

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
3	1	1A.01		X		Support the concept, DO not agree with the fact that we can achieve national consistency due to the various options allowed in the manual. I believe that we can achieve national consistency in the Meaning and Description of the TCD, but the application and judgement in application will never be consistent. In addition I disagree with the presumption that the MUTCD presumes sufficient working knowledge, professional training, and experiences. I believe each revision of the MUTCD has become more prescriptive and depends less on this core assumption of the USER.
4	1	1A.02		X		This proposed modification provides a clunky relationship between the 1A.02 definition and the Part 1C.02 definition of traffic control devices. We recommend that Section 1A.02 remain "Purpose" of Traffic Control Devices, or alternately "Scope".
7	1	1A.05		X		Under "Relationship to Other Publications," consider adding AREMA Communications and Signals Manual, USDOT Highway-Rail Grade Crossing Handbook, and ITE Preemption of Traffic Signals Near Railroad Crossings as referenced publications.
7	1	1A.05		X		I opposes reference no. 14, "Guidelines for Determining Traffic Signal Change and Clearance Intervals" this is a flawed document that is encircled with controversy within the professional organization that published it. Reference to the Uniform Vehicle Code (UVC) as a publication should be removed. The UVC is no longer an independent document since it has been commandeered by the NCUTCD.
8	1	1A.06			X	Reference to the Uniform Vehicle Code (UVC) as a publication should be removed. The UVC is no longer an independent document since it has been commandeered by the NCUTCD. Referencing it in the MUTCD give relevance and credence to a document that is not managed as it was originally developed.
9		1B.01				We agree with the change and application to sites open to public travel. Our concern is who is responsible for notifying these owners and enforcing these new standards. There needs to be a significant amount of implementation time with a communication plan.
9	1	1B.01		X		Reference to the Uniform Vehicle Code (UVC) as a publication should be removed. The UVC is no longer an independent document since it has been commandeered by the NCUTCD. Referencing it in the MUTCD give relevance and credence to a document that is not managed as it was originally developed.
10	1	1B.02			X	THIS IS THE MOST CRITICAL CHANGE IN THE DOCUMENT I do not agree that FHWA should be in an approving authority over NCDOT policies, practices, and standard drawings. I agree these items should be consistent with the MUTCD and any supplement, but placing the FHWA Office in this level of approval is a gross federal overreach.
10	1	1B.02, Last Paragraph			X	Agree that related documents should be "in substantial conformance with the national MUTCD". However, considering <u>any</u> document related to traffic control devices as a supplement (Supplement) will require burdensome processes by States and local jurisdictions to become official. If this change is approved, what would be the time frame for conformity (especially for the plethora of existing documents already developed by the various States and other jurisdictions that may not change for years to come)?
12	1	1B.03 -		X		Appears to be a TYPO in referencing figures
13	1	1B.06		X		I support the intent to require improved research practice and reporting for experimentation with traffic control devices, but believe the proposed reporting requirements will preclude all but the handful of agencies with the most robust research resources from participating and will lead to unauthorized "experimental" practices. It is factual that many of the "experimental" ideas that have made it to the MUTCD were experimented outside of the MUTCD process. Making it more difficult to experiment is not recommended.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
16	1	1C.01		X		Under " <i>Definitions of Words and Phrases Used in this Manual</i> ", busway is defined. Consider adding a definition for Busway Grade Crossing (as mentioned in Section 8A.13) as well as renaming Busway Grade Crossing to Highway-Busway Grade Crossing. There are definitions for Highway-Rail Grade Crossings and Highway-Light Rail Transit Grade Crossing. Defining and renaming Busway Grade Crossing as noted would be consistent with verbiage used for these other types of grade crossings.
16	1	1C.02		X		#n/a - Add the definition for School Area. See Section 7B.02.A., page 605, line 34 of Clean text. Identify of an approaching school that might include school buildings or grounds, a school crossing, or school related activity adjacent to the highway that are not ordinated for higher fines.
17	1	1C.02	X			This revision provides clarity by adding and updating terms related to pedestrians, bicyclists, and transit. We support this change.
17	1	1C.02		X		Definition 157: Pedestrian Facility: Not all pedestrians are able to walk. Recommend changing "walking" to "pedestrian activity".
17	1	1C.02		X		Definition 236: Site Roadways Open to Public Travel: This will exponentially increase the number of locations required to conform to the manual. Is there a time frame for conformity? Who will be expected to monitor and enforce conformity?
17	1	1C.02				
18	1	1C.03		X		The acronyms/abbreviations "EPA" and "TDD" should remain in this Section for consistency, but may be referred to in Part 2. The Standard specifically states the acronyms and abbreviations "when used in this Manual" (which would include Part 2).
19	1	1D.01		X		Page 34, lines 29-32 of Mark Up: Who is expected to monitor/enforce the conformity requirement for "site roadways open to public travel"? What is the time frame for conformity?
21	1	1D.04		X		Page 36, line 40 of Mark Up: Change "private roads" to "site roadways or private toll roads" for consistency.
22	1	1D.05		X		I agree with the supporting statements that engineering judgement should be applied by a qualified engineer. What concerns me about this statement is that paragraph 9 is language from the US Office of Personnel Management that has zero bearing on anyone except the very small number (comparatively speaking) of federal employees that will be responsible for applying the Manual. However, many states may have exception language for government employees for licensure, and many small public agencies may not have staff that meets these requirements. By placing these written requirements, I believe it will create a legal liability issue for some individuals and communities that have placed this responsibility with employees who do not meet either of these items. IF FHWA is saying that a professional should be in the application, then FHWA should also reduce the significant amount of prescriptiveness in the manual and place the application examples in a document outside of the rule making process.
27	1	1D.10		X		No comments on notes or Table 1D-2. However, Table 1D-1 ("Acceptable Abbreviations") includes "Thursday (THURS)" in both the "General Abbreviations" and "Days of the Week" sub-tables.
N/A	1	1C.02		X		Definition 195. Right-of-Way, Public Highway-the definition refers to "real property,..., that are owned by the public agency having jurisdiction." In some states, highway rights-of-way may not be "owned" by the state highway agency, but may be a prescriptive easement over private property owned by the abutting property owners. This distinction may make the second sentence of the definition (which is not necessarily part of a definition) problematic in some locations. Maybe change the word "owned" to "controlled", "managed", or "claimed".

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
N/A	1	1C.02		X		Critical Definition Statement: 208 The term "damaged" will be point of contention in tort cases if this language is approved as written. Damage is a very broad word which can include a small scratch in the sign sheeting. In this case, the sign is still able to perform its function and purpose, but because it is "damaged" the language appears to say it should be replaced. The term "damaged" needs to be qualified as "damaged to the extent that the traffic control device no longer appears and operates as intended." I am sure this is the intent, but with such a litigious state our country is in, without some qualifier, any damaged constitutes the device is no longer serviceable.
N/A	1	1C.02		X		Definition 265. Traffic Control Device-see comment to docket item 4, Section 1A.02. The definition of Traffic Control Device ends with the first sentence. The rest of the material, if warranted, belongs in Section 1A.02.
N/A	1	1C.02			X	Definition 44. Crashworthy-the definition of the term should end with the proposed first sentence. Reference to other publications, even virtual, should be included in proposed Section 1A.05. If further information regarding crashworthy hardware or appurtenances is warranted, consideration should be made to adding a new section. Reference to roadside appurtenances that are not traffic control devices is not necessary.
N/A	1	1C.02			X	Definition 162. Pictograph-the definition of "pictograph" was introduced to the MUTCD by FHWA to address a practice of agencies adding graphic representations on guide signs. A practice that was admittedly an annoyance to state traffic engineers, but typically approved by policy makers, often outside of the highway agency. The definition has never been clear to the general public, who consider a logo to be a logo. This ship has already sailed, and trying to remove all the various allowed pictographs will only create problems for the respective jurisdictions. This will be a failed political activity especially for military bases, military branches of service, and government approved university or college from the list of entities for whom a pictograph is allowed. There cannot be any research that shows this is an unsafe practice especially since we allow similar items such as Logos. This is starting a fight over much to do about nothing.
29	2	2A.01		X		Page 42, lines 28-37: Define "temporary" under Guidance. How long should these temporary signs stay up? Possibly including a timeframe (i.e. 1-2 weeks or 1-2 months).
31	2	2A.04 (existing 2A.06)		X		Support paragraph line 31-33 pg 44 indicates the possible need to determine comprehension or possible misinterpretation of the intended message by the road user. This statement is not needed. Page 43 line 44 should also include size pictograph.
32	2	2A.05 (existing 2A.09)		X		error on page 45 line 32 Table should be 2A-4.
33	2	2A.11	X			J. This is a great addition. For pedestrian activity near schools, it good the larger sign remains an option.
35	2	2A.09 (existing 2A.12)		X		WE are fine with the federal language, however, there is a long history of their use and it will create a lot of concerns from those using these symbols.
37	2	2A.11 (existing 2A.15)		X		Line 18 indicates that a new plaque should not be in place for more than 6 month- good in theory- but will be difficult to enforce.
38	2	2A.12 (existing 2A.16)		X		Page 51 Line 5 error in 25A and B- no signs shown
39	2	2A.14 (existing 2A.18)		X		Question about statement of <u>crashworthy</u> line 8-10 page 53
40	2	2A.15 (existing 2A.19)			X	By removing the "or shielded with longitudinal barrier.." this would indicate it is required to be crash worthy even if it is behind guardrail. It is not cost effective to shield signs with guardrail, but it is cost effective to place signs behind guardrail that already exist. Requiring these signs placed behind existing guardrail to be crash worthy is an unnecessary cost.
41	2	2A.17 (existing 2A.21)		X		Error Line 43 should reference 2A.17 since it was moved was moved from 2A.15. Have questions concerning crashworthy statement on page 56.

2020 MUTCD NPA Comments - Proposed 11th Edition

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
42	2	2A.19 (existing 2A.04)		X		Page 56 line 33 need to provide the definition of vanity signs. This standard is redundant to others. Crashworthy and sign shape are already covered.
43	2	2A.20 (existing 2A.07)		X		Page 56 paragraphs numbers are referenced instead of line numbers- it is hard to ensure we all are referencing correct paragraphs. Error Page 57 line 13 should be Table 2A-1. Error page 58 line 19 and 20 should say Table 2A-1 and 2A-2.
44	2	2A.21 (existing 2A.08)	X			Error Table reference should be 2A-3 instead of 2A-5 on line 27, 30 and 38 on page 59 line 20 wrong table number.
