

11th Edition Release Overview and ITE Perspective: Highlights and the Road to Getting There



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Disclaimer

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The views and opinions expressed herein are the presenters' perspective and incorporates the feedback from ITE's technical councils and committees; and does not necessarily reflect those of ITE as an organization. In addition, these contents do not necessarily reflect the official policy, standards, or recommendations of ITE or its International Board of Direction.



Agenda

- Development Process of the 11th Edition
- Where to find MUTCD materials and using the MUTCD website
- Highlights of Revisions to the MUTCD
- ITE Perspective
- Future Updates and What's Next
- ITE's MUTCD Action Plan

Purpose of the MUTCD

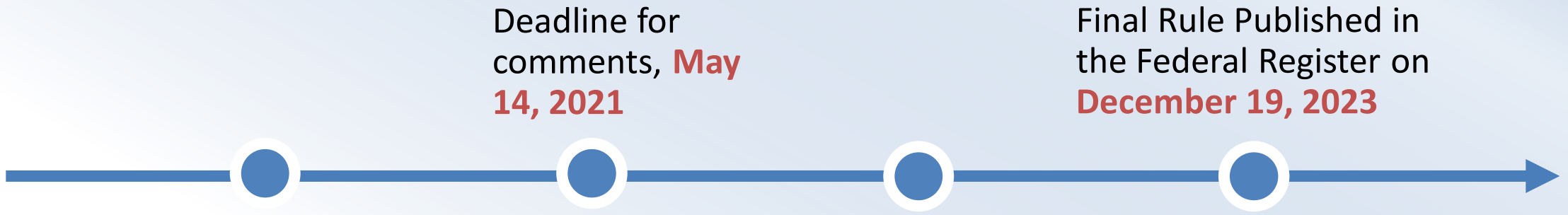
Section 1A.01 Purpose of the MUTCD

Support:

- 01 The purpose of the MUTCD is to establish uniform national criteria for the use of traffic control devices that meet the needs and expectancy of road users on all streets, highways, pedestrian and bicycle facilities, and site roadways open to public travel.
- 02 This purpose is achieved through the following objectives:
 - A. Promote safety, inclusion, and mobility for all users of the road network;
 - B. Promote efficiency through creating national uniformity in the meaning and appearance of traffic control devices;
 - C. Promote national consistency in the use, installation, and operation of traffic control devices; and
 - D. Provide basic principles for traffic engineers to use in making decisions regarding the use, installation, operation, maintenance, and removal of traffic control devices.

Source: : MUTCD, 11th Edition

Development of the 11th Edition MUTCD

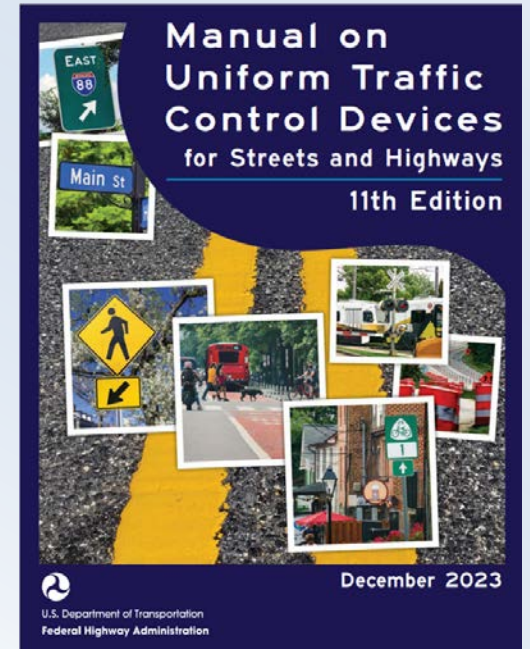


Deadline for comments, **May 14, 2021**

Final Rule Published in the Federal Register on **December 19, 2023**

NPA published in the Federal Register on **December 14, 2020**

Received 17,000 submissions to docket with over 100,000 comments



Where can I find information?

- MUTCD Website (www.mutcd.fhwa.dot.gov)
 - 11th Edition of the MUTCD
 - Supplementary Summary of Dispositions for Final Rule Changes
 - Text Redline with 11th Edition Changes
- Regulation Documents (www.regulations.gov)
 - Rule (preamble, key topic discussion)
 - Regulatory Impact Assessment (economic analysis)
 - Supporting documents posted for the NPA and Final Rule

MUTCD 11th Edition – Website Materials

11th Edition Materials on the MUTCD website

- <https://mutcd.fhwa.dot.gov/>
- MUTCD 11th Edition
- Supporting Documents
- Regulations.gov



The screenshot shows the homepage of the MUTCD website. At the top, there is a navigation bar with the U.S. Department of Transportation Federal Highway Administration logo on the left, and "FHWA Home | Feedback" on the right. Below the navigation bar is a search bar labeled "Search MUTCD Site:" with a "Go" button. The main heading is "Manual on Uniform Traffic Control Devices (MUTCD)" with a graphic of three arrows (red, green, blue) pointing in different directions. Below the heading is a section titled "Manual on Uniform Traffic Control Devices for Streets and Highways". The left sidebar contains a "Connect with MUTCD" section with an "eSubscribe" button, and a "Home Page" section with a list of links: "MUTCD Home", "Site Map", "Knowledge", "Overview", "Evolution of the MUTCD", "Who Uses the MUTCD", "MUTCD Current Edition", "Color Specifications", "Amendment Process", "Experimentations", "Standard Highway Signs (SHS) Publication", "FAQs", "Resources", "MUTCD Team", "23 CFR 655", "Official Rulings", "Interim Approvals", "Interpretations Issued by FHWA", "State MUTCDs & TCD Info", "Related Links", "Federal Register", "Policy Statements", "Previous Editions of the MUTCD", and "Publications". The main content area has a "What's New" section with a "MUTCD Webinars" sub-section. The webinar section contains text about two webinars on the MUTCD 11th Edition, effective January 18, 2024, and provides a link to the MUTCD News Feed. Below this is a section titled "Current Edition of the Manual on Uniform Traffic Control Devices for Streets and Highways". This section contains text about the MUTCD's purpose and history, and a link to the Federal Register notice for the 11th Edition. At the bottom of the page, there is a footer with the FHWA logo, navigation links for "US_DOT Home", "FHWA Home", "MUTCD Home", "Operations Home", and "Privacy Policy", and the text "United States Department of Transportation - Federal Highway Administration". The date "Last modified: May 14, 2024" is also present in the footer.

Navigating the MUTCD Website

- Standard Highway Signs Publication
- Frequently Asked Questions
- Official Rulings
- MUTCD Team

National Committee on Uniform Traffic Control Devices (NCUTCD) www.ncutcd.org

- Volunteer organization focusing on development of traffic control device standards, guidance, and practices
- Meets in January and June (3 days each)
- Sponsoring organization members comprise the voting Council
- Even representation between government agency officials and private sector
- Eight Technical Committees and several other task forces
- Open to visitors and those wishing to become members



Source: NCUTCD

Revisions to Part 1 – General

Compliance Dates

- Specific dates when provisions are required to be implemented
 - 5 Years (January 18, 2029)
 - Weight Limit Signs
 - Low Clearance Advance Sign
 - Low Clearance Overhead Sign
 - Low Ground Clearance and/or Vehicle Exclusion Signs and detour signs in advance of high-profile grade crossings



R12-4



W12-2



W12-2b



Compliance Dates

Specific dates when provisions are required to be implemented

- 10 Years (January 18, 2034)
 - Highway traffic signals at/near grade crossings
- September 6, 2026 (2009 MUTCD, Revision 3)
 - Maintaining Minimum Retroreflectivity (Pavement Markings)

