. This proposes to add an alternate bicycle detector symbol to Figure 9E-16 for optional use.

This is a proposal for content in the Oregon Supplement to the MUTCD 11th Edition. This proposal is not official Oregon Supplement content. ODOT might edit final proposed language to fit with the scope and style of the Oregon Supplement to the MUTCD. The Oregon Transportation Commission adopts the Oregon Supplement through an update to Oregon Administrative Rule 734-020-0005.

The Oregon Supplement to the MUTCD must be in substantial conformance with the national MUTCD (23 CFR 655.603(b)(1)). The FHWA Oregon Division Administrator decides whether the Oregon Supplement is in substantial conformance with the national MUTCD. This means the Oregon Supplement:

- Must conform to the Standard statements in the national MUTCD. FHWA may grant an exception because of requirements of a specific State law, provided information available and documentation provided by the state shows the non-conformance does not create a safety concern.
- Must conform to Guidance statements in the national MUTCD. FHWA may grant an exception if the proposal satisfactorily explains the reason for not conforming based on engineering judgement, specific conflicting State law, or a documented engineering study.
- Cannot have Standard, Guidance, or Option statements that contravene or negate Standard or Guidance statements in the national MUTCD. This means the Oregon Supplement cannot change a national MUTCD "shall" to a "should" or a "should" to a "may."
- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

One of the key links in a bicycle network is signalized crossings. Signal equipment at these intersections in Oregon detect cyclists by a variety of methods, such as induction loops, video, and radar. Research done in Oregon has shown that cyclists are unfamiliar with where to place their bicycle to be detected on an approach with the MUTCD's bicycle detector symbol and supplemental sign, and that the text "WAIT HERE FOR GREEN" can be effective without being 24 inches tall.

Discussion

Section 9E.15 allows the optional use of a bicycle detector symbol to show the best position for a bicycle to actuate a traffic signal, and an optional supplemental R10-22 sign that explains how to use the marking.

However, road users have a poor understanding of the marking. Field observations in Portland during a 2013 Portland State University research (*1*) project showed only 23.5% of cyclists waited on the bicycle detector symbol, and that only improved to 34.8% when the marking was paired with the sign. When surveyed, 45.4% of cyclists correctly named what the marking was meant for.

To improve road user understanding, the City of Columbia, Missouri, through consultant Alta Planning + Design, tested alternative markings through FHWA Request to Experiment "9(09)-66E Bicycle Detector Pavement Marking Alternatives – Columbia, MO" (*2*). Results from the experiment included:

1. Participants in the University of Missouri simulator test preferred the proposed alternative by 96% to 19% over the 2009 MUTCD symbol.
2. During field testing in Columbia, Missouri, 253 individuals responded to a survey after the proposed markings were installed at four intersections. Only 12% of responders correctly named the purpose of the 2009 MUTCD symbol, while 87% named the proposed symbol as "bikes stop here for green light."
3. Another study in Portland, Oregon confirmed the preference for the proposed symbol over the 2009 MUTCD symbol. Five symbol configurations, including the 2009 MUTCD symbol, were evaluated via field testing and surveys. Participants raked the symbols in preference for how well the symbol communicated its purpose. The proposed symbol ranked first by a wide margin. Portland also tested the 2009 MUTCD symbol with added text "WAIT ON LINES FOR GREEN," which improved comprehension.

The National Committee on Uniform Traffic Control Devices recommended FHWA include the proposed alternate marking from the Columbia, Missouri experiment and a version of the 2009 MUTCD symbol with added text (*3*).

For the 11th Edition, FHWA decided to add an option to add "appropriately-sized WAIT HERE FOR GREEN word markings" below the symbol to "help bicyclists know to stop on the bicycle detector symbol" (MUTCD 11th Edition NPA Item 637). Figure 9E-16 shows the symbol with 24-inch-tall WAIT HERE FOR GREEN markings. FHWA did not include the proposed marking.

