



National Committee on Uniform Traffic Control Devices

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Item No.: 25A-EDT-01

NCUTCD PROPOSAL FOR CHANGES TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

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COMMITTEE / TASK FORCE: Edit Committee
ITEM NUMBER: 25A-EDT-01
TOPIC: Definitions of Highway, Roadway, and Road
ORIGIN OF REQUEST: Edit Committee Task Force: Randy Dittberner, Scott Wainwright, Harry Campbell, and Rob Weber (and late member Jim Pline)
AFFECTED SECTIONS OF MUTCD: 1A.01, 1A.02, 1A.03, 1B.01, 1B.03, 1B.05, 1B.07, 1B.08, 1C.02, 1D.01, 1D.02, 1D.03, 1D.09, 1D.11

6 7 **DEVELOPMENT HISTORY:**

8 Approved by Edit Committee: 01/08/2025
9 Approved by NCUTCD Council:

10
11 *This is a proposed change to the MUTCD that has been developed by a technical committee, joint committee, or joint task force of the NCUTCD. The NCUTCD is distributing this to its*
12 *sponsoring organizations for review and comment. Sponsor comments will be considered in*
13 *revising the proposal prior to NCUTCD Council consideration. This proposal does not represent*
14 *a revision of the MUTCD and does not constitute official MUTCD standards, guidance, options,*
15 *or support. If approved by the NCUTCD Council, the recommended changes will be submitted*
16 *to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be*
17 *revised only through the federal rulemaking process.*
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21 **SUMMARY:**

22 This proposal would redefine several terms, including the following:

- 23 • *Road, highway, and street* would be defined as synonyms.
- 24 • Because *road* is expected to be the most preferred of these three, the definition of *highway* would be moved to *road*. It would include facilities that prohibit vulnerable road users, exclude facilities where motor vehicles are prohibited, and include private roads.
- 25 • *Roadway* would include shoulders and exclude pathways.

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29 This proposal is the first step of a two-step process; it includes associated changes to Part 1 of
30 the MUTCD. After the NCUTCD Council approves this proposal, it will not be sent to FHWA as
31 a recommendation until the Council approves one or more additional proposals that address the
32 remainder of the manual.
33

34 **DISCUSSION:**

35 Following is a brief discussion of this issue. A complete discussion, including examples, figures,
36 rationale, and impacts, can be found in the appendix beginning on page 22.

37
38 The MUTCD defines *highway* as a “public way for purposes of travel by vehicles and vulnerable
39 road users, including the entire area within the right-of-way.” *Roadway* means a “portion of a
40 highway” that includes only the “vehicular travel and parking lanes.” *Roadway* specifically
41 excludes “the sidewalk, berm, or shoulder.” The MUTCD also defines *street* as a synonym for
42 *highway* and *road* as a synonym for *roadway*.

43
44 The definition of *highway* has three problems:

- 45
46 1. **Vulnerable Road Users.** *Highway* is defined to be for “travel by vehicles and vulnerable
47 road users.” If a facility does not permit travel by **both** vehicles **and** vulnerable road
48 users, it does not meet the definition of *highway*. Most freeways, for example, prohibit
49 vulnerable road users and therefore do not meet the definition of *highway*.
- 50
51 2. **Bikeways.** *Highway* is defined as a facility “for purposes of vehicular travel.” Because
52 bicycles are vehicles, a facility for purposes of bicycle travel meets the definition of
53 *highway* even if motor vehicles are prohibited. For instance, a shared-use path on an
54 independent alignment meets the definition of *highway*, which is counterintuitive.
- 55
56 3. **Private Facilities.** *Highway* is defined as “a public way.” This phrase might mean “a
57 publicly owned facility,” or it might mean “a facility open to public travel.” This ambiguity
58 does not allow a clear understanding of what types of facilities are considered *highways*.

59
60 The definition of *roadway* has four problems:

- 61
62 1. **Shoulders.** Some provisions in the MUTCD are written as though *roadway* is defined to
63 include shoulders, which is not the case. Example: Paragraph 15 of Section 2G.03
64 requires that certain signs comply with the provisions for overhead mounting “if any
65 portion of the sign extends over the roadway.” This standard should also apply if any
66 portion of a sign extends over a shoulder.