44	2	2A.21 (existing 2A.08)		X		This is a change that we support because it removes practice and application issues outside the MUTCD where they should be. FHWA needs to move more of these type items out of the rule making process.
48	2	2B.02		X		Refers to Section 2A.04 for word messages see comments for this section.
52	2	2B.06		X		Pg 65 Lines 16-25 reference 2B.04a,b,c and f. Where are these references? Line 27 took out Engineering judgement- do we want to do that? Pg 66 Line 5 speed-control measures are available to control speeds- do not agree with the inclusion of this paragraph. Should be note that the word shall has been submitted for should in refer to placement of stop sign and yield sign may cause angst with municipalities.
56	2	2B.10	X			Section 2B is a great addition. However this comment is specifically to the Guidance on page 61, line 17-22. Tied to 7C.01
56	2	2B.10		X		Indicating all conditions must be met to place yield including crash info. Pg 68 Line 48 wrong referenced figures. Pg 69 line 13 what is section 2B-X3?
66	2	2B.20	X			This change would clarify In-Street and Overhead Pedestrian signing to include Trail Crossing signing. These changes provide guidance to pedestrian crossing and trail crossing signing at unsignalized and signalized locations. We support this change.
66	2	2B.20		X		(existing 2B.12): Pg 74 Line 20-25- changed from option to standard that W-11-2 is required with the in-street or overhead ped crossing sign. The Standard states shall not use at traffic control signal locations or ped hybrid beacon but option says you can use at ped crossings with flashing beacons? page 75 line 6 refers to section 2A.21 for mounting methods- but this is the section for Min Retro- I believe this is the wrong ref.
67	2	2B.21		X		This is another area that needs to be removed from the MUTCD. The Traffic Control Devices are the signs. How to set speed limits should not be in the manual. FHWA should say speed limits should be set using acceptable engineering practices, and point to some examples.
70	2	2B.25		X		On page 69, line 45 and page 70, line 8 -Add: (see Section 7B.02) after school zone
72	2	2B.27		X		(existing 2B.19): Page 83 line 19 error in figure reference should be 2B-5 instead of 1. This figure also contradicts information in 3D.06- where the fishhook was removed.
80	2	2B.40 (existing 2B.32)	X			Figure 2B.11 is new with new signs. This will change how we sign locations. Page 91 Line 46 is requiring the Keep right signs to be angled. This may be difficult to relay to the field during installation- How much of an angle?
81	2	2B.45		X		Page 93 Line 10 - "The All Traffic sign shall not be used to substitute for the Keep Right or Keep Left signs". Figure 2B-11 shows the all traffic sign as an alternate for keep right which contradicts this Standard.
86	2	2B.49		X		(existing 2B.41): Page 97, line 43: Suggested rewording- A Keep Right sign (R4-7 or R4-7c) may be used on a ramp median nose for wrong-way traffic control.
90	2	N/A		X		delete existing 2B.43: see comment in change 89
91	2	2B.51		X		(existing 2B.44): FHWA references 2B.51 this should be 2B.52
92	2	N/A		X		delete existing 2B.45: deleted the chevrons
94	2	2B.54		X		(existing 2B.47): New Standard Pg102 line 24 times and days for which parking regulations are in effect shall be posted if they are not in effect at all times of days of the week. Notified Traffic Safety
110	2	N/A		X		delete 2C.01: I believe a good statement and should be kept in manual. I have used this statement in correspondence to requests.

2020 MUTCD NPA Comments - Proposed 11th Edition

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
111	2	2C.02		X		(existing 2C.01): added the function inside the section title but did not add the function of warning signs. Add the support from previously deleted section of 2C.01.
114	2	2C.04		X		(existing 2C.05): changed table 2C-3 for stopped condition- for stop ahead, yield ahead, signal ahead, and intersection warning. I am not sure how this effects all these signs that are currently in the field.
116	2	2C.06		X		the speed differential they list is difference between the curve's adv speed and the roadway posted or 85th % speed which ever is greater- Does this mean you will have to complete a speed study on every curve. If a new facility we would obviously not have 85%.
117	2	2C.07		X		error page 124 line 7 should be 2C-4b and line 9 should be 2C-4a
118	2	2C.08 (existing)		X		We have locations installed where the LED flash from one sign to another- this would no longer be allowed.
120	2	2C.10 (existing 2C.12)		X		just a note- previously did not allow the one direction arrow at round abouts - now this is allowed and a new standard.
126	2	2C.18 (existing)		X		Error page 131 line 16 should be 2C-7
134	2	2C.36		X		Error- Page 137 line 11 Figures 2A-5 a and b do not show not show sign placement. Error line 46 should be 2C.45.
138	2	2C.41		X		Error- Page 139 Line 6 Figure should be 2C-9
142	2	2C.45 (existing 2C.40)			X	"Page 141, lines 14-17: It seems like the roadways have been mixed up and this needs to be changed to the following- When a Merge (W4-1) sign is installed on an entering roadway, the symbol should be oriented right or left as appropriate to depict the side from which the merge occurs, with the arrow representing the major roadway and the curved stem representing the entering roadway (see Figure 2C-1211). The sign should be located on the side of the entering roadway from which the merge occurs."
143	2	2C.46 (existing 2C.41)			X	"Page 141, lines 49-50, and page 142, lines 1-2: It seems like the roadways have been mixed up and this needs to be changed to the following- When an Added Lane (W4-3) sign is installed on an entering roadway, the symbol should be oriented right or left as appropriate to depict the side from which the roadway converges, with the straight arrow representing the major roadway and the curved arrow representing the entering roadway. The sign should be located on the side of the entering roadway from which the major roadway converges."
146	2	2C.49		X		Not sure I agree this new sign will accomplish the intended action- getting people to move over.
147	2	2C.50 (existing)		X		Error page 143 line 33 should be 2B.31
150	2	2C.59 (existing)	X			Note- changed info on establishing advisory speed.
152	2	2C.66 (existing)	X			note- Share the Road sign was removed
153	2	2C.67	X			This change would improve wayfinding for bicyclists by denoting when DEAD END or NO OUTLET signs are not applicable to bicyclists. We support this change.
156	2	2D.05 (existing 2D.06)		X		Page 159 line 1-3 standard contradicts the letter size on table 2D-2 sheet 2 of 2 for overhead. The standard is a shall statement for OH of 12 inches font with an option of 8 inch for less than 40 mph but table has limits of 35-55 has 8 inch. Needs to be consistent.
157	2	2D.07		X		Need to add parentheses on line 40 page 159
160	2	2D.11		X		References to sign M1-1a but is not shown in figure 2D-5. Need to show in this figure.
161	2	2D.12		X		Typo page 164 line 46 should say single not signal.
165	2	2D.34 (existing 2D.35)		X		Error page 172 line 4 should be M4-5P
167	2	2D.36 (existing 2D.37)		X		Error page 174 line 10 should be 2E.23 for Advance Guide Sign and 2E.50 for Supplemental Guide Signs. Line 36 figure reference wrong.
170	2	2D.40 (existing 2D.39)		X		Error page 176 line 37 should be 2B.35 and Figure 2B-9
171	2	2D.41		X		Figure 2D-14 reg signs for U and Left turns need to be shown where they are to be positioned on figure. Just floating on figure. Several errors that need to be addressed with figure.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
172	2	2D.45	X			This change would improve navigation for pedestrians. We support this change.
172	2	2D.45 (existing 2D.43)		X		Error page 179 line 17 should be 2A.08. Error page 180 line 34 should be 2A.20
173	2	2D.46 (existing 2D.44)		X		Error page 181 line 39 should be 2D-15
175	2	2D.49 (existing 2D.45)		X		Error on figure 2D-21 note figure references need to be updated with correct figures. Figure 2D-22 is the word TO necessary. Depending on number of lanes and interchange complexity we would utilize overhead versus ground mounted. Place option for OH on figure.
180	2	2D.55	X			These changes provide guidance and clarification on the installation of a new community wayfinding sign system. We support this change.
180	2	2D.55 (existing 2D.50)		X		New prohibiting italic, oblique, script, highly decorative fonts- this will be an issue with municipalities.
183	2	2D.58		X		Page 194 line 24 would prefer this to be a shall statement. Error page 195 line 30 should be 2E.54 instead of 2E.27 . Figure 2D-34 sign D6-4a should be D6-4aP
184	2	2D.59		X		How does one define "more susceptible to traffic incidents"?
184	2	2D.59		X		This entry without clearly defining "suseptible to traffic incidents" invites a lot of request for these signs. We have a few installed for major work zones and they were not very effective. However, some businesses like them because they believe it helps people navigate back to the highway.
188	2	2E.07 (existing)		X		Error page 202 line 18 should be 2D.36
190	2	2E.12 (existing 2E.14)			X	Error Line 2 should be 2A.07, Line 5 should be 2A.07 Line 7 should be 2A.07. Line 14 should be 2D.04. Table for expressway and freeways are wrong should be Table 2E-2 and 2E-3 for expressway and Table 2E-4 and 2E-5 for freeways. The added language "The minium numeral and letter sizes for OH mounted expressway and freeway signs shall be shown in the OH columns...,except where a larger minimum numeral or letter height is provided..." This will cause some locations to be required to be have 20 inch letters. We have used engineering judgement to determine the need for 20 inch letters and 48 inch shields in interstate to interstate movements.
192	2	2E.15 (existing 2E.10)		X		Agree- why are you then showing three destinations names or street names on Figure 2E-20- contradicts the guidance.
195	2	2E.18 (existing)		X		Error page 207 line 43 should be figure 2D-4. Directional arrow information conflicts with figure 2E-25 sheet 2 of 2.
198	2	2E.22 (existing 2E.31)			X	For Figures @E-3 Drawing C and D, these are poor examples that would create confusion for drivers. On Drawing C exit 11A should only be exit 11; Exit 11B should just be labeled exit 12. There is not a need to introduce the A & B exits here. For Drawing D Exit 25C should be Exit 26 for left to right, and from the other direction, exit 25 B should be exit 26. It would make more since having the same exit numbers going to the same road, regarless of which direction you are trveling from. No need to intrduce confusion
199	2	2E.23 (existing 2E.33)		X		Error page 212 lines 20-24 check E1-5 series references they are not listed in MUTCD. Line 35 not sure 2E.36 is the correct reference.
200	2	2E.24 (existing)		X		Page 213 line 25 remove (see Section 2E.24) and replace with this section. Error line 43 should be 2E-17.
201	2	2E.25 (existing)		X		Error page 216 line 5 should reference Chapter 4S instead of 4L.
