

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
Part 1: General		-Compliance dates: Low clearance signs --> 5 years High-profile grade crossing signs --> 5 years Traffic Signals at/near Grade Crossing --> 10 years -Added definition for "Engineer" for consistency -Emphasize a clear understanding of the application of engineering studies and engineering judgement in the proposed MUTCD
	1A.02: Traffic Control Devices - Definition	Definition of target road users has changed. All cyclists, scooter riders, and other non-pedestrian users are expected to have a license or demonstrated proficiency. Pedestrians and roadway users are expected to show level of competency regardless of age or disability.
	1A.03: Target Road Users	Definition of target road users has changed. All cyclists, scooter riders, and other non-pedestrian users are expected to have a license or demonstrated proficiency.
	1C.02: Definitions of Words and Phrases Used in this Manual	Rectangular Rapid Flashing Beacon (RRFB) definition updated. RRFBs defined as pedestrian-activated. Does not mention activation by any other roadway users.
Part 2: Signs		
	2B.06: General Considerations	Intersection control considers "units/day" which comprises of vehicular, bicycle, and pedestrian volume; not just vehicular volume.
	2B.16: All-Way Stop Control Warrant E: Other Factors	All-way stop control now warranted where pedestrian and/or bicycle movements justify.
	2B.20: In-Street and Overhead Pedestrian and Trail Crossing Signs	-Clarify in Standard P3 that no more than one in-street sign shall be placed in the roadway, on a lane line for a one-way roadway application, or on a median island. -R1-6 signs (in-street pedestrian/trail crossing signs) can only be used in as a supplement to W11-15 signs (off-street pedestrian crossing sign). Placement guidelines have changed and cannot install R1-6 alone.
	2B.21: (existing 2B.13) Speed Limit Sign (R2-1)	-Road context now suggested as part of guidance on establishing and reevaluating speed limits -Reorganize and revise material based on the NTSB's recommendation to review how speed limits are determined. FHWA retains reference to 85th-percentile speed as a factor that should be considered, particularly for freeways and expressways, as well as for rural highways, except those in urbanized locations within rural regions. FHWA also retains reference to the setting of speed zones in broad terms, thereby allowing agencies to establish detailed criteria based upon national

*\*This is not an all-inclusive list of MUTCD NPA proposed changes*

**1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)**

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
		guidance or based upon research, outside the MUTCD. In addition to providing comment on this proposed change, FHWA also requests comment on the following additional recommendations of the NTSB report: (1) Removal of the 85th-percentile speed as a consideration in setting speed limits regardless of the type of roadway (this recommendation was based in part on the assumption that that the 85 <sup>th</sup> percentile speed can increase over time as a result of the posted speed limit); and (2) the requirement to use an expert system to validate a speed limit that has been determined through engineering study.
	2B.30: Advance Intersection Lane Control Signs (R3-8 Series)	R3-8 signs may be modified when a bicycle lane is between two general purpose lanes. In this case, the sign may depict the bicycle lane in black. See Image.
	2B.66: Weight Limit Signs	In Section 2B.66 Weight limit Signs (R12-1 through R12-7), FHWA proposes to incorporate guidance P7 into standard P6 to require, rather than recommend, that if used, the Weight limit sign, with an advisory distance ahead legend, shall be located in advance of the applicable section of highway or structure so that prohibited vehicles can detour or turn around prior to the limit zone.
	Existing 2C.10	Delete existing Section 2C.10 Combination Supplemental Horizontal Alignment/ Advisory Speed Signs (W1-1a, W1-2a)
	2D.11: Design of Route Signs	-Clarify the requirement that Interstate Route, Off-Interstate Business Route, U.S. Route, State Route, County Route, and Forest Route sign legends are required to comply with existing requirements in Chapter 2A. -Amend standard to require county route markers to be 24"x24" (up from 18"x18") for consistency.
Part 3: Markings		
	3A.04: "Normal" Longitudinal Pavement Lines	6 inches wide for freeways, expressways, and ramps; 6 inches for all other roadways with speed limits > 40 mph, and 4 to 6 inches for all other roadways < 40 mph.
	3A.04: Wide Longitudinal Line Widths	If 6" lines are the normal width, 10" wide longitudinal line widths for > 40 mph. For all other roadways with speed limits < 40 mph, width of "wide" longitudinal lines must be 8 inches.