Experimentation

- New Standard requires official approval to experiment with a traffic control device that does not comply with the MUTCD
- New Option to streamline process for requesting official experimentation – *submit an abstract*
- Retains existing MUTCD prohibition on patented or proprietary traffic control devices, including under experimental consideration
- Previous Experimentation Examples
 - Green-colored pavement
 - Rectangular Rapid Flashing Beacons (RRFBs)

Future Webinar

Revisions to Part 2 – Signs

New Signs

298 New Signs and Plaques

- Regulatory
- Warning
- Bicycle Facilities
- Alternative Fuels
- Distance and Travel Times



R3-19b



W10-21



R10-40



E7-5



D9-11g
Biofuel (BIO)

Source : MUTCD, 11th Edition (all)

Speed Limits

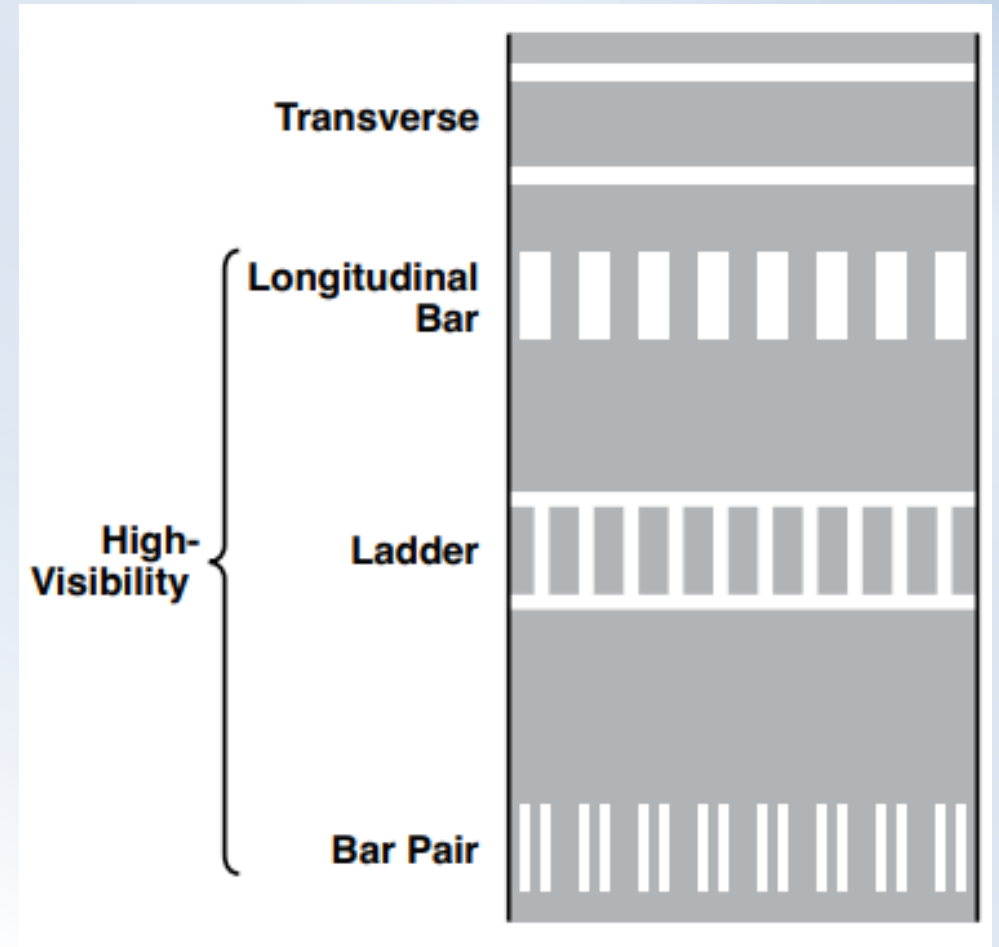
- Adds requirement to consider roadway context in engineering study for setting speed limits
- Recommends several factors to be considered in the engineering study for establishing speed
- Removes emphasis on 85th-percentile speed - recommends also considering pace and median speeds
- Adds Guidance to clarify that 85th-percentile speed should not be the sole consideration in setting speed limits on urban and suburban arterials or rural main streets



Revisions to Part 3 – Markings

Marked Crosswalks

- Should be installed at locations controlled by traffic control signals
- Uncontrolled crosswalk - revised criteria for engineering study



Source : MUTCD, 11th Edition

Aesthetic Surface Treatments

- Separate from colored pavement
- Can not mimic, obscure, or otherwise adversely impact the effectiveness of other traffic control devices
- Agencies have flexibility to use aesthetic treatment



Source: Kathy Falk

Colored Pavement

New Standard limiting the use of colored pavement as a traffic control device only to where it supplements other markings

- Yellow
- White
- Green (bicycle facilities)
- Red (public transit systems)
- Purple (electronic toll collection lanes)

Colored Pavement - Green

- Bicycle lanes
- Extension of bicycle lanes
- Two-stage turn box
- Bicycle boxes
- Background for bicycle detector symbols



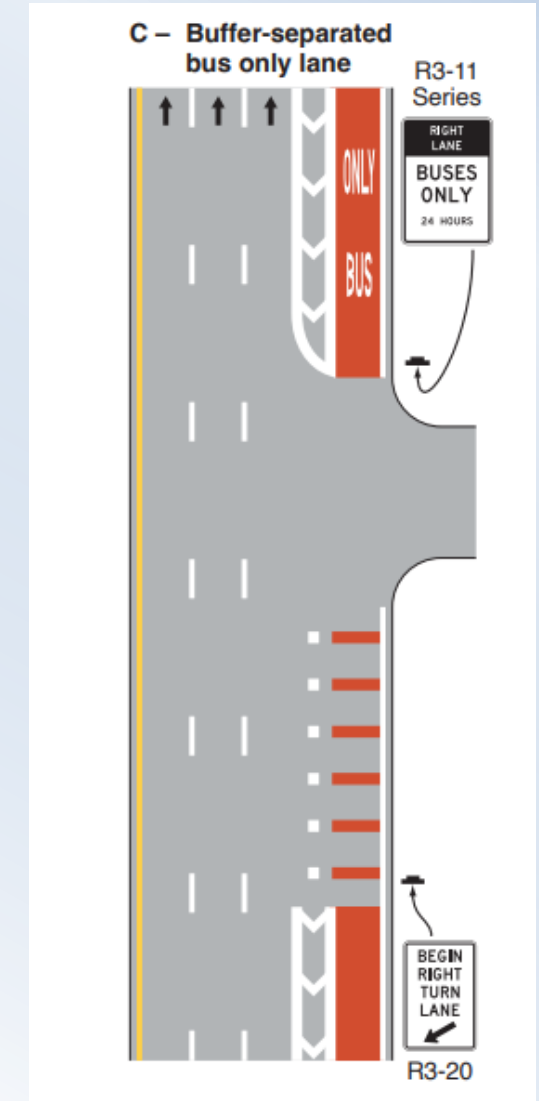
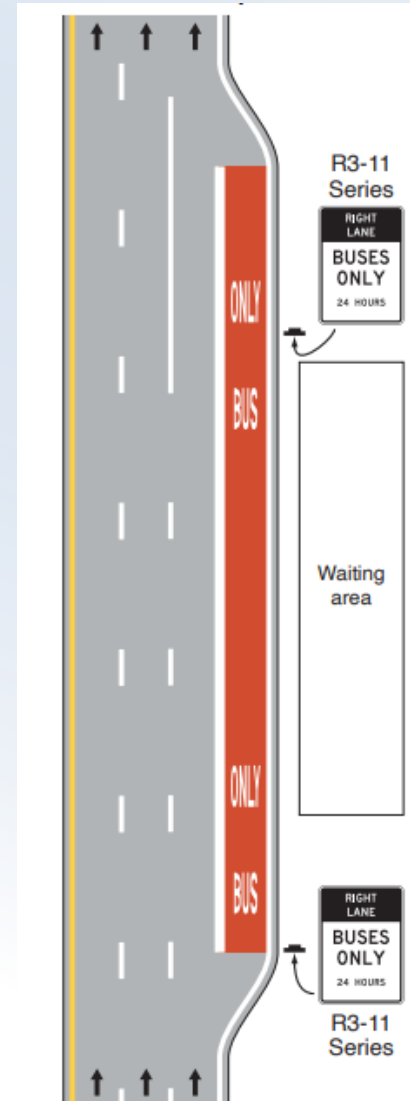
Source: : MUTCD, 11th Edition