202	2	2E.26 (existing)		X		Error line 38 narrow exit gore (E5-1c) sign is not shown in figure 2E-15. Error line 39 should be 2A.15.
203	2	2E.27 (existing)		X		Error page 217 line 20 should be E6-2 and E-62a
204	2	2E.28 (existing 2E.24)		X		In Section 2C.47 the lane ends merge (lt or rt) W-9-2 was removed; however, they are shown on figure 2E-23 as ground mounted and overhead. If removed from 2C.47 should be removed from this figure. Error page 218 line 40 should be 2B.31 instead of 2B.23. Error line 41 should be 2C.50 instead of 2C.43.
206	2	2E.31 (existing)		X		Error page 220 Line 24 and 35 should be 2C.12. Error line 43 should be 2D.36

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
207	2	2E.32 (existing)		X		Error in figure 2E-28 on note should be figure 2D.16 through 2D.18
208	2	2E.33 (existing)		X		Error in figure 2E-29 on note should be figure 2D.20
209	2	2E.34 (existing)		X		Error on Figure 2E-30 Note should say See Figure 2D-20 instead of 2D-15
210	2	2E.35 (existing)		X		Error on Figure 2E-31 Note should say See Figure 2D-19 instead of 2D-14
211	2	2E.36		X		Error on Figure E-32 Sheet 1 of 2. Sign for Exits 36-37 should be Morrisville Troy Hills instead of Morrisville Littleton and supplemental sign should be Littleton Exit 37 instead of Troy Hills exit 36
212	2	2E.37 (existing)		X		Error on line 19 with sign types E1-5fP through E1-5kP these sign types are not listed in table 2E-1.
213	2	2E.38		X		Figure 2E-34 should not be a left exit I-495 should be exiting to right.
214	2	2E.40 (existing)		X		**see figure 2E-37- they changed arrow directions to match lines 31-34.
214	2	2E.40 (existing 2E.21)		X		FHWA removed Pull-Through option on line 7 but left in standard on line 13. Figure 2E-37 conflicts with language in 2E40 standards listed in items B and C.
220	2	2E.50 (existing 2E.35)		X		I agree with no more than four supplemental traffic generator destinations shall be signed from a single interchange- however, there are conflicts with language under support indicates no more than one supplemental guide sign with no more than two destinations but in Standard indicates no more than four supplemental traffic generators- which one is it. Error under Guidance should be 2D.48 instead of 2D.46
222	2	2E.52 (existing)	X			agree but will be a hard sale
223	2	2E.53 (existing)		X		Error page 235 line 41 should be 2E-61. Page 236 line 2 should be 2B.67 not 2B.60.
224	2	2E.54 (existing)		X		Error under Support should be 2D.58 instead of 2H.07
226	2	2E.56		X		Error page 238 line 26 should say 2E-64
227	2	2E.57 (existing)		X		Error page 238 line 40 and 41 should say figure 2E-65
229	2	2F.02		X		Error page 241 line 1,4,6 should be 2A.07
230	2	2F.03		X		Error page 241 Line 31, 35 should be 1D.07 and Line 32 should be 2F.05 and 2F.16
231	2	2F.04 (existing 2F.05)		X		Section 2F.04 addresses toll rate signs for Toll Plazas. Option and guidance for a toll rate sign on open road tolled facilities has been omitted and thus not allowed per Section 1B.05. Provide text and/or figure(s) that provides the option to allow toll rate signs on open road toll facilities.
231	2	2F.04 (existing)		X		Error page 243 line 23 should be 2B.21.
232	2	2F.05 (existing)		X		Error Figure 2F-3 in sign labeling for R3-31 and R3-32P, there are reversed
234	2	2F.10		X		Error page 246 line 45 should be 2E.23 and 2E.25 instead of 2E.33 and 2E.36. Same line indicates see Section 2E.XX- what is this section?
236	2	2F.12 (existing 2F.13)		X		Section 2F.12 requires all guide signs for toll highways shall have a rectangular panel with "TOLL". This would include an exit gore sign for a tolled facility. Add option and guidance on how to use a "TOLL" panel with an exit gore sign to a tolled facility
236	2	2F.12 (existing)		X		Error page 248 line 3 should be Figure 2F.12, line 14 and line 25 should be W-16-17P instead of W16-20P.
237	2	2F.13		X		Add text to the option found on Page 250 lines 29-32 to allow a separate information sign to be located ON the tolled facility. As written, it can be interpreted that the sign is only allowed on the approach to facilities, where space is often limited. Add text to allow alternate wording for this separate sign such as "PAYMENTS ACCEPTED" followed by the pictographs of accepted agencies, up to a maximum of six. Reword page 248 lines 17-19 to remove the requirement of a black legend on yellow background TOLL panel for guide signs leading to a toll road for destination signs (D1 series) used on conventional roads at the entrance to a toll facility. If the requirement is not removed, provide guidance how to incorporate the TOLL panel into a D1 Series sign. In particular, address the case where one destination is tolled and the other is a non-tolled route.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
237	2	2F.13		X		Error page 250 line 9 keep reference to Figure 2F-6 and remove 2F-12. 2F12 does not have ONLY messages.
238	2	2F.17		X		Error page 252 line 35 and line 38 2F.12
239	2	2F.18-2F.19		X		
241	2	2F.19			X	North Carolina General Statue 136-89.213(b)(3) requires directions to a customer service center that accepts cash payments to be signed on each of its open road tolling facilities. Add an option and guidance for trailblazing signing to customer service centers to the Sections 2F.18 (Guide Signs for Entrances to ETC-Only Facilities) and 2G.19 (Guide Signs for Priced Managed Lanes).
242	2	2G.01	X			This change would clarify the language is this section in regards to preferential and managed lanes and bicycle facilities. We support this change.
243	2	2G.03		X		Error page 257 line 35 wrong chapter reference- 4M is incorrect. Page 258 line 23 should be 2A.14 instead of 2A.18. Add hyphen on page 250 line 33 between general Purpose
245	2	2G.05		X		Page 261 line 41 and 42 where are the signs referenced R3-11e, R3-11g, R3-14e and R3-14g located in the manual? Same comment for page 262 line 2 and 3. Line 12 what is R-311hP- should it just be R3-11P
247	2	2G.11		X		Error page 268 line 46 need to include figure 2G-8 and deleted figure 2G-15.
250	2	2G.20			X	There is no mention of Bus on shoulder. Why wasn't https://ops.fhwa.dot.gov/Publications/fhwahop15023/apb.htm#sb1 added into this section? Concerned with the amount of signing for variable conditions- we would be utilizing these is urban conditions and we will not have the spacing (1 mile, 1/2 mile) Also references section 3E.04 which requires pavement marking for example BUS ONLY - should be optional not a shall
251	2	2G.21		X		I am assuming this applies when all traffic is allowed to use shoulders versus just Bus. For Bus time can vary depending on traffic ques- Bus drivers make the decision when to use based on their rules; therefore placing any times would not be appropriate.
252	2	2G.22		X		A figure needs to be added to show a typical diamond interchange
253	2	2G.23		X		Error on line 50 should be 2E.28 and 2E.20 instead of 2E.28 and 2E.26. Error on page 278 should be 2E.57 instead of 2E.29. Note will required OH sign modification
254	2	2G.24		X		Error page 278 linr 36 misspelled word should be Arrow instead of Arow
257	2	2H.01 (existing 2H.02)		X		Error in support should be Secction 1D.11 instead of 1D.09 Section 2A.19 instead of 2A.03
258	2	2H.02 (existing 2H.01)		X		Error should be 2A.07 onlines 40, 43,and 45.
262	2	2H.06 (existing 2H.04)	X			Under Guidance only name of feature not watershed.
264	2	2H.08	X			Will no longer allow the interstate shield in the sign - will be text only. Our current future signs all have shield.
265	2	2H.09		X		Figure 2H-3 has too much information and funding sources are not needed.
266	2	2H.10	X			This added section would provide clarity and guidance on signs used for identifying a grade separation on facilities such as a railways, bikeways, and pathways. We support the change.
267	2	2H.11 (existing 2H.05)		X		Error page 285 line 23 should be 2A.14 line 25 should be 2E.22 and line 30 2E.22
271	2	2H.14		X		D9-19 sign is not shown in table 2H-1 need size. Second paragraph should be D9-19 instead of D18-1. Under Guidance ti references d9-11gP or D9-11hP- where are these signs? They are not in table of labeled in figure 2H-10.
272	2	2I.02		X		Remove "The Emergency Medical Service sign may be used for facilities that provide emergency medical care but do not operate on a full-time basis. " I believe motorist still have an expectation these facilites are open full time and if they are signed maybe misleading.
281	2	2I.14	X			This change will clarify the Standard for "Carpool and Ridesharing Signing (D12-2). We support the change.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
281	2	2I.14		X		Section 2I.14 allows for the use of websites and phone numbers to be displayed on Carpool and Ridesharing signing. Add option to allow similar use of websites and phone numbers only for account-only electronic tolling program information, especially those associated with HOV lanes.
285	2	2J.02			X	Saying specific service signs are for rural locations if no longer rural switch to General Service. Limiting Attractions to 4 panel. Not sure I understand the logic on limiting attractions to 4 panel. Remove empty blue sign if no panels.
289	2	2J.09	X			New figure and way to sign for collector distributor
293	2	2K.02		X		Standard indicates when used recreational and cultural symbols shall be white on brown but figures do not show this.
294	2	2K.04	X			Note- changing from 4 to 3 on an assembly. We could break up into two sign assemblies to mitigate issue.
295	2	2L.01		X		Error on line 45 should be 1A.05 instead of 1A.11
296	2	2L.02	Not Sure			Prohibits Alert messages on DMS other than Amber. We currently have state laws requiring us to do Blue & Silver. We also have an SOP for fugitive alerts which we have done a few times in the last 20 years.
296	2	2L.02		X		Error under Guidance line 12 should be 2G-18 instead of 2G-18. Error last paragraph should be 2H.04 instead of 2H.03. "transportation-related" will still create a debate. Can signs be placed for transportation public meetings? "Traffic control related" might be stronger language that would help us. Line 8 CMS should not be used in place of static guide signs. Is it only guide signs or should it be any static sign? Proposed Language: AMBER alert messages should be kept as brief as possible and display only that information which will direct road users to another source, such as broadcast or highway advisory radio, for detailed information about the alert. Other information, such as detailed descriptions of persons, vehicles, or license plate numbers, should not be displayed in an AMBER alert message on a CMS. Prohibits Alert messages on DMS other than Amber. We currently have state laws requiring us to do Blue & Silver. Lines 19/20 and 35/36 on page 318 seem similar and could be combined.