\*This is not an all-inclusive list of MUTCD NPA proposed changes

1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
	3B.09: Edge Line Pavement Markings	"Guidance: Regardless of the width of the normal line used on the roadway, edge lines on two-lane roadways should be at least 6 inches wide."
	3B.19: Stop and Yield Signs	<ul style="list-style-type: none"> <li>-Introduce a new standard to chapter 3, 3B.19 that requires yield lines on pavement be used in conjunction with a yield sign or other appropriate traffic control device.</li> <li>-Yield line pavement marking shall not be installed without a "yield here to..." sign (R1-2, R1-5, R9-6)</li> </ul>
	3C.01 General	Standard added to include that crosswalk markings shall be provided at all non-intersection crosswalk locations
	3C.02: Applications of Crosswalk Markings	<ul style="list-style-type: none"> <li>-Modify Guidance P8 regarding criteria for engineering studies for crosswalk across uncontrolled roadways to include pedestrian ages, and to change "posted or statutory speed limit" to "speed limit or the 85th-percentile speed."</li> <li>-Guidelines on when to install a marked crosswalk now also take into consideration the ages of pedestrians to accommodate children and seniors</li> <li>-Guidelines on when NOT to install marked crosswalks have changed to include any roadway signed at 40mph or greater or via a crash study</li> </ul>
	3C.03: Design of Crosswalk Markings	<ul style="list-style-type: none"> <li>-Introduce a new standard requiring that, where curb ramps are provided, crosswalk markings shall be located so that the curb ramps are within the extension of the crosswalk markings. The new standard requires that crosswalk markings encompass curb ramp.</li> <li>-Crosswalk dimension language has changed and does not include the 36" wide marked block with 36" gap that is used commonly on trunk highways. Crosswalks are now defined as either basic and high-visibility. Basic crosswalks require an engineering study for installation.</li> </ul>
	3H.02: Materials	Guidance added: Consideration should be given to minimizing traction loss of bicycles when selecting a roadway surface material that simulates colored pavement
	3H.03: Aesthetic Treatments in Crosswalks	<ul style="list-style-type: none"> <li>-Add new Standard, Guidance, Option, and Support paragraphs describing appropriate use of aesthetic treatments within crosswalks and to provide examples of acceptable materials and patterns.</li> <li>-Aesthetic treatments of crosswalks cannot encourage pedestrians to linger in the crosswalk. All treatments should encourage users to vacate the crosswalk. Allowances on colors and treatments have been defined.</li> <li>-FHWA requests comments with detail and explanation.</li> </ul>

*\*This is not an all-inclusive list of MUTCD NPA proposed changes*

**1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)**

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
	3H.06: Green-Colored Pavement for Bicycle Facilities	New section added on the use of green-colored pavement for bicycle facilities. Standards added on the limitation of green-colored pavement use (bicycle lanes, intersections, etc.).
	3J.03 Curb Extensions Designed by Pavement Markings	New language added to define and add guidance on using pavement markings to mark curb extensions. A double solid white line must be used in the absence of other channelizing devices. Guidance added that travel is encouraged in curb extensions and should be treated as such.
Part 4: Highway Traffic Signals		
	4A.05: Meanings of Bicycle Symbol Signal Indications	<ul style="list-style-type: none"> <li>-Standard meanings are given for bicycle traffic signal indications including flashing and steady green, yellow, and red bicycle signals</li> <li>-Steady Green - enter intersection</li> <li>-Steady Yellow - green movement terminated, red phase imminent</li> <li>-Steady Red - do not enter intersection, right turns permitted</li> <li>-Flashing Green - no meaning, is not used</li> <li>-Flashing Yellow - cautiously enter intersection, yield to peds</li> <li>-Flashing Red - stop before entering intersection</li> </ul>
	4F.19 Preemption Control of Traffic Control Signals	Shortening or omitting a pedestrian change interval shall be permitted only due to a boat approaching a moveable bridge or rail traffic approaching an at-grade crossing
	4H: Bicycle Signal Faces	Entire chapter added on the use of bicycle signals and bicycle signal faces.
	4I.04: Countdown Pedestrian Signals	Guidelines on location of pedestrian push buttons have been updated in relation to the curb ramp and crosswalk
	Figure 4J-1: Guidelines for the Installation of Pedestrian Hybrid Beacons	Guidance for utilizing pedestrian volume for placement of pedestrian hybrid beacons (PHB) may be reduced if the 15th percentile crossing speed of pedestrians is less than 3.5 feet per second
	4J.02, 4K.01, 4L.02, 4S.03, and 4U.02: Accessible Pedestrian Signals and Audible Information Devices	Change several statements regarding accessible pedestrian signals (APS) and audible information devices from being optional to being recommended. Pedestrian push buttons would be recommended where APS is used at pre-timed signals. APS would be recommended where Pedestrian Hybrid Beacons are installed. Audible information devices would be recommended where Warning Beacons, In-Roadway Warning Lights, or Rectangular Rapid Flashing Beacons (RRFBs) are installed.