Source: Geoff Giffin

Red-Colored Pavement

- Exclusive for use on public transit facilities and where general-purpose traffic is not allowed



Revisions to Part 4 – Highway Traffic Signals

Warrants – Standards Changed to Guidance

Reinforce that other factors, beyond the warrants, be considered as part of the engineering study to justify installation of traffic control signals

- Agencies have more flexibility to consider other relevant factors in addition to reliance on the numerical warrants analysis alone

Warrant 7: Crash Warrant

Future Webinar

- Adopted Interim Approval-19

Table 4C-2. Minimum Number of Reported Crashes in a One-Year Period

Number of through lanes on each approach		Total of angle and pedestrian crashes (all severities) ^a		Total of fatal-and-injury angle and pedestrian crashes ^a	
Major Street	Minor Street	Four Legs	Three Legs	Four Legs	Three Legs
2 or more	1	6	5	4	4
2 or more	2 or more	6	5	4	4
1	2 or more	6	5	4	4

Table 4C-3. Minimum Number of Reported Crashes in a Three-Year Period

Number of through lanes on each approach		Total of angle and pedestrian crashes (all severities) ^a		Total of fatal-and-injury angle and pedestrian crashes ^a	
Major Street	Minor Street	Four Legs	Three Legs	Four Legs	Three Legs
1	1	6	5	4	4
2 or more	1	6	5	4	4
2 or more	2 or more	6	5	4	4
1	2 or more	6	5	4	4

^a Angle and on

Source: : MUTCD, 11th Edition

Warrants for Pedestrian Hybrid Beacons (PHBs)

- Option to reduce thresholds by up to 50% where 15th-percentile crossing speed of pedestrians is less than 3.5 feet per second



Source: Andy Smith

Pedestrian Signals

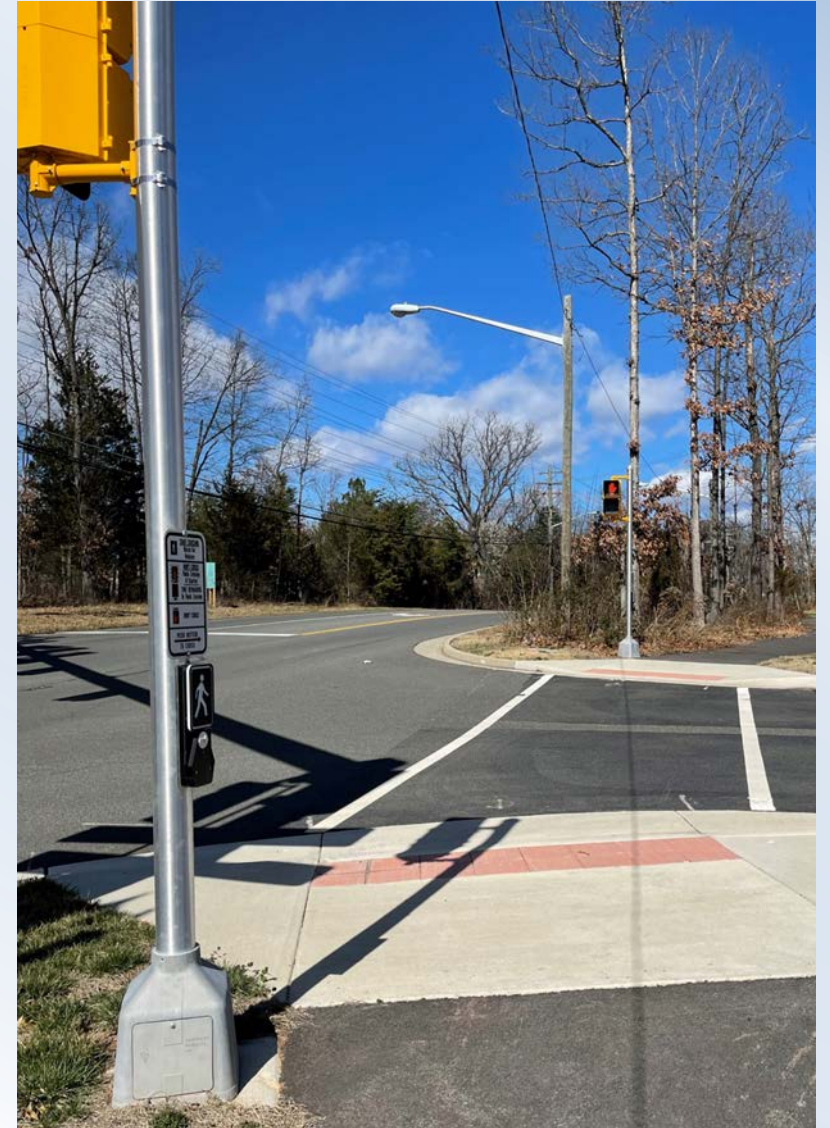
- *Recommended* at all traffic signals
- Previously decision was based on engineering judgment