While the 11th Edition option for added text should improve road user understanding, it makes the marking much larger than it needs to be for the intended user, and still likely will not improve understanding like the proposed marking will, based on survey results in the Columbia, Missouri experiment. The proposed marking can be made as a preformed thermoplastic sheet with black background, improving durability of the marking (Figure 2 and Figure 3). Compared to the 2009 Edition marking, the added cost for materials of this optional device is approximately $100. The added time for installation is nominal.

Figure 1: Bicycle Detector Marking Types

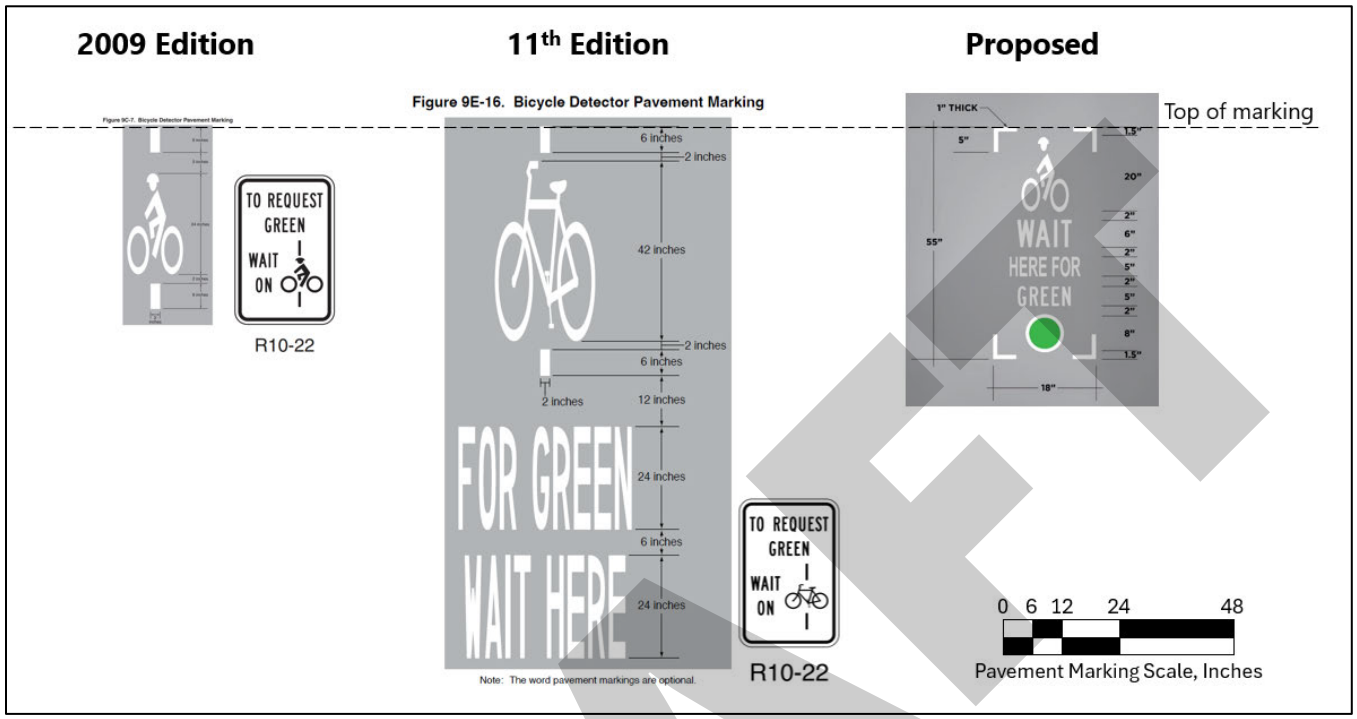


Table 1: Bicycle Detector Marking Dimensions

Dimensions	2009 Edition	11th Edition with text	Proposed
Length	43 inches (3.58 feet)*	124 inches (10.33 feet)	55 inches (4.58 feet)
Width	15 inches* (1.25 feet)	42 inches* (3.50 feet)	18 inches (1.50 feet)