\*This is not an all-inclusive list of MUTCD NPA proposed changes

1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
	4K.04: Vibrotactile Arrows and Locator Tones	<ul style="list-style-type: none"> <li>-Even if the push button is not needed to activate the pedestrian signal or the accessible pedestrian signal features, vibrotactile arrow shall be located on speaker box for differently-abled and disabled users</li> <li>-Option to default set locator tone to deactivated until a pedestrian is within a 12-foot radius from the push button</li> </ul>
	4L: Rectangular Rapid Flashing Beacons	Entire chapter added on the application, design, and operation of rectangular rapid flashing beacons
Part 5: Automated Vehicles	All new – Guidance and Standard Statements to Prepare for Future AV	<ul style="list-style-type: none"> <li>-All new content that is highly evolving.</li> <li>Not a mandate to mark roads for AVs – focus to provide agencies adequate info to fit AV system and have uniformity while we have a mixed fleet of manual and automated vehicles. Current proposed language includes orientation of signs, lane line widths, LED refresh rate - capture as dark symbol, "Ghost" lines in TTC zones - (grooved in lines)</li> </ul>
	5B.02: Markings	Support and Guidance statements with a list of considerations that should be used to accommodate machine vision used to support the automation of vehicles and benefit the performance of the human vehicle operator.
	5B.04: Temporary Traffic Control	<ul style="list-style-type: none"> <li>-Guidance and Standard statements regarding the use of signs and pavement markings to accommodate machine vision better and benefit the performance of the human vehicle operator in and through work zones.</li> <li>-FHWA proposes that type of signs, spacing, and mounting height should follow the requirements in Part 6 and that the END ROAD WORK sign should be used to establish the end of the work zone.</li> </ul>
Part 6: Temporary Traffic Control		
	6K.02: Pedestrian Channelizing Devices	Guidance added on using pedestrian channelizing devices when work activities impact sidewalks or pedestrian facilities.
	6N.04: Work Affecting Pedestrian and Bicycle Facilities	<ul style="list-style-type: none"> <li>-Guidance added on ensuring that bikeways continue through the temporary traffic control zone. On multi-lane roadways, one or more travel lanes may be closed for temporary bikeways. Bike detours should be as short and direct as possible.</li> <li>- A full detour plan should be developed if the detoured path is complex and does not follow the original bikeway corridor.</li> </ul>

\*This is not an all-inclusive list of MUTCD NPA proposed changes

1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
	6P.01: Typical Applications: Notes for Figure 6P-47	-Additional Guidance on bicycle detours: If a roadway having a speed limit of 35 mph or higher is closed, a separate bicycle facility or detour should be considered. - -Additional guidance given on roadways at 30 mph or lower depending on lane width.
	6P.01: Typical Applications: Notes for Figure 6P-48	Standard added: Where used, the Street Name sign or Bike Route Name sign shall be placed above the Bike Detour sign.
	6P.01: Typical Applications: Notes for Figure 6P-51	Option added on providing a temporary path for bicyclists when a paved shoulder is closed on roadways with speed limits of 45 mph or greater.
	Figure 6P-28: Sidewalk Detour or Diversion Notes	Specifics are given on temporary accessible pedestrian facilities. Accessible and detectable features must be consistent with the existing facility. Ramps shall be 12:1 or flatter in slope.
Part 8: Rail Crossings		
	8E.01: Purpose (Pathway & Sidewalk Grade Crossings)	Pathway and sidewalk crossings are separated. Pathway crossings have alignments that are independent of an adjacent roadway, and the traffic control devices of the roadway do not influence the pathway. Sidewalk crossings are parallel to the roadway and are influenced/mandated by the traffic control devices.
	8E.02: Use of Standard Devices, Systems, Practices	Bicycle and pedestrian crossings should cross railroad tracks as close to a right angle as possible. New guidance added for clarity on at-grade rail crossings for bicycles and pedestrians.
	8E.06: Passive Traffic Control Devices - Swing Gates, Fencing, and Pedestrian Barriers	When maze fencing is used (pathway or sidewalk alignment forces pedestrian or cyclist to face oncoming rail traffic), barriers must be designed to allow passage of wheelchairs, mobility devices, bicycles, and bicycles with trailers.
	8E.07: Active Traffic Control Systems	Guidance added on when to use active traffic control systems at sidewalk and pathway crossings. Signals may be included on the back of existing signals so that path users can see the signals from both directions.
	8E-19: Active Traffic Control Devices - Automatic Pedestrian Gates	Hanging bar may be added to a vehicular gate to prevent a visually impaired pedestrian from passing the vehicular gate when the gate is activated.
Part 9: Traffic Control for Bicycle Facilities		