67
68 This issue is more concerning now that the 11th Edition of the MUTCD sanctions part-
69 time motor vehicle travel on shoulders. Shoulders are excluded from the definition of
70 *roadway* even when a shoulder is open to part-time motor vehicle travel. However, the
71 word *roadway* is often intended to include shoulders open to part-time motor vehicle
72 travel. Example: Section 1C.02 defines *crosswalk* as “part of a roadway . . .” Since
73 shoulders are not part of the roadway, it is impossible for a crosswalk to exist across a
74 shoulder.

- 75
76 2. **Bicycle Facilities.** The roadway is the portion of a highway “used for vehicular travel.”
77 Because bicycles are vehicles, any portion of the highway used for bicycle travel is part
78 of the roadway, except the sidewalk, berm, and shoulder. It is complicated to determine
79 whether shared-use paths are part of the roadway.

80
81 Sidewalks are expressly excluded from the roadway. *Sidewalk* is defined as a “portion
82 of a street between the curb line, or the lateral line of a roadway, and the adjacent
83 property line or on easements of private property that is paved or improved and intended
84 for use by pedestrians.” To meet the definition of *sidewalk*, a facility must run alongside
85 a roadway and be intended for use by pedestrians.

86
87 *Shared-use path* is defined as “a bikeway . . . also used by pedestrians” and other
88 authorized users. A bikeway is “any road, street, path, or way that in some manner is
89 specifically designated for bicycle travel.” To meet the definition of *shared-use path*, a
90 facility must be open to pedestrians and designated for bicycle travel.

91
92 By these definitions, if a facility runs alongside a street, is open to pedestrians, and is
93 designated for bicycle travel, it meets the definitions of **both** *sidewalk* and *shared-use*
94 *path*. If a facility meets the definition of *shared-use path* but not *sidewalk*, then the
95 facility is a roadway, because it is intended for bicycle travel, and bicycles are vehicles.

96
97 This complicated relationship causes several contradictions. Example: Paragraph 7 of
98 Section 9D.06 says, “Certain uninterrupted, long-distance interstate bicycle routes can
99 largely be on shared-use paths, or other off-roadway facilities.” A shared-use path is
100 only an “off-roadway facility” if it is also a sidewalk, and this does not appear to be what
101 this provision intends to refer to.

- 102
103 3. **Road User.** *Road user* is defined as someone “within the highway,” even though *road* is
104 only a subset of *highway*. A pedestrian or bicyclist on a sidewalk is not using the “road,”
105 because sidewalks are excluded from the road. Bicyclists and pedestrians on the
106 shoulder are also not using the road, because the shoulder is not part of the road. It is
107 counterintuitive that *road user* includes people who are not using the road.

108
109 Furthermore, *road user* includes people using a highway or site roadway open to public
110 travel, but it does not include people using bikeways that are not also highways, even
111 though the MUTCD legally applies to all bikeways.

- 112
113 4. **Parking Lanes.** The definition of *roadway* uses the term *parking lane*, but *parking lane*
114 is undefined. It is unclear whether *parking lane* is intended to include perpendicular and
115 angle parking in addition to parallel parking.

116
117 In addition to these problems with the definitions of *highway* and *road*, the MUTCD sometimes
118 uses a term that does not accurately convey the intent. Example: In Section 1C.02,
119 *conventional road* is defined as “a street or highway other than an expressway or freeway.” It is
120 inconsistent to use *road* as part of the defined term *conventional road* when the definition refers
121 to “a street or highway.” A road is “a portion of a highway,” so it is inconsistent for *conventional*
122 *road* to be defined to include the entire right-of-way.

123 124 **Proposed Solution**

125 The proposed solution can be separated into two steps:

- 126 • **Step 1:** Decide on any changes to definitions.
- 127 • **Step 2:** Review the MUTCD to ensure that the text, figures, and tables are consistent
128 with the definitions. This step is likely to involve all technical committees because
129 changes are expected to be needed in every part of the MUTCD.

130
131 Because of the scale involved in Step 2, it is not reasonable for a single NCUTCD ballot
132 proposal to address the entire issue at once. Rather, this proposal is intended to accomplish
133 Step 1 by proposing updates to several definitions. In addition, this proposal provides a sample
134 of Step 2, showing how the definition changes would be applied to a portion (Part 1) of the
135 MUTCD. The intent is to illustrate that the proposed definitions are reasonable when applied to
136 MUTCD content.

137
138 After this Step 1 proposal is approved by the NCUTCD Council, it will not be immediately sent to
139 FHWA as a recommendation. Rather, after Council approves this Step 1 proposal, technical
140 committees will begin work on Step 2. Both Step 1 and Step 2 proposals would be sent to
141 FHWA only after Council approves Step 2.