296	2	2L.02		X		Line 8: CMS should not be used in place of static guide signs". Is it only guide signs or should it be any static sign?
296	2	2L.02		X		Lines 19/20 and 35/36 on page 318 seem similar and could be combined.
298	2	2L.04		X		Address required text size for changeable message signs on Toll Rate Signs for direct entry into Express Lanes based on both speed and other context, such as single lane and multi-lane. Section 2L.04, recommended the letter height is solely based on speed limit. Page 321 lines 25-30 allows for full matrix LED modules with 20mm pixels to size text based on the applicable provisions, but no provisions are provided in the Manual for text size since the rate displayed is dynamic.
298	2	2L.04		X		Line 43, page 319 mistakenly refers to 6F.61. This Section is now 6L.06.
298	2	2L.04		X		Line 43, page 319 mistakenly refers to 6F.61. This Section is now 6L.06.
299	2	2L.05		X		Error on page 322 line 1 should be 1D.10 instead of 1A.15. Table 2L-4 example 6 is incorrect. I think their point is that road work can be displayed as roadwork.
299	2	Table 2L-3		X		Example 3, Comments should say "glances" not "glaces"
299	2	Table 2L-3		X		There is some missing text at the end of the Note under table 2L-3
299	2	Table 2L-4		X		Many entries in Comments column have "Table 2D-XX" and some text is cut off the right side of this column.
300	2	2L.06		X		Error under support should be 2A.19 instead of 2A.04
300	2	2L.06		X		Section 2L.06 discusses overuse and refers to 2A.04. I think it needs to be referring to the new section 2A.19.
301	2	2L.07		X		Error under guidance should be Section 2E.48 and 2E.40 instead of 2E.49 and 2E.50
304	2	2M.02		X		Error Line 26 should be 2A.09 instead of 2A.12
305	2	2M.04		X		Error page 326 line 3 should be General Service instead of General Information
309	2	2M.09		X		Error under standard line 6 should be 2E.50 instead of 2E.35. Error line 25 should be 2E.23. Error line 26 should be 2E.25. Error line 28 should be 2E.26. Error line 30 should be 2E.22.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
310	2	2M.10		X		Error line 43 and 46 should be 2D.56. Error line 48 should be 2A. 19. Error sixth paragraph references Miscellaneous Information Signs See Section 2H.04- this section was deleted, retitled and relocated to 2H.06. Error same page on line 44 should be 2A.02. Error line 46 should be 2D.45.
315	2	2N.05		X		Error aline should be 2B.04 instead of 2b>05.
520	2	2A.11	X			J. This is a great addition. For pedestrian activity near schools, it good the larger sign remains an option.
521	2	2B.25		X		On page 69, line 45 and page 70, line 8 -Add: (see Secion 7B.02) after school zone
N/A	2	2A.06		X		error page 46 on line 24 Table 2A-5 instead of Table 2A-2
N/A	2	2B.58 (existing 2B.51)		X		Page 106 line 31 new support item indicates Ped w/ Low vision might need additional figures other than TC devices to communicate prohibition of ped crossing. Not sure what this means - I don't think this statement needs to be in the MUTCD.
N/A	2	2D.02		X		Error page 157 line 19 should be 2A.20, 2A.21 and 2A.06
N/A	2	2D.03		X		Error page 157 line 43,46, and 48 should be 2A.07
N/A	2	2D.04		X		Error page 158 line 22 should be 2A.08
N/A	2	2D.38		X		Error page 175 line 31. 2A-5 does not show D15-1 signs.
N/A	2	2D-2 Table		X		Page 159 line 1-3 standard contradicts the letter size on table 2D-2 sheet 2 of 2 for overhead. The standard is a shall statement for OH of 12 inches font with an option of 8 inch for less than 40 mph but table has limits of 35-55 has 8 inch. Needs to be consistant.
N/A	2	2E.03		X		Error page 200 line 47 should be 2E.57 Error Line 48 should be 2H Error page 210 Line 4 should be 2I.14
N/A	2	2E.19		X		Error page 209 line 9 should be 2A.13 and line 10 2A.14.
N/A	2	2E.30		X		Error page 220 line 9 should be 2E 23 and 2E 26 instead of 2E.23
N/A	2	2E.43		X		Error 2A.17 should be 2A.13.
N/A	2	2E.44		X		Error 2E.11 should be 2E.21.
N/A	2	2E.47		X		Error 2D.41 should be 2D.43
N/A	2	2F.15		X		Error page 251 line 48 should be 4R.02 instead of 4K.02
N/A	2	2F.16		X		Error page 252 line 12 4K.04 is wrong reference. Line 21 should be 4R.02 instead of 4K.02
N/A	2	2G.02		X		Error page 256 line 22, 25, 27 should be 2A.07 instead of 2A.11.
N/A	2	2G.18 (existing 2G.17)		X		In Section 2G.18, add a standard, option or guidance to clarify when to use "TOLL" or "TOLLS" when there are multiple Toll Rate Modules on one Toll Rate Sign (R3-48 or R3-48a).
N/A	2	2G.18 (existing 2G.17) and 2G.19 (existing 2G.18)		X		In Sections 2G.18 and 2G.19, add a standard, option or guidance to clarify if the use of "LANES" terminology is required when there are multiple express lanes, and what language to use on a facility with both single express lanes and multiple express lanes in different segments. For the last segment of an Express Lane facility, NCTA uses "END EXPRESS LANE" on toll rate signs (R3-48(a)) and the Exit Destination Signs for a Managed Lane (Figure 2G-25). Add option and guidance to Sections 2G.18 and 2G.19 to allow the use of the message "END EXPRESS LANE" on Toll Rate Signs (R3-48(a)) and Exit Destination sign for a Managed Lane (Figure 2G-25).
N/A	2	2J.04		X		Error page 308 line 2 should be 2A.10, 2E.13 and 2E.14
N/A	2	Figure 2A-2 and 2A-3		X		Error Note section should reference Section 2A.15 instead of 2A.19
N/A	2	Figure 2A-4		X		*** should reference 2B.30 instead of 2B.22
N/A	2	Figure 2A-4 sheet 4 of 4		X		should have an only on both overheads
N/A	2	Figure 2C.14		X		Example for converging and entering roadway figure. Sign W4-1L -placement of this sign may lead someone to believe they have the thru movement and others on the mainline will be merging. Instead they need to be merging. Also figure is showing two lanes merging into one lane- who has the right of way. Drawing needs to be revised.
N/A	2	Figure 2C-3		X		Removed the chevrons from the figure. This will cause issues especially on Design Build Proj. because not required. We may need to look at a standard to include as an option. Sheet 3 of 5 the W1-6 sign placement is odd.
N/A	2	Figure 2G-18		X		Address required text sizes for static elements of Toll Rate Signs (R3-48(a)) for direct entry roadways to express lanes from conventional roads.
N/A	2	Figure 2G-25		X		Update the title for Figure 2G-25 to be "...for a Priced Managed Lane".

2020 MUTCD NPA Comments - Proposed 11th Edition

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
N/A	2	Figure 2A-2 of 4 Sheet		X		Why is the overhead sign for right turn lane have an only - it is a developed lane. These are large arrow per lane signs on a conventional road- do we need to be showing this type of application for this roadway type. Also do you need an only for a straight through movement. This will also restrict view of signals as well. The design of the OH sign will not fit- too large for all these lanes- will have to reduce font size to get arrows over the center of each lane. Sign Schedule- indicates D series signs- do we follow overhead font sizes or D - confusing?
N/A	2	Figure 2A-3 of 4 Sheet		X		Same comments as on figure 2A-4 sheet 2 of 4. Also the alternative signing at overhead location for Malpe Street shouldn't it show left turn arrows instead of down arrows.
N/A	2	Table 2L-3		X		Example 3, Comments should say "glances" not "glaces". There is some missing text at the end of the Note under table 2L-3.
N/A	2	Table 2L-4		X		Note under table says CMS display is generally limited to 8 characters. Also typo in word "characters" in this note. Many entries in Comments column have "Table 2D-XX" and some text is cut off the right side of this column.
320	3	3A.04			X	Disagree that normal line width should be 6" on any road over 40 mph. The research that this is based upon is good research conducted by a very reputable scientist and engineer. However, the concern is that the equipment used for this research was dated equipment. The purpose of the widerline is to help with the Self Driving vehicle. Since that research was completed, the technical improvements in cameras, and video analytics has greatly improved. This change has an enormous cost to it. In North Carolina, we are using more 6" lines and have safety studies that support using them when there are lane departure concerns. However, there is little added benefit if any in many cases. We are seeing that the material and material life expectancy is more important.
321	3	3B.01			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
324	3	3B.04			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
325	3	3B.05			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
326	3	3B.06			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
326	3	3B.06		X		Text mark-up document states Figure 3B-10 has five (5) sheets - it is actually six (6) sheets. Text mark-up states Figure 3B-13 has two (2) sheets but only "(Sheet 2 of 2)" is included in the Combined Figures file for Part 3.
327	3	3B.07			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
329	3	3B.09			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
332	3	3B.13			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
341	3	3B.27		X		Some municipalities have concerns regards to blue versus white for accessible spaces.
343	3	3B.28		X		On page 323, line 19 -Add: (see Section 7B.02) after school zones
344	3	3B.29		X		Text mark-up document states "Figure 3B-28" and "Figure 3B-29" but neither figure is included in the Combined Figures file for Part 3.
345	3	3B.31		X		Agree with FHWA changes, Can't find Figure 3B-29
346	3	3C.01		X		Matt Magnasco had an issue with this with regards to marking ALL midblock crosswalks/crossings.
346	3	3C.01		X		Page 368 Line 4, Unclear what a "non-intersection" is. The rest is covered by our Standards. NCUTCD committee voted to change to "At non-intersection locations that established by the agency to be a crosswalk, crosswalk markings shall be provided"
348	3	3C.03		X		Page 370 Line 14, Unclear what a "non-intersection" is. Page 370 Lines 24-25 need clarification
350	3	3C.05		X		Matt Magnasco had an issue with this with regards to spacing uniformity of longitudinal markings (why can't lane width and wheel spacing be taken into consideration?). If not, can this be added to the NC Supplement.
350	3	3C.05		X		Would "Uniform" spacing not allow our wheel track crosswalk markings?