Source: Kathy Falk

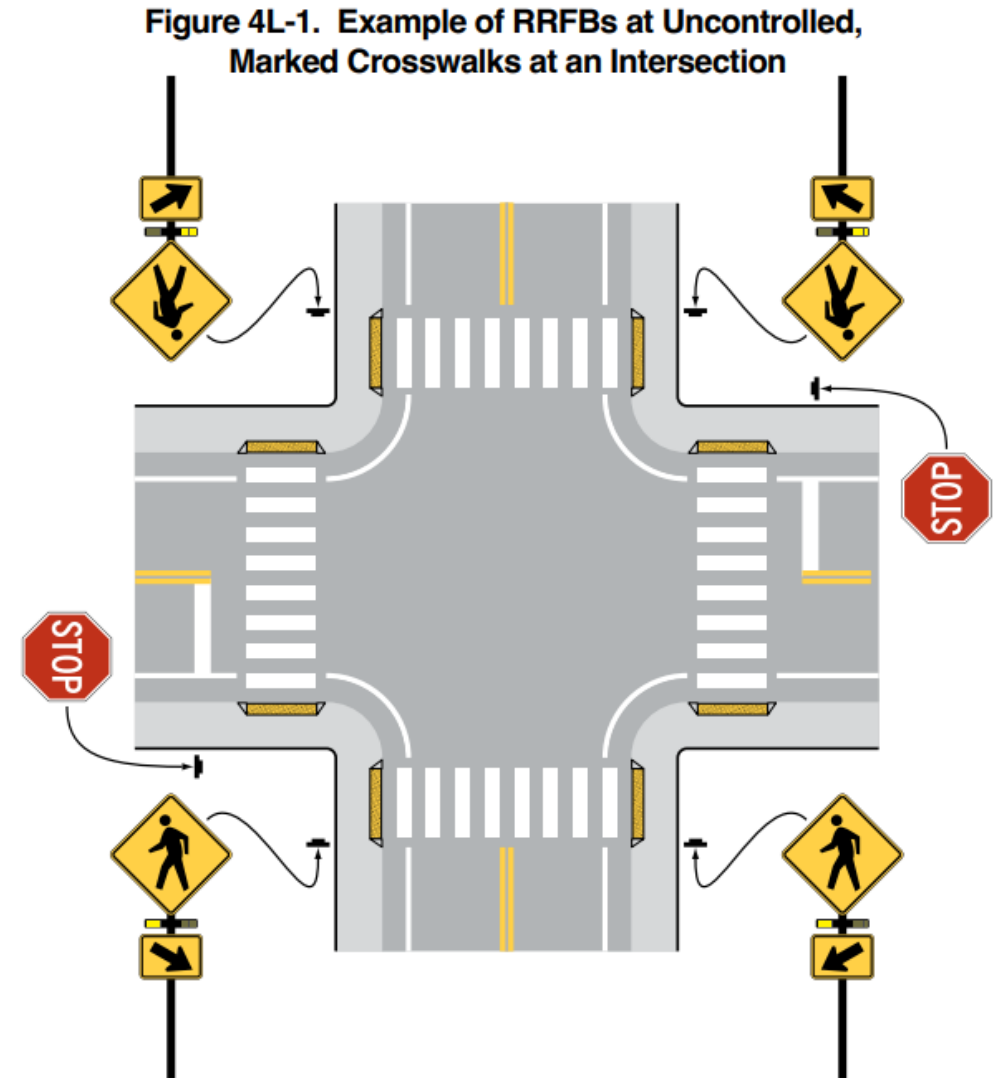
Accessibility

- Recommend, rather than provide an option, accessible pedestrian signals (APS) at all pedestrian signals and pedestrian hybrid beacons (PHB)
 - New Chapter 4K on APS
- Recommend audible information device (AID) at rectangular rapid flashing beacons, pedestrian-actuated warning beacon, and in-roadway warning lights at crosswalks



Rectangular Rapid Flashing Beacons

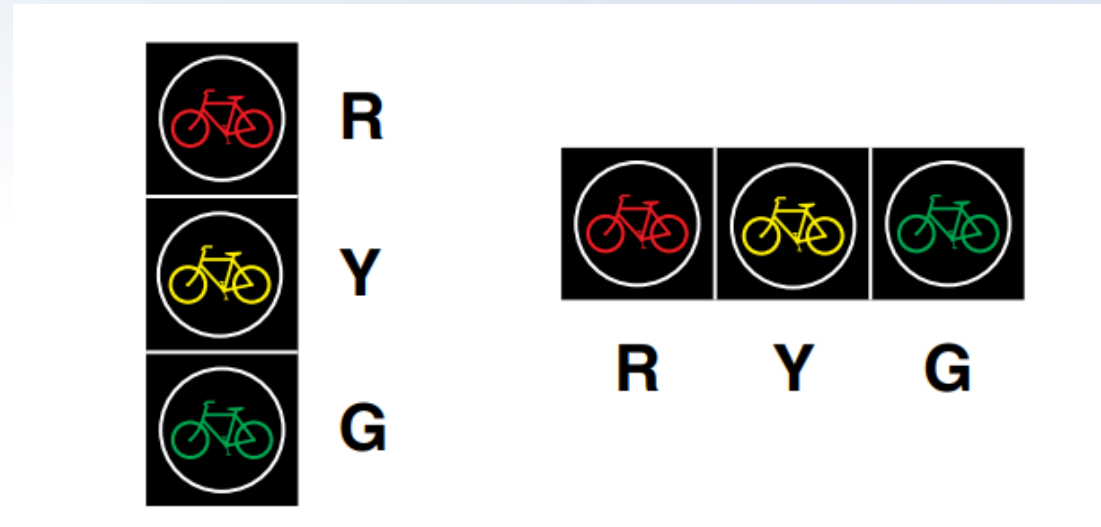
New Chapter 4L for RRFBs



Source : MUTCD, 11th Edition

Bicycle Signal Faces

- New Chapter 4H based on Interim Approval 16 with revisions
- Prohibited at PHBs



Future Webinar

**New Part 5 –
Traffic Control Device
Considerations for Automated Vehicles (AVs)**

Content

- Provisions that are exclusively for those agencies seeking to better accommodate driving automation systems to support AVs
 - Help prepare agencies for AV technologies
 - Support safe integration of AVs
- Two Chapters
 - Chapter 5A – Scope and Purpose
 - Chapter 5B – Provisions for Traffic Control Devices

Former Part 5 material related to low-volume roads is now dispersed throughout the Manual

Revisions to Part 6 – Temporary Traffic Control

General Changes

- Reorganization throughout with new chapters and sections
- Consolidated information and deleted repetitive material
- Several Standards changed to Guidance for flexibility
- Strengthened provisions for communicating with pedestrians with vision disabilities through construction areas and use of accessible sidewalk detours

Revisions to Part 8 – Railroads/Light Rail Transit

Diagnostic Team

- New Standards, Guidance, and Options to be consistent with 49 CFR part 222 (a Federal Railroad Administration regulation)
- Defines diagnostic team and roles and responsibilities related to Traffic Control Devices

Future Webinar

Revisions to Part 9 – Bicycle Facilities

Bicycle Facilities

- Establishes Separated Bicycle Lanes and Counter-Flow Bicycle Lanes as Facility Types
- Provides additional mixing zone and conflict area markings
- Provides additional intersection treatments for bicycles
- Signs | Added regulatory signs with new facility types and lane control