Figure 2: Proposed Detector Marking at Loop Detector

Figure 3: Proposed Detector Marking in Bicycle Box

Figure 4: Bicyclist Using Proposed Detector Marking in Bicycle Box

References

1. Bussey, S. W. The Effect of the Bicycle Detector Symbol and R10-22 Sign on Cyclists Queuing Position at Signalized Intersections. Portland State University, Portland, Oregon, 2013. DOI: https://doi.org/10.15760/honors.371

2. Wojciechowski, P. Columbia, MO Bicycle Pavement Marking Detection Symbol RTE Findings. Columbia, Missouri, 2017. https://www.como.gov/wp-content/uploads/2020/10/Final-Report-FHWA-909-66E-Bicycle-Detection-Columbia-MO-RTE-09-20-2017-1.pdf.

3. National Committee on Uniform Traffic Control Devices. *18-BIK-06 Bicycle Detector Symbol Marking*. Sun City West, Arizona, 2018. https://ncutcd.org/wp-content/uploads/meetings/2019A/AttachNo17.18B-BIK-06.BikeDetectorMarking.Approved.pdf.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9E. MARKINGS

Section 9E.15 Bicycle Detector Symbol

Option:

01 The bicycle detector symbol (see Figure 9E-16(OR)) may be placed on the pavement indicating the optimum position for a bicycle to actuate the signal.

02 Appropriately-sized WAIT HERE FOR GREEN word markings may be placed on the pavement as shown in Figure 9E-16(OR) ~~immediately below the bicycle detector symbol~~.

03 A R10-22 sign (see Section 9B.20) may be installed to supplement the bicycle detector symbol pavement marking.

Support:

04 The "Standard Highway Signs" publication (see Section 1A.05) contains details on the bicycle detector symbol.

05 Section 3H.06 contains information on incorporating green-colored pavement as a background enhancement to the bicycle detector symbol.

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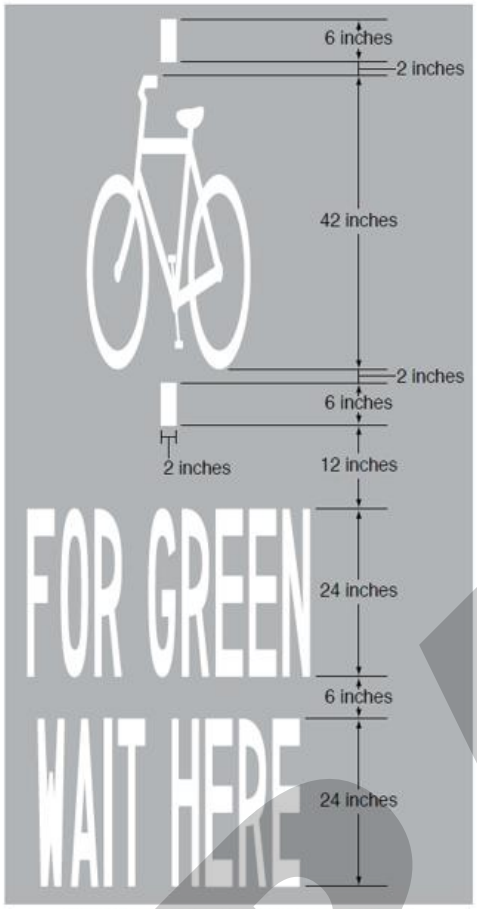
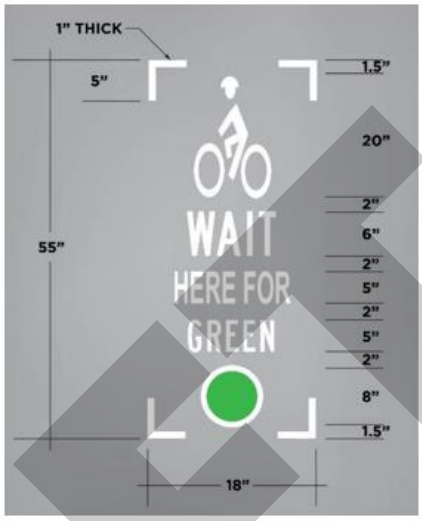
Figure 9E-16(OR). Bicycle Detector Pavement Marking



Note: The word pavement markings are optional.