353	3	3C.11		X		Can't find Figure 3C-3, nothing to compare to what we have previously done on DDIs

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
355	3	3D.01		X		Figure 3D-8: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
358	3	3D.06		X		Need to discuss
360	3	3E.02			X	Disagree that normal line width should be 6" on any road over 40 mph See NOTE in Item 320
362	3	3E.04		X		Text mark-up document does not state that Figure 3E-5 has two (2) sheets, but two sheets are included in the Combined Figures file for Part 3.
362	3	3E.04		X		Don't agree that markings should be a shall condition.
367	3	3H.03	X			Some organizations are concerned about the prohibition of colorful crosswalks (say they play a key role in pedestrian safety and support community character/neighborhood vitality). FHWA requests comment on how allowing more intricate designs and bright colors around standardized crosswalk markings improves the safety or operations at and around the crosswalk, while maintaining the recognition of the crosswalk.
367	3	3H.03		X		Figure 3H-1: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
368	3	3H.04		X		Figure 3H-2: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
369	3	3H.05		X		Figure 3H-3: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
370	3	3H.06	X			Questions raised about solid vs dashed green-colored paint when crossing an intersection (more visual?) Options are allowed based on FHWA's Interim Approval IA-14, April 15, 2011, and can be viewed at the following Internet Web site: http://mutcd.fhwa.dot.gov/resources/interim_approval/ia14/index.htm .
370	3	3H.06		X		Figure 3H-4: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
371	3	3H.07	X			Some organizations are concerned about the inclusion of text regarding an engineering study to justify the use of red-colored pavement
371	3	3H.07		X		Figure 3H-5: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
372	3	3H.08		X		Figure 3H-6: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent. Text mark-up document does not state that Figure 3H-6 has two (2) sheets, but two sheets are included in the Combined Figures file for Part 3.
373	3	3I.01		X		FHWA needs to define "not permanent" on Page 395 line 24. This definition should be based on Section 6N.01. Can they use any color device?
373	3	3I.01		X		"Emergency incident and planned special events... do not necessitate police officers or other authorized personnel to obtain and deploy channelizing devices to match the color of the existing pavement marking" Why not? Can they use any color or not at all? What is requirement? This is not clear.
374	3	3I.02		X		All of our approved products meet this section's standard and our standards agree with the changes. Can't find spacing reference in Section 3B.11 noted on line 3 of page 396
376	3	3J.02		X		Figure 3J-1: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
378	3	3J.04		X		Figure 3J-3: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
379	3	3J.05		X		Text mark-up document does not state that Figure 3J-4 has two (2) sheets, but two sheets are included in the Combined Figures file for Part 3. The titles of Figure 3J-5 in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
380	3	3J.07		X		Figure 3J-6: The titles of this figure in the Text mark-up document and the Combined Figures file for Part 3 are not consistent.
521	3	3B.28		X		On page 323, line 19 -Add: (see Secion 7B.02) after school zones

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
383	4	4F.02			X	We disagree with the concept of the bimodal section being steady yellow/flashing yellow. Previous version of the MUTCD made the bimodal choice green arrow/FYA and is the choice NC has in operation. We favor this operation because then the top sections of the head are reserved for the change/clearance intervals .
383	4	4F.08			X	We disagree with the concept of the bimodal section being steady yellow/flashing yellow. Previous version of the MUTCD made the bimodal choice green arrow/FYA and is the choice NC has in operation. We favor this operation because then the top sections of the head are reserved for the change/clearance intervals .
383	4	4F.09			X	Answer similar to above
383	4	4F.15			X	We disagree with the concept of the bimodal section being steady yellow/flashing yellow. Previous version of the MUTCD made the bimodal choice green arrow/FYA and is the choice NC has in operation. We favor this operation because then the top sections of the head are reserved for the change/clearance intervals .
383	4	4F.16			X	Answer similar to above
384	4	4A.05	X			This added section would provide clarity on the design, operation and uses of the proposed bicycle traffic signal indications. The installation of bicycle signal faces to control bicycle movements at various locations and conditions will be optional.
384	4	4A.05		X		Why "cautiously" for bikes. Inconsistent with CIRCULAR GREEN for vehicles or WALK for Pedestrians. All users should enter cautiously on a green, not just bikes or vehicles on a yellow or flashing display.
384	4	4A.05		X		Line 39: add "on the same approach" immediately after the word "right". On page 405 line 41, add "on the same approach" immediately after the word "left"
386	4	4B.02	X			This change provides new guidance that a traffic control signal is not a proper measure to control speeding. We agree that other approaches like roadway design features should be used instead.
390	4	4C.02-4C.10			X	Concern with changing from standard to guidance for signal warrants. This is ok with regards to allowing the flexibility to consider other traffic control devices - signal should be considered versus shall. Concern is that guidance may imply that warrant criteria does not have to be met before a signal may be installed. One of the signal warrants should be satisfied before installing a traffic signal. Standard 4C.01 requires analyzing all the warrants. This seems to override the changing teh Warrants to just Guidance. Sees like they would be consistent. Make Standard or make Guidance.
392	4	4C.05	X			Concern that the threshold for pedestrian volumes is too high (higher than threshold for cars on minor street) The change provides an option to apply the criteria for major-street traffic volumes separately for each direction if a raised median is present to provide pedestrian refuge. This should be ok because two-stage pedestrian crossing applications are common.
393	4	4C.08	X			Pedestrian crash requirement? This change would provide an improved traffic signal warrant criteria for crash experience since the basis of the threshold of five or more crashes is not known. Both vehicular and pedestrian crashes are accounted for in the technical conditions where each reported crash considered is related to the intersection.
394	4	4D.01	X			We agree that it is important to account for all modes of travel when evaluating mobility and safety. This change would also clarify that if the signal faces have backplates with yellow borders that the backplates should be covered and that if the signal faces are turned they should be oriented so that the yellow backplate borders will not reflect light back to any approaches of the intersection.
395	4	4D.02	X			Some organizations want 4D.02 to upgrade the guidance to provide pedestrian signal heads at each marked crosswalk at a location controlled by a traffic control signal to a standard.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
396	4	4D.03	X			Is "Provisions for Bicyclists" going to become Section 4D.03 and is "Provisions for Pedestrians" moving to Section 4D.02? If so, what is happening to existing Section 4D.02 "Responsibility for Operation and Maintenance"? This added section would provide clarity on the design, operation and uses of the proposed bicycle signal faces.
398	4	4D.06		X		Figure please - New guidance 3 ft separation between left-turn faces and heads for different movements/same approach
400	4	4D.08			X	Think max head height should remain a standard
403	4	4E.01			X	Historically the position of the display would be backup for know what action to take. If the same signal section is allowed to display multiple color indications, then this removes a key redundancy that is critical. We are not in favor of allowing steady indications sharing the same face. Difficult for colorblind drivers to observe difference in colors
405	4	4F.01		X		Line 45: Incorrect reference to 2C.46 - please change to 2C.44
406	4	4F.02 P6		X		Existing wording about combined thru-left turn lane indications is better than the new.
412	4	4F.16		X		Charles Abel had issues with this one.
412	4	4F.16		X		We broadly agree with the concept of green and yellow arrows for these intersections, we find that the requirement to designate a major movement and provide two indications for that movement to be overblown in particular for one and two-lane approaches. Two heads is all that should ever be required for these conditions.
413	4	4F.17		X		Disagree with the Support statement that only names the ITE procedure
414	4	4D.27		X		Isn't the existing language safer for pedestrians to avoid potential conflicts with emergency vehicles and buses similar to boats and trains? We do support the change to display a distinctive indication for law enforcement personnel to point out preemption based on the NTSB recommendation in order to improve safety.
417	4	4H	X			IS there enough consensus on the use and operation of Bicycle signal faces to include in the manual? include horizontal heads in figure 4H-1
417	4	4H	X			This added chapter will provide clarity and guidance on the application, design and operation of bicycle signals to control bikeways or bicycle lanes at signalized intersections.
420	4	4I.02	X			Figure 4I.02 shows non countdown why?
420	4	4I.02	X			This change provides clarity on the Walking Person and Upraised Hand symbols. We agree with this change because the guidance seems appropriate given these symbols could be slightly visible when not illuminated.
422	4	4I.04	X			This change provides clarity on the red clearance interval in order to account for an overlap.
423	4	4I.05	X			This change provides clarity on the meaning of easy activation and also provides additional criteria and guidance for the placement of pushbuttons which should be used for actuated signal designs and audible pedestrian signals.
424	4	4I.06	X			This change allows a reduction in the minimum buffer interval to 2 seconds based on the research study completed by Delaware DOT to allow flexibility for signal timing optimization. We agree with the changes because pedestrians do not typically wait on a paved shoulder and the clearance time calculations should be based on the crossing distance starting from the edge of pavement.
424	4	4I.06		X		P2 should clarify that it refers to regular signal
426	4	4J.02	X			Broadly agree with the changes to this section, however, anywhere an APS is listed as a "should" in the manual, guidance should point to the basis of installing these things after a study is performed as stated in 4K.01 lines 11-22
426	4	4J.02	X			We agree with the changes outlined for the design of pedestrian hybrid beacons because they seem appropriate based on the research and case studies completed as part of the FHWA evaluation of pedestrian hybrid beacon installations at or near intersections and other field experience.
427	4	4J.03		X		Option beginning line 39 page 478 - what is minimum dark time? Provide definition
427	4	4J.03		X		Guidance line 48 page 478 referring to yellow times doesn't match new guidance on 4F.17 yellow clearances now that hybrid beacons are allowed at intersections.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
427	4	4J.03		X		Is 8D.09 the correct reference or 8D.10 - line 8 page 479
428	4	P9				Which Section is FHWA proposing to change existing Option P9?
432	4	4L	X			What is happening to existing Chapter 4L Flashing Beacons - is it being renumbered? This new chapter will provide guidance for application, design and operation of rectangular rapid-flashing beacons (RRFBs) which are used to enhance safety for pedestrians.
432	4	Figure 4L-1		X		The guidance related to Figure 4L-1 is vague as to whether both sets of RRFBs flash simultaneously-we think they should be independent. Also, We think the signs should be double mounted and with RRFBs on both sides and operate as independent crossings.
438	4	4S.01	X			incorrect reference-should be 2E.25. pg501 line 14
443	4	4T.01		X		reference 2B.63 not correct?
445	4	4T.04			X	When will you choose not to clear all opposing traffic? Maybe stay a Standard.
N/A	4	4A.10		X		Keep the word "agency" (it is shown as a red strike-out).
N/A	4	4A.10		X		On page 407 line 35, the word "agency" should remain and a period should be added immediately following the word "agency".
N/A	4	4B.04		X		Lines 19 and 20: Prefer existing wording.