R4-19



R9-20



R9-24



R9-24a



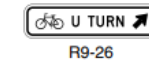
R9-25



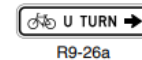
R9-25a



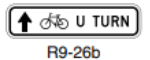
R9-25b



R9-26



R9-26a



R9-26b



R9-27



R9-27a



R9-27b



R10-12b



R10-4



R10-22



R10-24



R10-25



R10-26



R10-40



R10-40a



R10-41



R10-41a



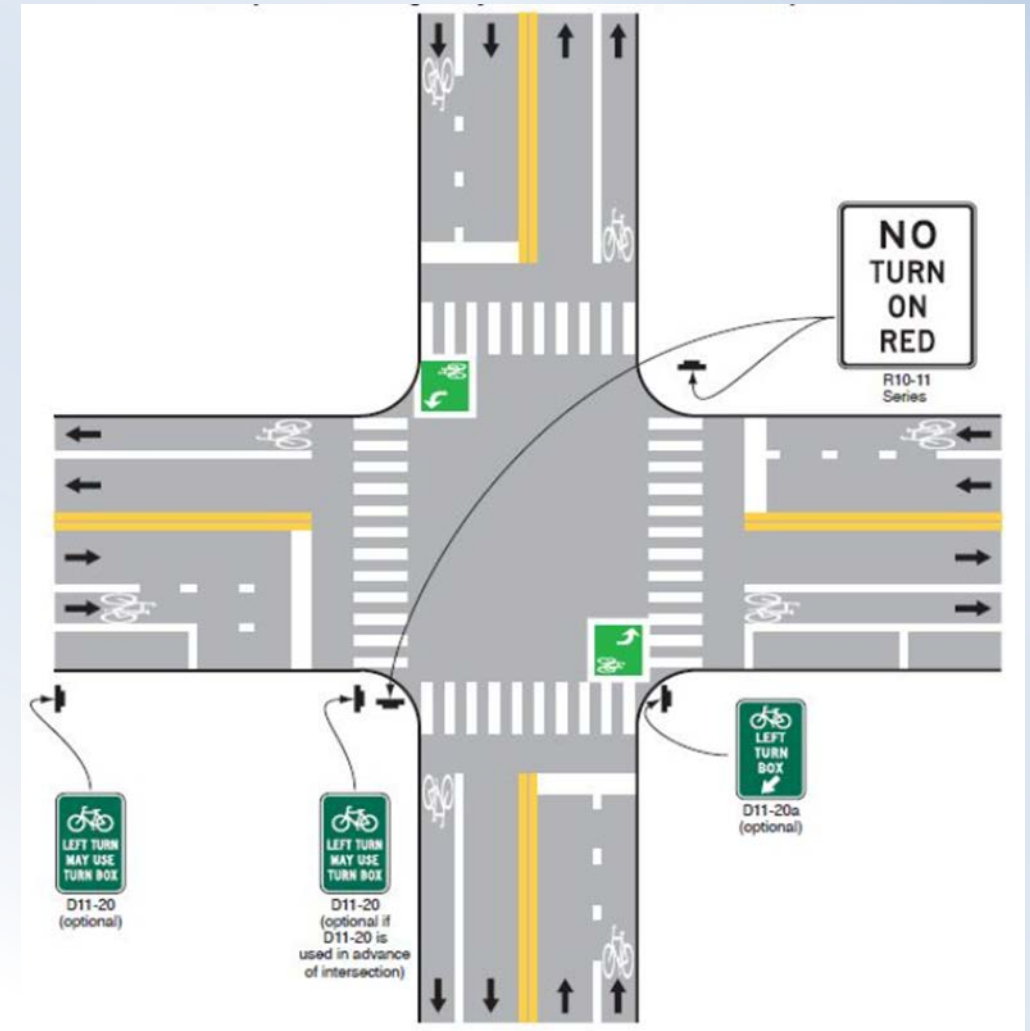
R10-41b



R10-41c

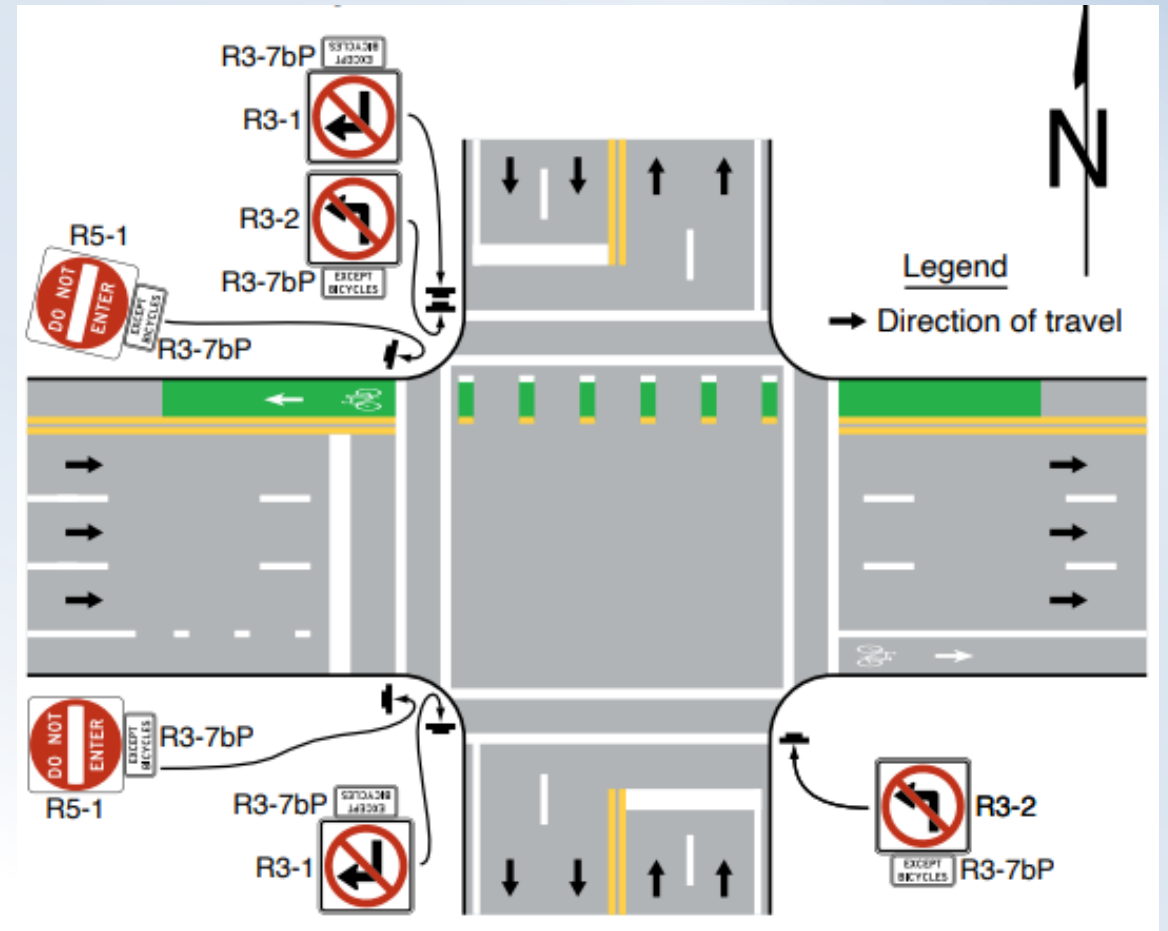
Two-Stage Bicycle Turn Box

- New Option
- Requires:
 - Pavement markings to designate queueing area
 - Bicycle symbol and turn arrow markings indicating appropriate direction to turn
 - Prohibition of turns on red (if turning vehicles conflict with turn-box)



Counter-Flow Bicycle Lanes

New Guidance to determine when to locate a counter-flow bike lane adjacent to the general-purpose lane



Source : MUTCD, 11th Edition

ITE Perspective

Comments on NPA

- ITE offered comments to the Notice of Proposed Amendment Docket May 5, 2021.
- Comment letter was drawn from more than 300 issues of concern.
- Focused on three main themes with issues of the greatest importance and impact that the MUTCD need to:
 - Support the needs of all users
 - Be grounded in current practice while supporting flexibility and innovation
 - Be a forward-looking document
- Within these themes, ITE provided 27 comments on specific issues.

Perspective

ITE's Councils and Committees along with ITE technical staff reviewed our prior comments against the MUTCD 11th Edition and associated release documentation.

We believe the MUTCD 11th Edition:

- Demonstrates a context-sensitive perspective woven throughout
- Shares a commitment to meeting the diverse needs of all users of the public right of way.
- Aligns with the principles of the Safe System Approach
- Supports FHWA's inclusion of traffic control devices previously under provisional interim approval.

Issue	Status
The MUTCD needs to support the needs of all users	
Target Road Users (1A.03)	+
Speed Limit Setting (2B.21)	✓
Pedestrian Facilities (5 items)	✓ ⊙ × × ✓
Bicycle Facilities (5 items)	+ ✓ ⊙ × ×
Bicycle Signals (4 items)	× × × ✓
The MUTCD needs to be grounded in current practice while supporting flexibility and innovation	
Overall Number of Standards Statements	+
Use of the MUTCD (1A.04)	×
Experimentation (1B.06)	⊙
Placement and Operation of Traffic Control Devices (1D.09)	⊙
Application of Changeable Message Signs (2L.02)	+
Normal Width Lines (3A.04)	✓
The MUTCD needs to be a forward looking document	
Use of Warrants, generally	+
Automated Vehicles (Part 5)	✓
Yellow Change and Red Clearance Intervals (4F.17)	+
Separate Part for Pedestrian Facilities	⊙
Rethinking MUTCD	+

KEY:
✓ Substantially Addressed ⊙ Mixed–Not as Desired
+ Mixed–Somewhat Yes × Not Addressed



Target Road Users (1A.03)

Support the Needs of All Users

Comment(s): ...as the transportation profession begins to adopt and move more towards the **Safe System Approach** to ensure the safety of all users, it is important to consider the fact that road users are human, they make mistakes, and the design of the system, including traffic control devices, should account for the mistakes that will inevitably be made to the maximum extent possible...should be reflected...in this Support statement.

Also, the distinctions between target road users proposed in the NPA seems unclear and incomplete. If retained, we believe this language would be much clearer if these distinctions were removed and replaced by a simpler statement regarding assumptions that traffic control devices are designed for reasonable and prudent, alert and attentive road users who are acting lawfully.