\*This is not an all-inclusive list of MUTCD NPA proposed changes

1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
	9A.02: Standardization of Application for Signing	Support added that nonstandard signing should not be used on bicycle facilities. Drawing special attention or branding a bicycle facility can contribute to enforcement problems.
	9B.01: STOP and YIELD Signs (R1-1, R1-2)	Expand the scope of a standard requiring the use of STOP or YIELD signs to include separated bikeways or other bicycle facilities so that bicyclists are aware that they are required to stop. The proposed revision does not permit these signs to be used in conjunction with bicycle signal faces.
	9B.02: Except Bicycle Plaques	New section added the usage of "Except Bicycle" plaques (R3-7bP)
	9B.03: Advance Intersection Lane Control Signs for Bicycle Lanes	New section added on the usage of advance intersection lane control signs that signify the relationship of bicycle lanes to other lanes on the roadway approach to the intersection. (R3-8 series)
	9B.18: Two-Stage Bicycle Turn Box Regulatory Signing	New section outlines situations in which two-stage turn boxes are required. Required associated signage and placement also included. Requiring a turn box also includes situations where bicycles utilizing the vehicle left-turn lane are not practical due to vehicle speed, number of lanes, and other safety concerns.
	9D.03: BIKE ROUTE Plaque	Bicycle symbol shall not be used on a street name sign.
	9D.09: Bicycle route Sign auxiliary Plaques	New section added on the use of directional bicycle route signage.
	9D.12: Destination guide Signs for Shared-Use Paths (D11-10x)	New section for the use of signs denoting destinations for shared-use paths. Business logos or graphics shall not be used on destination guide signs.
	9D.13: Two-Stage Bicycle Turn Box Guide Signing (D11-20 series)	New section added on the use of two-stage bicycle turn box guide signs. Where a two-stage turn box is provided, the accompanying two-stage turn sign shall be used.
	9E.01: Bicycle Lanes	Bicycle lanes may not also be established as shoulder. The bicycle symbol or BIKE LANE pavement word marking and the pavement marking arrow shall not be used in a shoulder.
	9E.02: Bicycle Lanes at Intersection Approaches	-New language added to section to provide standards on mixing zones where bicycles interact with vehicles, and guidance on the use of bend-outs. Mixing zones shall only be used where the bicycle lane is one-way in the same direction as vehicle traffic. -Bicycle lanes shall not be marked through general-purpose lanes. A shared lane may be used when space cannot accommodate a bicycle lane and general-purpose lane

\*This is not an all-inclusive list of MUTCD NPA proposed changes

1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)

## APPENDIX: SALT MUTCD NPA List of Proposed Changes\*

*\*This Appendix is not an all-inclusive list.*

*It is intended to help your review and provide comments to FHWA.*

MUTCD	Proposed Section	Description of Proposed Revision
	9E.02: Bicycle Lanes at Intersection Approaches (continued)	-Bicycle lanes may only be positioned to the right of right-turn only lanes or positioned to the left of left-turn only lanes if the bicycle lane is controlled by a bicycle traffic signal display.
	9E.03: Extensions of Bicycle Lanes through Intersections	New section for the demarcation of bicycle lanes extended through intersections and interaction with crosswalks and other roadway markings
	9E.04: Bicycle Lanes at Driveways	Bicycle lanes may be continued through a driveway using solid or dotted longitudinal lines.
	9E.06: Buffer-Separated Bicycle Lanes	New section on roadway marking use for buffer-separated bicycle lanes, types of line styles, and buffer dimension guidance
	9E.07: Separated Bicycle Lanes	New section on separated bicycle lanes with options and guidance on vertical elements used for separation and guidance on dimensions and roadway markings
	9E.08: Counter-Flow Bicycle Lanes	New section on counter-flow bicycle lanes and standards on roadway markings and striping to show counter-flow lanes. Additional standards and guidance are provided on the placements of counter-flow bicycle lanes and associated signage
	9E.09: Shared Lane Marking	Guidance added on the spacing of shared lane markings and distances from intersections
	9E.11: Two-Stage Bicycle Turn Box	New section on standards for guidance on roadway markings, spacing, and use of two-stage turn boxes for bicycles.

\*This is not an all-inclusive list of MUTCD NPA proposed changes

1/21/2021 (REVISED 2/3/2021, 2/11/2021, 2/22/2021, 3/5/2021, 3/24/2021, 4/22/2021)