N/A	4	4B.05		X		Line 46: prefer "increased" to "higher"
N/A	4	4D.04		X		In Guidance of Paragraph 4, remove "protected only" from text for left turns. Some dual lefts operate as protective/permissive or with variable phasing. These (and all) dual lefts should also have 2 or more signal faces, even if not the major movement.
N/A	4	4E.04			X	This change completely contradicts the entire purpose of the MUTCD. Why allow different displays from the same section? There will not be uniformity with this allowance. Lines 15-20: What? This is confusing and maybe contradictory to earlier statements on the position of fya indications.
448	5	Part 5			X	This New section is premature. The Self Driving work is all tailored around existing conditions, and TCD. This section should be removed especially from the rule making process.
N/A	6	6M and 6P			X	These chapters are application chapters and should not be part of the Manual. The TCD in the manual are covered elsewhere. Chapter 6M even states they are not TCD.
505	6	6M.04			X	Make a continuous detectable edge for pedestrians a should condition, from "when determined". Recommend leaving it as it was.
516	6	6P.01		X		FHWA proposes adding 8 new Typical Application figures describing work impacting bike facilities 6P.01b and 6P.01k changes suggest an Option note for the use of positive protection during mobile or short-term operations. Use of positive protection is not typical for mobile operations. Should consider other mitigation strategies if possible. 6P.01g proposes deleting the requirement for stop lines for intermediate-term closures using traffic signals on two lane roadways. Consider defining a duration that would require the stop lines. For example, "If greater than 3 days, stop lines shall be installed..." Paint striping is relatively inexpensive and easy to install and remove and increases safety to avoid head-on collisions.
517	7	7A.01 & 7A.02	X			Consolidates chapter 7A from 4 parts to 2 parts. Support change, But Figure 7A-1 not shown
518	7	7A.01	X			Changes P1 7A.04 to 7A.01 as support instead of standard. Support the change but question legalities
518	7	7A.01		X		remove reference to other chapters. Should simplify not remove completely. Manual is confusing enough.
522	7	2B.10	X			Section 2B is a great addition. However this comment is specifically to the Guidance on page 61, line 17-22. Tied to 7C.01
522	7	7B.03	X			Why is there no guidance when to apply a designated school zone like warrants?
522	7	7B.03	X			School crossing Assemblies on roundabout or channelized right controlled by a Yield. No figures, hard to visualize the assemblies
522	7	7B.03		X		Correction: Page 607, Line 29- Section 2B.20 should be Section 2B.19.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
522	7	7B.03		X		accordance with the provisions of Section 2B.20 2B.19, in advance of a marked crosswalk that crosses an uncontrolled multi-lane approach within school zones.
522	7	7B.03		X		The In-Street Pedestrian Crossing (R1-6 or R1-6a) sign (see Section 2B.12 2B.20 .
522	7	7B.03			X	Line 17 section# should read 2B.19. Line 19 section # should read 2B.20.
526	7	7D.01			X	Guidance. Should ADD Crossing guards should have: (j) appropriate training for their safety and childrens safety.
N/A	7	7C.01	X			Renumbering but not listed as a modification number.
Various	8				X	We do not agree that the term Diagnostic Team should be placed in a MUTCD standard. The federal rule referenced has been around for over 20 years and three revisions to the MUTCD, why is it so important now?
528	8	8A.01		X		A support statement includes reference to the AREMA Communications and Signals Manual. With the introduction of highway-busways grade crossings into Chapter 8, APTA (American Public Transportation Association) recommended practices would appear applicable for busway systems. For example, APTA BTS-BRT-RP-003-10 recommended practice discusses intersection treatments for busway systems. Therefore, consider APTA recommended practices for inclusion in Chapter 8 as part of the support statement and elsewhere in the Chapter as applicable. If APTA is incorporated into Chapter 8, consider adding it to 1A.05 "Relationship to Other Publications."
528	8	8A.01		X		Chapter 8 now includes provisions for highway-busway crossings. Therefore, consider incorporating highway-busway grade crossings into the introduction language. As an example, " <i>Chapters 8A, 8B, 8C, and 8D describes the traffic control devices that are used at highway-rail, highway-LRT grade crossings, <u>and highway-busway grade crossings</u>. Unless otherwise provided in the text or on a figure or table, the provisions of Part 8 are applicable to both highway-rail, highway-LRT grade crossings, <u>and highway-busway grade crossings</u>.</i> "
529	8	8A.02		X		A guidance statement references a location controlled by a traffic control signal, a pedestrian hybrid beacon, or an emergency beacon. However, the guidance only say the traffic control signal should be provided with preemption. It does not include the pedestrian hybrid beacon nor the emergency beacon. Consider rewriting to: " <i>If a highway-LRT grade crossing is equipped with a flashing-light signal system and is located within 200 feet of an intersection or midblock location controlled by a traffic control signal, a pedestrian hybrid beacon, or an emergency-vehicle hybrid beacon, the highway traffic <u>/pedestrian</u> control signal <u>or beacon</u> should be provided with preemption in accordance with Section 4D.274F and 8D.10 unless otherwise determined by a Diagnostic Team.</i> "
530	8	8A.03		X		Additional changes at a grade crossing that should be listed for consideration by a Diagnostic Team include: additional tracks, increased speeds (trains and/or vehicles), change in train frequencies, and addition of driveways on roadway near grade crossing or between grade crossing and intersection.
530	8	8A.03		X		Under the support, the proposed language introduces the AREMA Manual and ITE Preemption of Traffic Signals recommended practices. Consider adding the USDOT Highway-Rail Crossing Handbook as well as APTA (American Public Transportation Association) recommended practices.
530	8	8A.03			X	This standrd has too high of a mark. Consensus is more than a simple majority. In many cases the only way to get consensus is to get agreement with the most stubborn individual of the group. This tends to be the Railroad representatives. These actions have increased the cost traffic control devices around railroad tracks by a factor of 5 if not more. In order to have concensus, it must be documented. These standards that have introducee the Diagnostic Team and the imporatance that the MUTCD has placed on them will be subject to endless tort discovery. Who was on the team, when did the team meet, what was the vote, where are all the documents showing these.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
534	8	8A.07		X		Section should be renamed to be "Minimum Track Clearance and Clear Storage Distance" (or include both in title), as both are introduced and defined here and are of equal importance when referring to clearing vehicle queues off of tracks and distances required for clearance
534	8	8A.07		X		Under condition A in the support statement, the stop line when it is present would be the desired (or normal) stopping point for vehicles. Consider rewriting condition A as follows: <i>"If an automatic gate is present on the approach, the upstream point is the <u>greater</u> portion of the automatic gate <u>or the stop line when present</u> that is farthest from the nearest rail."</i> This would also be consistent with text further in the Chapter which references the downstream point as being the intersection stop line, yield line, or normal stopping point on the highway.
535	8	8A.08		X		Support and guidance statements in this section reference 200 feet and 100 feet. While they note this is measured along the highway between crossings (or similar type language), they do not mention where this is measured from until paragraph 3 under a guidance statement (which mentions between inside rails). As these references are in guidance and support statements with the decision on crossing treatments to ultimately be decided by the diagnostic team, consider eliminating the aforementioned reference to inside rail for consistency. Or as an alternative identify where these measurements are taken for the others.
536	8	8A.09		X		The proposed language changes a standard to a guidance for removal of improperly or no long applicable traffic control devices for a crossing elimination. Consider reverting back to a standard. The continued presence of improper or no longer applicable devices may confuse a motorist, or worse, breed disrespect for these type devices where their use may otherwise be warranted. For instances, where a crossing is eliminated by a road closure using barricades, the continued visibility of these devices may mislead a motorist into believing that the crossing is still accessible. Also, a closure may occur not only due to roadway modifications, but also due to track being abandoned. In the case of track abandonment where the roadway remains, the devices need to be removed or their continued presence will give motorists incorrect or misleading information. Finally, certain classes of vehicles may need to continue stopping if unwarranted devices remain in place even if the location were posted as "Exempt" in some states.
538	8	8A.13		X		Consider a typical drawing detailing the "BUS XING" markings.
538	8	8A.13		X		A proposed standard requires a bell or other audible device for each pathway or sidewalk approach to the crossing. This implies a separate bell for "each approach" versus one bell for "the crossing" as may be typical at other type grade crossings (reference 8D.4 where it requires a bell for LRT crossings rather than for each approach). Consider rewording to: <i>"If an active busway grade crossing warning system is used at a pathway-busway or sidewalk busway grade crossing, a bell or other audible warning device shall be provided for <u>the crossing</u> each pathway or sidewalk approach to the crossing."</i>
538	8	8A.13		X		Consider retitling section from "Busway Grade Crossing" to "Highway-Busway Grade Crossing" for consistency with other Section titles and descriptions (i.e.: highway-rail grade crossing, highway-LRT grade crossing).

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
538	8	8A.13			X	STRONGLY DISAGREE - Should busways be incorporated into Chapter 8, or be a new Chapter. The utilization of highway-rail and highway-LRT crossing styled gates and lights for a busway sets a precedence. This application should be supported by extensive research before being allowed. Otherwise, these systems will potentially promulgate on busways throughout the transportation infrastructure, desensitizing the public to them and gradually decreasing their effectiveness. The application of these critical systems should be limited to their originally intended purpose - to warn motorists of the approach of a steel wheel on steel rail mode of transportation which has very limited stopping capability (which in the case of a freight train, may require over mile of stopping distance) with no opportunity to change direction versus a rubber-tired vehicle which can stop quicker and may have a higher level of maneuverability. In addition, the MUTCD provides other treatment options for busways such as preempted or priority traffic signals. Of note, if the decision is made to move forward with allowing the use of highway-rail and/or highway-LRT style devices at highway-busway crossings, Chapter 8 should be further reviewed to ensure standards, guidance, and options specify whether they are individually applicable to steel wheel, rubber-tire wheel, or both throughout.
541	8	8B.03		X		A proposed standard requires a crossbuck at gated highway-LRT crossings in a semi-exclusive alignment. It appears counter intuitive to consistency and safety to require a crossbuck on semi exclusive LRT crossings with gates, but not those without. Motorists, especially those unfamiliar with an area, may not readily distinguish the difference between a heavy rail and a light rail crossing.
542	8	8B.04		X		A proposed guidance statement addresses a T-intersection. Consider adding verbiage to address other type multiapproach intersections which would recommend shifting stop or yield control to the roadway with no crossings across an approach to avoid vehicles stopping on the tracks. Also, there may be benefit to including reference to Section 2B.06 so that practitioners do not overlook it (<i>STOP signs and YIELD signs shall not be installed on different approaches to the same unsignalized intersection if those approaches conflict with or oppose each other</i>).