Perspective: 11th Edition text is an improvement on the prior edition and that proposed in the NPA, and revised to show more consideration of vulnerable users as a target road user.

Does Not Address:

- Safe System Approach concept of human fallibility in design of TCDs
- Assumptions for road users

Speed Limit Setting (2B.21)

Support the Needs of All Users

Comment(s): ITE... supports proposals... that recommend removal of all speed limit setting guidance from the MUTCD and alternatively direct users to other practitioner resources.

...if choice is to retain the proposed speed limit setting guidance in the NPA, we believe it moves in the proper direction towards recognizing that setting safe speed limits on freeways and expressways vs. surface streets and in rural vs. urban contexts involve very different considerations... for example:

- prevailing speed data should be included as a factor to be considered in setting speeds on freeways and expressways.
- prevailing speed data should not receive primary or special consideration in setting speed limits on urban streets, which instead should take into consideration many factors, including those listed in the proposed NPA language but also including additional factors such as transit services and infrastructure and presence of pedestrian and bicycle facilities.
- The Support statement should also refer to existing guidance regarding speed limit setting through use of expert systems and a Safe System Approach.

Perspective:

As for speed limits - much of what was requested in the ITE letter was included - this is an improvement over 2009 and the 2020 NPA.



Pedestrian Facilities (5 items)

Support the Needs of All Users

Comment(s): The term pedestrian or pedestrians appears in multiple parts of the MUTCD more than 1,300 times. Similar to Part 9, which is focused on bicycle facilities, creating a separate Part of the MUTCD for Pedestrian Facilities would provide a clear focus on safety and traffic control devices for a common vulnerable road user.

...recognizes that this would be a significant undertaking and recommends that this be included in the next, more comprehensive update to the Manual.

Creating a new Part of the MUTCD focused on pedestrians would also need to be carefully cross referenced to any pedestrian material that remains in other Parts.

Perspective:

- A new chapter on Pedestrian facilities was not included.
- Provisions for pedestrians have been added to other relevant sections, but they are not centralized in the manner comparable to bicycle facilities. Our comments did not expect much more for this edition, so our goal was met in part.

Pedestrian Facilities (5 items)

Support the Needs of All Users

Comment(s): The Standard and Guidance for Aesthetic Treatments in Crosswalks under 3H.03 is unnecessarily restrictive and the designs provided in the figure seem arbitrary and inconsistent with aesthetic treatment already permitted by many agencies that have not found them to cause safety issues.

...aesthetic treatments in crosswalks on low speed, low volume roads should be permitted unless they create a documented safety issue.

Perspective:

- The speed limit of 30 MPH or less was removed. The list of patterns and colors allowed was softened. The use of illustrations, symbols and pictographs is still restricted.
- Reading of the section on aesthetic treatment of crosswalks seems to be more liberal than the prior version, but it is still not clear and requires interpretation of the design of the aesthetic treatment as being acceptable vs overly artistic.
- Our interpretation is that there is flexibility between white transverse border stripes. A clearer guideline could be provided in the future that does not require interpretation of the design.

Pedestrian Facilities (5 items)

Support the Needs of All Users

Comment(s): Section 4F.19 includes a Standard that allows the pedestrian change interval to be truncated or removed during transition to preemption control when clearing traffic for emergency vehicles, or near moveable bridges and rail-grade crossings when boats or trains are approaching.

Creates a condition where a pedestrian may not have enough time to safely complete a crossing before the pedestrian interval ends. If this language is retained, it should be accompanied by guidance to practitioners to minimize its use to only those situations where a clear conflict at the bridge or rail crossing must be avoided.

Perspective:

- NPA there was a Standard: *“C. The shortening or omission of any pedestrian change interval shall be permitted only when the traffic control signal is being preempted because a boat is approaching a movable bridge or because rail traffic is approaching a grade crossing.”*
- Removed and the following Option included: *“During the transition into preemption control... Any pedestrian walk interval and/or pedestrian change interval may be shortened or omitted.”*
- In the Federal Register Preview document there was discussion on this topic (pgs. 63-64). FHWA stated that: “insufficient data on the magnitude of these potential issues and therefore does not adopt the proposed Standard that would prohibit the truncation of the pedestrian change interval during the transition preemption control... and revised Standard and added Option for clarification.

Pedestrian Facilities (5 items)

Support the Needs of All Users

Comment(s): The restrictions in section 2B.20 on use of the In-street Pedestrian or Trail Crossing sign do not match research conducted or the previous NCUTCD proposal 16B-RW-02-In-Street Pedestrian Signs Gateway Installation that was specifically supported by ITE in our May 22, 2020 letter to FHWA on interim approvals.

The addition of Standards that only allow the use of In-Street or Overhead Pedestrian Crossing sign in conjunction with the Pedestrian Crossing (W11-2) warning sign is too restrictive and should be changed to a Guidance statement or only applied to higher-speed roads. This same concern also applies to the in-street trail crossing sign.

Perspective:

The language was not modified nor was a low speed qualifier added.

Pedestrian Facilities (5 items)

Support the Needs of All Users

Comment(s): The Standard added in Sections 3C.01 and 9E.13 requiring crosswalk markings at a non-intersection locations and shared-use path crossings will increase visibility and safety of vulnerable road users at crossing points that are often at unique or unsafe locations, so we strongly support this change.

FHWA may want to consider adding an option statement that additional traffic control devices may need to be considered in addition to the crossing markings to further increase visibility, particularly at mid-block locations or on higher-speed roadways.

Perspective:

Mixed reaction to this one...

While not included explicitly in Section 3C.01 and implicit 9E.13, Section 3C.02 Guidance states:

The installation of other traffic control devices and other measures designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence, should be considered in addition..."

Bicycle Facilities (5 items)

Support the Needs of All Users

Comment(s): The expansion of Part 9 in the NPA to address increased use of various types of bicycle facilities is generally supported by ITE.

The addition of so many Standards as well as design guidance in Part 9 may unnecessarily restrict the installation of traffic control devices that are meant to increase safety of bicyclists in specific contexts.

Careful review needed for each new Standard to ensure it is necessary to be a Standard, if use of the Standard may limit bicyclist safety, and if too much design guidance is provided beyond what is necessary for traffic control devices for bicycle facilities.

Perspective:

- Section runs contrary to overarching concept of reducing number of standards.
- ...hearing specific concerns over standards regarding mandatory use of signs at bike boxes and at 2-stage turn boxes.

Bicycle Facilities (5 items)

Support the Needs of All Users

Comment(s): The new provisions for buffer-separated, separated, and counter-flow bicycle lanes are good additions to the MUTCD; however, these facilities should also be specifically defined in Part 1 to ensure clarity.

The number of Standards and amount of design guidance related to these bicycle facilities can be simplified or reduced. For example, the Standard requiring a buffer for a parking lane in section 9E.07 should be changed to a Guidance statement.

Perspective:

- The definition was expanded to include buffer-separated, counter-flow and separated bicycle lanes.
- The standard requiring a buffer for a parking lane was altered, but not changed to Guidance.

Bicycle Facilities (5 items)

Support the Needs of All Users

Comment(s): The Standard in section 9E.05 stating “*bicycle lanes shall not be provided on the circulatory roadway of a circular intersection*” should be reconsidered or further clarified regarding the specific types of bicycle lanes this Standard is prohibiting, and what is specifically meant by circular intersection and “on the circulatory roadway”.

Applied in the broadest sense, this Standard may prohibit safe accommodation of bicyclists at types of roundabouts that have been shown to be effective at reducing conflicts between bicyclists and motorists (e.g., Dutch style roundabouts).

Perspective:

- This section was expanded to include cases where separated bicycle lanes may be used with circular intersections as opposed to the original blanket prohibition.