(A)



(B)

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OREGON TRAFFIC CONTROL DEVICES COMMITTEE
OREGON SUPPLEMENT TO THE MUTCD 11th EDITION
SUPPLEMENT PROPOSAL

MUTCD 11th Ed. Section(s) Affected	Last Revised	Proposal No.
9E.17 – Raised Devices	October 15, 2024	11912
Supplement Team	**Status**	
9-Bicycles	OTCDC Review – 1st round	

Summary (2-3 sentences)

FHWA reported a known error in 9E.17 Paragraph 08 that changes the type of bicycle facility described in that guidance paragraph. FHWA will not be able to change this until a future edition of the MUTCD. This proposes to correct the known error in the Supplement to ensure proper application of the guidance.

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- Can be more prescriptive than the national MUTCD. This means the Oregon Supplement can make a national MUTCD "should" condition a "shall" condition in Oregon, can allow only one of several national MUTCD optional designs for a particular device, or can prohibit the use of a particular optional device in Oregon.

Problem

FHWA reported a known error in 9E.17 Paragraph 08 that changes the type of bicycle facility described in that guidance paragraph. FHWA will not be able to change this until a future edition of the MUTCD.

Discussion

9E.17 Paragraph 08 gives guidance about using raised channelizing devices in buffer-separated bicycle lanes. FHWA reported this as a known error, saying it should be changed to separated bicycle lanes. This is likely because buffer-separated bicycle lanes use markings, not vertical elements, to separate the bike lane from motor vehicle traffic. Channelizing devices are vertical elements, so using channelizing devices in the buffer would create a separated bicycle lane.

The Supplement should correct this error because it changes the type of bicycle facility described in the paragraph and may lead to misapplication of the guidance in practice. Currently, the Supplement does not need to correct other known errors in Part 9 because the other known errors are not significant enough to result in misapplication of the MUTCD content.

Proposed Supplement Content

This marks material proposed for removal in the Supplement with ~~red strikethrough~~ and addition with blue underline. This shows the entire section where the change is proposed unless noted otherwise.

CHAPTER 9E. MARKINGS

Section 9E.17 Raised Devices

Support:

01 Chapter 3I contains information on using channelizing devices to emphasize pavement marking patterns associated with certain bicycle facilities. A common application is the use of flexible raised devices to create separated bicycle lanes (see Section 9E.07).

02 Using inflexible raised devices immediately adjacent to the travel path of a bicyclist without a buffer creates a collision potential for bicyclists.

Option:

03 In accordance with Chapter 3I, channelizing devices may be used to emphasize a pavement marking pattern that establishes a bicycle lane or other bicycle facility provided that the installation of channelizing devices does not prevent motor vehicles from turning when the turn requires the motor vehicle to merge with the bicycle lane or facility as required by law or ordinance.

Guidance:

04 *If used, channelizing devices for bicycle facilities should be tubular markers (see Section 3I.02).*

05 *The selection of a raised device for use with bicycle facilities should consider the collision potential of both the post and the base since the base might still be present in the event the post is struck and missing.*

Support:

06 Measures to reduce the likelihood of a road user striking a channelizing device include marking a buffer space, improving lighting, improving retroreflectivity, or the periodic addition of taller vertical elements within runs of shorter elements.

Standard:

07 **Channelizing devices that are used to emphasize the pavement marking patterns of bicycle facilities shall not incorporate the color green into either the device or its retroreflective element to supplement the presence of green-colored pavement.**

Guidance:

08 *If used in ~~buffer~~ separated bicycle lanes, channelizing devices should be placed in the buffer space and at least 1 foot from the longitudinal bicycle lane pavement marking.*