542	8	8B.04		X		Depending on site characteristics, the "TO TRAINS" may be confusing. Therefore, the use of the "TO TRAINS" should be an option as determined by a Diagnostic Team and not a standard. Concur with the prohibited use of the stop sign as proposed.
542	8	8B.04		X		Especially being it is a standard, consider rewording sign height requirements to " <i>shall be at least 5 feet in rural areas, but at least 7 feet in areas where parking or pedestrian movements are likely to occur.</i> " The proposed language does not support all potential options (for instance, an urban area with no parking or pedestrian movements). In addition, rural and urban are not definitively definable.
544	8	8B.06		X		For the proposed language in condition E of the standard statement, it appears counter intuitive to not require a crossbuck at LRT crossings without gates, but to require a grade crossing advanced warning sign in instances where crossbucks are not used at highway-LRT crossings (as allowed under 8B.03).
544	8	8B.06		X		Reference is made in the Section to " <i>distance from edge of the track</i> " which might be interpreted to be the edge of the track ties. Other sections reference distances from rail. Therefore, consider rewording to " <i>distance from nearest rail of the track</i> ."
545	8	8B.07		X		Consider removing the verbiage " <i>Except where pre-signal is installed.</i> " The R8-8 sign should be installed on any approach where queueing is possible, even if a pre-signal is present. External conditions such as ingressing movements, aggressive drivers or those who may disobey the pre-signal, could create an intermediate queueing situation where traffic could foul the tracks even with pre signal present.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
546	8	8B.08		X		Under the proposed option statement for retaining low clearance signs, removing tracks or covering them will not necessarily remove the low clearance condition. Recommend developing further language addressing the need for alternate signage where a poor roadway profile with low clearances may remain.
547	8	8B.16			X	Consider changing the proposed guidance to option for warning and regulatory signs. Due to different configurations and clearances of similar type vehicles (such as trucks), the use of regulatory signs should be limited to more extreme cases versus prohibiting a complete class of vehicles. Change "....word message <i>warning signs and selective exclusion regulatory signs</i> (see Section 2B.52) for specific vehicle types and combinations should <u>may</u> be used in addition to, or in place of, the Low Ground Clearance Grade Crossing (W10-5) sign."
547	8	8B.16			X	Disagree with concepts as presented because the proposed language identifies certain types of low clearance vehicles. Instead, recommend identifying roadway profile/characteristic as a criteria where the signs are warranted versus vehicle type. There are numerous legally allowable configurations and combinations of vehicles on a roadway and any of these combinations might use a particular grade crossing (including those where they may be prohibited). While the focus has been on larger vehicles, sports cars and "low-rider" sedan type vehicles may also present hang-up issues. Identification of specific vehicles as proposed may create legality issues for an agency if such a vehicle becomes hung up and the crossing was not signed even though that particular type vehicle was not a regular user of the crossing.
547	8	8B.16			X	Under the guidance statement for detour signing, consider revising to "A signed detour should be installed <u>considered</u> to guide potential hang-up vehicles to alternate nearby crossings to avoid the potential hang-up condition." There are cases where detours may require extensive rerouting and signing would not be practical. Therefore, detour signing should be considered, but installation of detour signing not necessarily installed. In certain cases, an agency could instead consider coordinating with GPS mapping agencies to eliminate potential routes for trucks where they might get hung up.
552	8	8B.26			X	The guidance statement proposes that the ENS signs be mounted approximately parallel to the roadway or pathway. Consider retaining current orientation requirement that the sign be oriented so as to face highway vehicles on or at the grade crossing (or change proposed language to orient the sign perpendicular to the roadway or pathway). Parallel orientation to the roadway, as proposed, may introduce sign obstructions especially when sign is mounted on the gate mechanism support as well as require a highway user to foul the tracks to read the sign.
555	8	8C.03		X		Consider additional guidance for stop line requirements where queue cutter signals and pre-signals are installed. Recall in Chapter 4 that the minimum distance from a traffic signal head to the stop line is supposed to be 40 feet; whereas, the stop line for a crossing is 8 feet in advance of the gates or lights and 15 feet from the nearest rail in Chapter 8. This can create different stopping points based on if the pre-signal or queue cutter signal is to be obeyed or the crossing signal.
556	8	8C.05		X		(30) (Appears to be a typo in the NPA): Recommend language be added to address the maintenance of crossings which use panel type surfaces. During railroad performed maintenance, panels may be removed, but not reinstalled back into their original place. Therefore, the markings may become disjointed. Therefore, consider modifying sentence to read: " <i>The edge lines and lane lines may be omitted from the highway surface at a grade crossing if the surface cannot retain the application of the edge line or lane line markings, or if railroad maintenance of modular crossing type surfaces (such as concrete panels) may create marking continuity issues through the grade crossing.</i> "

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
557	8	8C.06			X	The proposed option statement allows the use of Do Not Block Box (DNBB) markings with dynamic envelope markings. Unless research has documented a benefit to extensive cross-hatching using both dynamic envelope and DNBB markings at the same crossing, recommend that the dynamic envelop not be used in conjunction with DNBB markings. If DNBB markings are the area where a vehicle isn't supposed to stop (which may encompass the dynamic markings area), the dynamic markings themselves would appear redundant and convey no apparent additional information to the vehicle operator. However, do concur with allowing cross-hatching as an option inside the dynamic envelope if used alone.
559	8	8D.02		X		Consider rewording the guidance statement addressing vehicles turning towards the crossing to eliminate references to design vehicle as there are multiple configurations/lengths of vehicles which may exceed the design vehicle. In addition, it may be advantageous to provide advanced warning to all vehicles prior to them making the turn towards the crossing even if there is more than sufficient storage. Rather, specify some type physical dimension such as: <i>"Where the distance between the nearest edge line of a travel lane of an intersecting highway to an approach to a crossing is less than 50 feet as measured from the crossing approach stop line to such edge line, the Diagnostic Team should consider providing additional flashing-light signals aligned toward the movement turning toward the grade crossing."</i>
560	8	8D.03		X		A proposed support statement allows rectangular lights of approximately the same size as the circular lights on gate arms. However, it is not necessarily the size of the fixtures, but rather the area of the illuminated surface that is critical. Suggest rewording: <i>Rectangular red lights of approximately the same size illuminated surface area are sometimes used-permissible on gate arms instead of circular lights.</i>
562	8	8D.05		X		A proposed standard statement requires that if an exit gate is present, the queue clearance time shall be long enough to permit the exit gate to lower after the design vehicle (of maximum length) is clear of the minimum track clearance distance. Though dynamic operations is discussed in the guidance following, consider adding verbiage to clarify and support that operationally, this queue clearance time may vary during different events with dynamic gate operations.
562	8	8D.05		X		Proposed language for a standard statement references a design vehicle of maximum length. The reference to maximum length is problematic. Rather, the queue clearance time should be calculated for "the design vehicle length." Else, the application of the proposed verbiage may, by default and to reduce legal exposure, mean the maximum legal length of vehicle will be used whether or not they are expected along the roadway facility, requiring expensive and unnecessary (or even impractical) crossing approach circuits.
565	8	8D.10		X		A proposed standard statement requires the Diagnostic Team to establish priority for preemption between trains and boats. However, Section 4F.18 says that "the order of priority <i>should</i> be: train, boat, heavy vehicle (fire vehicle, emergency medical service), light vehicle (law enforcement), light rail transit, rubber-tired transit." Therefore, does 4F.18 need revising or, at a minimum, should it be referenced here?
565	8	8D.10		X		As written, it was difficult to decipher what was to be analyses and what was the intent of the proposed guidance statement <i>"if simultaneous preemption is used, an analysis of extended grade crossing warning times should be conducted, as this condition is frequently encountered with simultaneous preemption operation."</i> The key phrase in this sentence is <i>"extended grade crossing warning times."</i> To clarify the statement, consider changing the reference to <i>"extended grade crossing warning times"</i> to <i>"extended grade crossing warning time requirements,"</i> and adding language that the grade crossing warning time extension is time beyond that typically provided by the railroad for non-preempted locations and is for the purposes of clearing a vehicle off the tracks.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
565	8	8D.10		X		As written, it was difficult to decipher what was to be analysis and what was meant by the proposed guidance statement <i>"if advance preemption is used, an analysis of preemption operation and sequencing should be conducted to identify preemption time variability. The analysis should include both the condition requiring the longest amount of time to enter the track clearance interval and the condition requiring the shortest amount of time to enter the track clearance interval."</i> Therefore, recommend support statement language be added clarifying that the variation in preemption timing is due to the different potential phases the traffic signal could be in when a train approaches the crossing and activates the preemption sequence; hence, requiring different timing intervals prior to entering the track clear green. This may only require changing the reference to sequencing in the proposed language to highway traffic control signal phasing.
565	8	8D.10		X		Provide further guidance on where the 200 feet measurement should be taken. Say <i>".....200 feet as measured from the farthest grade crossing stop line to the traffic control signal stop line."</i> or similar.
565	8	8D.10		X		Should a pre-signal also be mentioned as option to prevent additional vehicles from being drawn into Minimum Track Clearance Distance area? Pre-signals may be more effective than automatic gate for driver compliance.
565	8	8D.10		X		This should be a standard where multiple tracks are present at a crossing and possibility of multiple through trains exist. Preemption reservice at multi-track crossings, as one train may be exiting the crossing and then a 2nd train is detected. Not as critical on a single line, as a train would likely have to stop and reverse to reenter crossing.
566	8	8D.11		X		In line beginning "The prohibition of a permissive turning movement towards the grade crossing during the signal preemption sequence....", permissive turns should also be prohibited through "a combination of use of blank-out signs and/or red signal (CIRCULAR to ARROW) indications if an exclusive head is provided for the permissive turning movement.
566	8	8D.11		X		The proposed guidance says a blank-out turn restriction sign prohibiting turning movements towards the tracks should be used. However, the 4-section flashing yellow arrow, protected-permitted traffic signal head (or similar flashing arrow heads) used exclusively for a turn lane would make the blank-out sign redundant when a steady red arrow is illuminated during a preemption event. Therefore, consider adding language to clarify this potential exception or changing the guidance to an option.
567	8	8D.12		X		A proposed standard statement references a design vehicle of maximum length. The reference to maximum length is problematic. Rather, the queue clearance time should be calculated for "the design vehicle length." Else, the application of the proposed verbiage may, by default and to reduce legal exposure, mean the maximum legal length of vehicle will be used whether or not they are expected along the roadway facility.