Bicycle Facilities (5 items)

Support the Needs of All Users

Comment(s): The addition of green pavement under section 3H.06 for bicycle facilities is a good addition to the MUTCD that increases safety of bicyclists. It should be made clear that green pavement is permitted for buffer-separated and counter-flow bicycle lanes when located within the roadway.

Perspective:

- Specifies separated bicycle lanes but not specifically buffer-separated or contra-flow lanes... seems as though since these are within the definition of bicycle lanes, but is not explicit.
- Other concern is that green under sharrows will not be allowed. The new edition specifically allows black, but it's not the same thing but is silent otherwise.

Bicycle Facilities (5 items)

Support the Needs of All Users

Comment(s): The addition of Section 9E.03 Extensions of Bicycle Lanes through Intersections increases bicycle visibility and safety through an intersection; however, chevron markings should be permitted to be used as well as dotted lines in these extensions since chevron markings are more visible and will generally last longer in intersection traffic than dotted lines.

Perspective:

This change was not made and is prohibited by a Standard statement.

Bicycle Signals (4 items)

Support the Needs of All Users

Comment(s): In general, the language within the NPA on bicycle signal faces (Part 4H) is too restrictive and is not consistent with the flexibility provided for other signals in the Manual. With the amount of research and experimentations done related to bicycle signals faces, the NPA should go beyond just the incorporation of interim approval IA-16.

Perspective:

- More restrictive than the NPA version and is more restrictive than IA-16. Need better explanation for these changes.
- Disappointed that the vehicle flashing yellow arrow shown in the NPA was deleted from the final version and concerns that:
 - A separated bikeway must be controlled by a bike signal if it is to the right of a right turn lane.
 - The bike signal must be an exclusive phase in most applications to prevent conflicting vehicle turns.
 - The proposed bike signal signs are confusing, untested, and not based upon any research.
 - The results of experiments on items such as flashing yellow arrows are not known to the user community on why the changes were made.

Bicycle Signals (4 items)

Support the Needs of All Users

Comment(s): The Standard statement and related option in section 4H.01 will prevent bicycle signals from being used in all contexts where they could be safely used.

This Standard and associated Option statement should be converted to a Guidance statement.

Perspective:

- Requested change **not** adopted.
- The Standard for use of bike signals remains generally too restrictive. The overall provision will prevent the use of bike signals for applications where they could improve safety. Many users feel that they cannot meet the provisions.

Bicycle Signals (4 items)

Support the Needs of All Users

Comment(s): The NPA also proposes to prohibit use of bicycle signal faces with Pedestrian Hybrid Beacons PHBs (section 4H.02). There is a known problem with bicycles entering crosswalks controlled by PHBs during the flashing red interval and this can be alleviated by introducing bicycle signal indications to regulate bicycles on the approach.

Perspective:

This provision was not added bicycle signals cannot be used at PHBs.

Bicycle Signals (4 items)

Support the Needs of All Users

Comment(s): We believe the proposed Standard [in 4H.03] requiring the use of bicycle signal signs (the new R10-41 series of signs) should be changed to a Guidance statement in the absence of specific research or experience that supports the use of these signs as a Standard.

Perspective:

- Requested change **not** adopted.
- There was no currently available research or experience indicating that they are understood or provide any value.

Overall Number of Standards Statements

Grounded in current practice while supporting flexibility and innovation

Comment(s): Concern with the overall number of Standards statements in the NPA.

There are many situations where uniformity is absolutely required in terms of design and placement of traffic control devices, in order to ensure quick and correct comprehension and action by road users.

...appears that the NPA contains many Standard statements, both new and existing, where strict uniformity may be desirable but is not essential to support a safe transportation system. These Standard statements should be changed to Guidance statements (examples provided).

Perspective:

- Overall, many Standards statement converted to Guidance statement throughout.
- Others remained unchanged where changing to Guidance or Option(s) would have provided more content appropriate flexibility.

Use of MUTCD

Grounded in current practice while supporting flexibility and innovation

Comment(s): ...agree that traffic control device decisions should be made by qualified and experienced professionals. However, compliance is not likely practical in every possible situation (e.g. streets controlled by homeowner's associations or small communities without engineering expertise on staff). This new language should be changed from a Standard to a Guidance statement.

Perspective:

Standard statement not modified, nor guidance provided for exception.

Experimentation (1B.06)

Grounded in current practice while supporting flexibility and innovation

Comment(s): The proposed changes to this section do not improve a process that is already seen as too complex, too inflexible, too costly, and not straightforward for agencies to apply, many of which simply want to sign onto an experiment already proposed by another jurisdiction.

Making the entire process part of a Standard statement and adding numerous new requirements makes this situation worse.

Process needs to be recast as Guidance, not a Standard; simplified to the maximum extent possible; and include provisions for additional agencies to sign onto an approved experiment by simply providing a list of locations where the experimental treatment will be used and evaluated and an agreement to comply with the established parameters for the experiment in question.

A more simplified and shared experimentation process will likely increase the amount of useful information and data provided to FHWA so that staff can more easily and consistently evaluate new traffic control devices under the same problem statement, and increase understanding of variations agencies may use in the same or similar conditions.

Agencies requesting an experiment are essentially self-funding traffic control device research, so the process should be as simple and straightforward as possible.



Experimentation (1B.06)

Grounded in current practice while supporting flexibility and innovation

Perspective:

- FHWA acknowledged that *“...commenters stated that they believe the experimentation process is getting more complicated. Commenters suggested that the existing process hinders innovation to the point of it becoming impossible to pursue due to the steps and time required.”*
- FHWA adopted a *“new Option to streamline the process for requesting official experimentation. This new Option allows a requesting agency to submit an abstract of the experimental concept for preliminary review of its viability and potential alignment with other ongoing or previous research on the concept.”*

Concern:

Federal Register Preview document (pgs. 18-19) on the NPRM states:

“If an existing compliant solution is identified, the need for experimentation to develop and consider a new device or application is eliminated.”



Placement and Operation of Traffic Control Devices (1D.09)

Grounded in current practice while supporting flexibility and innovation

Comment(s): ...intent of the Standard statement in this section regarding the placement of necessary traffic control devices before any new roadway is open to public travel.

...may not be necessary or practical for all roadway classifications (e.g. markings on a new low speed, low volume local roadway where final paving is not yet complete, but public travel does not create a safety issue).

This Standard should be changed to a Guidance statement.

Perspective:

No change and retained as Standard statement.

Application of Changeable Message Signs (2L.02)

Grounded in current practice while supporting flexibility and innovation

Comment(s): ITE is generally supportive of the intent of the changes that were made to Section 2L.02 with new/revised language pertaining to changeable message signs.

...most of this material is more appropriate as Option or Guidance statements rather than as Standards.

Perspective:

- Additional Standards and Options statements added vs. moving elements to Guidance.
- Generally addressed concerns.
- Still concerns remain related to safety campaign messages but appear to be workable with appropriate documentation.

Normal Width Lines (3A.04)

Grounded in current practice while supporting flexibility and innovation

Comment(s): Use of wider longitudinal pavement markings have acknowledged safety benefits for human drivers, as well as existing and emerging driver assistance systems and automated vehicles as outlined in the NPA.

...proposed new Standard, no specific cost is provided as reliable estimates of both the total road mileage affected by the new Standard and the proportion of the affected road mileage which is already marked with 6-inch wide markings are not available ...and that the total cost of compliance with this provision is an initial one-time cost which totals in the hundreds of millions of dollars (or higher), with a similar additional cost incurred each time the markings are reapplied.

Due to the significant cost burden to public agencies, including local public agencies, we believe that this provision should be changed from a Standard to a Guidance statement or applied only to freeways, expressways and ramps.

Perspective:

- Modified as suggested.