567	8	8D.12		X		If turns are to be prohibited at the downstream intersection, the NTOR sign should be placed at pre-signal. Otherwise, if a vehicle is across the tracks, there is no harm in allowing right on red if vehicle is in throat after crossing (assuming there is adequate sight distance).
567	8	8D.12		X		The paragraph beginning "[t]he pre-signal phase sequencing may be timed with an offset from the downstream intersection...." should be Guidance, not Option. Pre-signals should be timed with downstream signal in an effort to minimize potential for vehicles queuing on crossing.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
568	8	8D.13		X		The straight thru GREEN ARROW is standard for queue cutter and presignal during normal (stop and go) operations. Therefore, should queue cutter and pre-signal flash red instead of yellow for malfunction flash (versus programmed flash). If signal is in malfunction flash, it no longer recognizes preempt calls and will continue to flash. By flashing red, this forces vehicles to stop and then proceed. Also flashing yellow signal may conflict with flashing red of railroad warning devices, so flashing red would be preferred during flashing mode. Flashing YELLOW may still be allowed as part of stop and go mode (like Flashing Yellow Arrow), but this is different from Flashing mode, which is stated here.
572	8	8E.01		X		"Pathway" should be changed to "sidewalk". A sidewalk runs parallel to a roadway within the highway right-of-way and is close enough to the edge of the roadway's traveled way that the traffic control devices for the roadway grade crossing can frequently exert an influence over or provide adequate warning to pathway <u>sidewalk</u> users.
574	8	8E.03		X		A proposed guidance statement that a " <i>pathway grade crossing traffic control devices should be located such that no portion of the physical features of the device, including the support hardware, is closer than a minimum of 12 feet from the center of the nearest track</i> " should also include sidewalk devices in addition to the pathway. There may be occasions where sidewalk facilities include separate devices (such as in Section 8E.05)
579	8	8E.08		X		A proposed guidance statement says that "if an engineering study shows that flashing-light signals with a Crossbuck sign and an audible device would not provide sufficient notice of approaching LRT traffic, consideration should be given to also installing an automatic pedestrian gate (see Section 8E.09) with appropriate channelization or fencing." Recommend the proposed guidance be changed to an option and the language included other treatment options such as the use of enhanced signing and markings, "Z" type pedestrian crossings or even manually operated gates as these (and possibly other treatments) are also acceptable and may warrant evaluation prior to automated pedestrian gates.
579	8	8E.08		X		A proposed guidance statement says that consideration should be given to installing automatic pedestrian gates if a subsequent engineering study finds flashing lights with crossbucks and an audible device are not resulting in appropriate behavior. Recommend the proposed guidance be changed to an option and the determination to use these be based on a diagnostic team review versus a study. Further recommend the addition of language for consideration of appropriate channelization or fencing similar to that stated in the guidance for LRT traffic. Finally, recommend the proposed language consider including other treatment options such as the use of enhanced signing and markings, "Z" type pedestrian crossings or even manually operated gates as these (and possibly other treatments) are also acceptable and may warrant evaluation prior to automated pedestrian gates.
N/A	8	Figure 8B-2		X		There is no distance shown between the YIELD or STOP signs and the railroad track placard (though from Figure 3B-3, it may be inferred this should be 2 inches minimum. Consider adding this to distance to Figure 8B-2 as well.
N/A	8	Figure 8C-1		X		Reference is made to Table 2C-4 for location of signs W3-1 and W3-2 as well as the W10-1. In Table 2C-4, placement for these signs is specified as deceleration to advisory speed 0 mph. The figure has further text stating the distances in the table would apply to the W3-1 and W3-2 signs when these distances are used rather than the W10-1 with no further distance provided for location of the W10-1. Especially since this may also impact the location of the RXR markings as well, consider providing further instruction in the figure on where the W10-1 should be located in such a case where W3-1 and W3-2 signs are used instead.
N/A	8	Figure 8C-2		X		Section 8A.13 references busway markings. Recommend a figure similar to 8C-2 be developed illustrating these.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
N/A	8	Figure 8D-2		X		In the figures, islands are shown as being essentially between the gates. Other applications include extending the island beyond the gates which would facilitate shorter gates and could provide an enhanced gate running preventive measures depending on the extent of the island extensions. Also, consider adding a dimension detailing how close to the track an island may be.
N/A	8	Figure 8E-1		X		Consider showing detectable warning on the figures where applicable (similar to Figure 8E-2).
N/A	8	Figure 8E-6		X		In the figure, consider showing a minimum distance between the track when a refuge area should be provided (12 + 4 + 12 = 28 feet).
N/A	8	Figure 8E-7		X		The note for red or white retroreflective strip implies the strip itself is optional. No dimension is provided for gap between the railroad placard and the Yield/Stop signs.
595	9	9B.14		X		Figure 9B-1: R9-20 legend still indicates the old "May Use Full Lane" instead of the re-worded "Allowed Use of Full Lane"
614	9	9D.04		X		Creates uniformity for bicycle route signing. "Standard: All numbered bicycle routes shall be identified by route signs (see Sections 9D.04, Section 9D.05, and Section 9D.07) and auxiliary plaques (see Section 9D.08)." Suggest rewording so that it is clear that signage is not required on all numbered bike routes, since this could be a logistical challenge and significant financial burden on states and local agencies to fully sign their existing and future route networks.
623	9	9E.01		X		Revised guidance for markings defining bicycle lanes, prohibits bike lane markings on roadway shoulders. Concern from some organizations that new "shall" statements provide restrictions on how a bike lane can be designed - such as prohibitions on commonly used intersection markings, and requirements to use specific markings at driveways. Change shall to should.
624	9	9E.02	X			Modifies guidance about mixing zones and buffered/separated bicycle lanes - the requirement that bicycle lanes shall not be marked within a general purpose lane, either with dotted or any other line markings is questionable? (NACTO standard: https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/combined-bike-laneturn-lane/)
631	9	9E.09	X			Revised guidance for shared-lane markings - is there a reason the speed limit for shared lane markings increased from 35 mph to 40 mph? We are not aware of the reasoning.
636	9	9E.14		X		Creates guidance for bicycle route pavement markings - I know Raleigh has asked for on-street East Coast Greenway markings in shared lanes, but that doesn't seem to be a common ask. This section seems to be in regards to shared-use paths, separated bikeways on independent alignment, and on improved trails. Consider changing from shall to should.
637	9	9E.15		X		Modifies guidance for bicycle detector marking. Concerns expressed by APBP and LAB will require more evaluation.
641	9	9G.01	X			Statement that accommodation/application of bicycle traffic at alternative intersections is not a requirement (don't have section 9G in the markup text?)
643	9	9G.03		X		Recommends use of a two-stage bicycle turn box at median U-turn/superstreet intersections (I'd have to see a figure to see what they are recommending.....) Agree, would need to see figure to see what's being recommended.
644	9	9G.04		X		Recommends transitioning from shared-lane markings to a bicycle lane in advance of a road ending in exclusive right or left (would have to see figure to see what they are recommending.....) Agree, would need to see figure to see what's being recommended.
584, 586, Other	9	9A.02		X		FHWA proposes to separate existing Chapter 9B Signs into three chapters – retitle Chapter 9B to “Regulatory Signs,” add a new Chapter 9C “Warning Signs and Object Markers,” and add a new Chapter 9D “Guide and Service Signs.” In addition, FHWA proposes to separate Table 9B-1 Bicycle Facility Sign and Plaque Minimum Sizes into three tables – Table 9B-1 for regulatory signs, Table 9C-1 for warning signs and object markers, and Table 9D-1 for guide and service signs. These changes are for consistency with how signs are organized in Part 2 and to make it easier to locate bicycle-related signs by sign type.

Change Number	Part	Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording	Disagree with concept	Comments
584, 586, Other	9	9A.02		X		<p>In Section 9A.02 the following Standard needs to be reviewed for errors-</p> <p><u>"Standard:</u> <u>If the sign or plaque applies to motorists and bicyclists, then the size shall be as shown for conventional roads in Tables 2B-1, 2C-1, or 2D-2.</u> <u>The minimum sign and plaque sizes for signs specific to bicycle-only facilities and shared-use paths shall be those shown in Tables 9B-1, 9C-1, and 9D-1; and shall be used only for signs and plaques installed specifically for bicycle traffic applications</u> <u>Table 9A-1. Bicycle Facility Sign and Plaque Minimum Sizes "</u></p> <p>— Should 2D-2 be 2D-1?</p> <p>— Table 9A-1 (Table 9B-1 in 2009 MUTCD) is only Table proposed. Tables 9B-1, 9C-1 and 9D-1 are not in the proposed Tables for Part 9.</p>
584, Other	9	9A.02		X		<p>Support statement is inconsistent. Proposed change is in quotation marks:</p> <p><u>"Support:</u> <u>The installation of nonstandard signing on bikeways or modifying standard signing in a manner inconsistent with Chapter 2A to draw special attention, educate users or the community, or brand a bicycle facility can contribute to public "non-acceptance" and enforcement problems."</u></p>
624, Other	9	9E.02		X		<p>Suggest referencing Figure 9E-9 to this Option statement:</p> <p><u>"Option:</u> <u>Where there is insufficient width in the roadway to include a bicycle lane and a general purpose turn lane, bicycle travel may be accommodated through the turn lane using shared-lane markings (see Figure 9E-9)"</u></p>
631, Other	9	9E.09		X		Need to reference and add Figure 9C-9. "Shared Lane Marking" detail from the 2009 MUTCD to Section 9E.09
631, Other	9	9E.09		X		<p>There is an issue with the Figures and guidance given. Figure 9E-9 does not accurately represent the guidance. Per the guidance for Figure 9E-4, Figure 9E-9 would be the better choice.</p> <p><u>"Option:</u> <u>The shared-lane marking may be used (See Figure 9E-9) where the width of the roadway is insufficient to continue a bicycle lane or separated bikeway on the approach to the intersection, or it is advantageous to terminate the bicycle lane or separated bikeway in order to provide for a shared lane.</u> <u>The shared-lane marking may be used on approaches to intersections (See Figure 9E-4) in exclusive turn lanes to continue a bicycle lane where there is insufficient width in the roadway for both the bicycle lane and turn lane."</u></p>
633, Other	9	9E.11		X		<p>Correction need:</p> <p>Figure 9E-10 Drawing C should have two dotted line markings for the Bike Lane extension through the intersection per the Standard in Section 9E-03.</p>