Use of Warrants, Generally

Forward looking document

Comment(s):

- ...the use and application of Warrants in the MUTCD needs to be fully re-examined...Many of the warrants use values for criteria that are dated, appearing to be carried from one version of the MUTCD to the next and should be informed by more current research, for example:
 - The traffic signal 8 hour warrant volumes have not changed since 1961 MUTCD. However, in that Manual, actuated signals did not need to meet side street volumes. This concept was dropped in 1971 MUTCD.
 - The peak hour and 4-hour traffic signal warrant volumes have not changed since 1978 MUTCD.
- Warrants are also not treated in a consistent manner throughout the MUTCD which cause confusion, for example:
 - Warrants for all way stop control, for example, are defined as Options.
 - Warrants for traffic signals follow more usual format sequence of Support-Guidance-Standard-Option.

Use of Warrants, Generally

Forward looking document

Comment(s), cont'd:

- ...some existing warrants are contrary to current engineering and safety practice. (e.g. 4C.08 Warrant 7, Crash Experience, which notes fatal motorist and pedestrian crash thresholds to be considered in whether a traffic signal may be warranted ...not consistent with the Safe System principle that any loss of life is unacceptable and potentially warrants changes to the road system in order to avoid future fatal crashes.

Perspective:

These high level comments were not addressed in span of time between the NPA and NPRM and is something to work with the research community and the NCUTCD for the next MUTCD.

Automated Vehicles (Part 5)

Forward looking document

Comment(s): ...proactively developing initial MUTCD content focused on traffic control device provisions needed support automated vehicles (AVs), recognizing that this is an evolving area that will continue to change. The overall approach of providing Guidance (not Standards) based on available knowledge about the technology and how it might be deployed is sound.

...caution that much more needs to be understood about how automated vehicles will safely interact with pedestrians, bicycles and other vulnerable road users and that the evolving AV guidance needs to focus as much on the safety of these users as on the operation of the automated vehicles themselves.

Perspective:

- Appreciate addition of content.
- "Safety" not mentioned in opening 5A.01 (and only once in all of Chapter 5) rather down in Section 5A.04 Traffic Control Device Design and Use Considerations as Support.

Yellow Change and Red Clearance Intervals (4F.17)

Forward looking document

Comment(s): ...new MUTCD references and incorporates elements from ITE's *Recommended Practice Guidelines for Determining Traffic Signal Change and Clearance Intervals* (2020) ...does not incorporate all of the relevant material from the Recommended Practice.

...research [[Transportation Pooled Fund Study TPF-5\(470\)](#)] is underway [and] ITE will be updating and revising our Recommended Practice once those findings are available. As a result, ITE believes that text in this section should include the phrase “most recent version” when referencing the ITE publication. ITE plans to update our Recommended Practice on a recurring basis as ongoing and new research projects are completed.

Perspective:

- Paragraph citing ITE publication dropped due to comments on NPA and active research.
- Issue to be revisited in subsequent edition of MUTCD.

Separate Part for Pedestrian Facilities

Forward looking document

Comment(s): ...recommends creating a separate Part of the MUTCD for Pedestrian Facilities, which would provide a clear focus on safety and traffic control devices for a common vulnerable road user.

Perspective:

- This was **not** done as part of this edition (mentioned earlier).
- Intent was to bring pedestrian up to the same level of emphasis in the context of non-motorized users as bicycles.
- Understand the complexity of unwrapping pedestrian TCDs from all of the chapters in MUTCD.
- Potential opportunity when PROWAG information integrated into MUTCD in a future edition.

Rethinking MUTCD

Forward looking document

Comment(s): ...believe that the process of rethinking what a new version of the MUTCD should look like must start sooner rather than later and must include:

- a full reevaluation of the content and structure of the MUTCD.
- removal of unnecessary material, increased flexibility where possible.
- a more streamlined and timely process for updating the provisions contained in the MUTCD.

Perspective:

- Some of this is included in the NRPM preview document about the 4 year cycle to update.
- ITE will be working with peer associations, NCUTCD and continuing to engage with FHWA on this issue.
- Hosting a Conversation Circle Wednesday afternoon July 24th titled,
MUTCD 11th Edition: Opportunities & Challenges.

Future MUTCD Updates and What's Next

Future MUTCD Updates

- 11th Edition fulfills FHWA's statutory requirements of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA)
- Future updates will be on a quadrennial cycle (every 4 years)

Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)

- Final Rule Published on August 8, 2023
- Will be future MUTCD rulemaking based on FHWA's adoption of PROWAG



The screenshot shows the U.S. Access Board website. The header includes the logo and tagline "U.S. Access Board Advancing Full Access and Inclusion for All", a search bar, and a language selector for "En Español". The navigation menu contains links for "About", "News", "Advancing Access", "Guidelines & Standards", "Services", "File an ABA Complaint", and "Contact Us". The main heading is "Public Right-of-Way Accessibility Guidelines". Below this is a "PDF" button. The article title is "About the ADA and ABA Accessibility Guidelines for the Public Right-of-Way". The text states: "The Access Board has published new guidelines under the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA) that address access to sidewalks and streets, crosswalks, curb ramps, pedestrian signals, on-street parking, and other components of public right-of-way. These guidelines also review shared use paths, which are designed primarily for use by bicyclists and pedestrians for transportation and recreation purposes." An image shows a person's feet walking on a sidewalk with yellow tactile paving and a white cane. The "Background" section lists two items: "August 8, 2023 - The Board publishes final rule in the Federal Register." and "February 13, 2013 - The Board publishes a Proposed Draft".

Source: U.S. Access Board

What's Next?

- Hotlinks version of MUTCD
- Standard Highway Signs publication – Phased release
- New FHWA Guidelines
 - Experimentation
 - Speed Limit Setting
- States with their own MUTCD or Supplements have until January 18, 2026 to revise their documents – in substantial conformance to National MUTCD

ITE's MUTCD Action Plan

Products

QuickBites

- Two-Way Separated Bike Lanes at Railroad Grade Crossings **RELEASED**
- Track Angle of Railroad Grade Crossings Effect on Bicycles **RELEASED**
- Pedestrian Crossings at Roundabouts – Improving Driver Yielding Behavior

Technical Briefs

- Pedestrian Push Button Plaques and Signs

Informational Reports

- Prohibition of Turns on Red at Signalized Intersections
- Traffic Control Devices Handbook (2nd Ed.) 2013



ITE's MUTCD Action Plan

Products (cont'd)

Informational Reports

- Prohibition of Turns on Red at Signalized Intersections
- Traffic Control Devices Handbook (2nd Ed.) 2013

Recommended Practices

- Speed Reduction Techniques (
- Signal Preemption Near Railroad Grade Crossings
- Context Sensitive Solutions for Walkable Urban Thoroughfares

ITE's MUTCD Action Plan

Web Resources

- Bicycle Signals Resources Hub
(www.ite.org/technical-resources/topics/complete-streets/bicycle-signals/)
- TrafficWiki – Identify, suggest, and make the changes you think are needed to this dynamic member resources.

Standards

- ITE will update and ensure consistency with the many different standards that ITE manages and develops for the transportation community .
- Roadside Unit (RSU) Standardization for Connected Vehicle and Infrastructure Deployments
- NTCIP 1200 Family of Standards



ITE's MUTCD Action Plan

Professional Development

- Summer series webinars
- Hybrid learning certificate course

Conferences and Meetings

ITE is organizing technical sessions and workshops at upcoming conferences and meetings to provide training, education, and discussion opportunities on the MUTCD 11th Edition.

- 2024 ITE Annual Meeting Sessions
- MUTCD 11th Edition: Opportunities & Challenges
- Evolving from the 11th to 12th Edition of the MUTCD
- NCUTCD and AASHTO CTE

Q&A

Type your questions in the question pod if you haven't already.

We will begin with answering at least one question from each participant and return to answer the remaining as time allows.