142
143 The following terms are proposed for revised definitions:
144

- 145 • *Road, highway, and street* are proposed to be defined as synonyms.
146
- 147 • Because *road* is expected to be the most preferred term of these three, the definition of
148 *highway* is proposed to be moved to *road*. The term is proposed to be redefined so it
149 applies to facilities open to motor vehicle travel even when vulnerable road users are
150 prohibited. The definition is proposed **not** to include facilities where motor vehicles are
151 prohibited, such as pathways. Lastly, the definition is proposed to clarify that it includes
152 roads open to public travel, including private roads and site roads open to public travel.
153
- 154 • *Highway and street* are proposed to be redefined as synonyms of *road*.
155
- 156 • *Roadway* is proposed to be redefined to include shoulders and exclude pathways. The
157 undefined term *parking lane* is proposed to be replaced with the defined term *on-street*
158 *parking*.
159
- 160 • *Shared-use path* is proposed to be redefined as a “type of pathway. . .” rather than “a
161 bikeway . . .” This would emphasize that shared-use paths are, first and foremost,
162 intended for multiple modes, as indicated by the word *shared*. This change would also
163 eliminate situations where the same facility could be considered both a sidewalk and a
164 shared-use path, because sidewalks are expressly excluded from the definition of
165 *pathway*. Lastly, the definition proposes to expressly acknowledge that all shared-use
166 paths are bikeways.
167
- 168 • *Shoulder* is proposed to be redefined to clarify that shoulders are part of the roadway.
169 The definition is also proposed to clarify that shoulders are within the traveled way only
170 when they are open to part-time travel by motor vehicles.
171
- 172 • *Traveled way* is proposed to be redefined to include shoulders only when they are open
173 to part-time motor vehicle travel.
174
- 175 • Several other definitions are proposed to be changed for consistency with the changes
176 above. The rationale for these changes is annotated below.
177
178

179 **RECOMMENDED MUTCD CHANGES:**

180 The following present the proposed changes to the current MUTCD within the context of the
181 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
182 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
183 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
184 underline for additions and ~~green double strikethrough~~ for deletions. In some cases,
185 background comments may be provided with the MUTCD text. These comments are indicated
186 by bracketed white text in shaded green. Deletions made by a technical committee or task
187 force after initial distribution to sponsoring organizations are shown in ~~highlighted red~~
188 ~~strikethrough and Helvetica text~~. Additions made by a technical committee or task force after
189 initial distribution to sponsoring organizations are shown in underline blue and Helvetica text.

190
191 [For brevity, this proposal includes only sections and paragraphs with proposed changes and nearby text
192 where context is needed.]

193 **PART 1. GENERAL**

194
195 **CHAPTER 1A. GENERAL**

196
197 **Section 1A.01 Purpose of the MUTCD**

198 Support:

199 01 The purpose of the MUTCD is to establish uniform national criteria for the use of traffic control
200 devices that meet the needs and expectancy of road users on all roads, including streets, highways,
201 ~~pedestrian and bicycle facilities, and~~ site roadways open to public travel, and bikeways. [Road user is
202 currently defined to include people using only highways and site roadways open to public travel, but it is
203 proposed to be redefined to also include people using bikeways. There are several problems with the list
204 of facility types in this sentence: (1) Mentioning both *street* and *highway* is redundant since they are
205 synonyms. (2) The words “pedestrian and” have been identified by FHWA as a known error. The
206 MUTCD is not intended to apply broadly to all “pedestrian facilities.” (3) The MUTCD does not apply to
207 all “bicycle facilities” as this term is defined. For example, the MUTCD does not apply to bicycle
208 parking facilities outside the right-of-way. The defined term *site roadway open to public travel* is
209 proposed to be changed to *site road open to public travel* for internal consistency, and the sentence is
210 proposed to be recast so *site road open to public travel* is clearly a subset of *road*.]

211 02 This purpose is achieved through the following objectives:

- 212 A. Promote safety, inclusion, and mobility for all users of the roads and bikeways network;
213 [Safety, inclusion, and mobility are as important for people using bikeways, to which the
214 MUTCD legally applies, as for people using roads.]
215 B. Promote efficiency through creating national uniformity in the meaning and appearance of
216 traffic control devices;
217 C. Promote national consistency in the use, installation, and operation of traffic control devices;
218 and
219 D. Provide basic principles for traffic engineers to use in making decisions regarding the use,
220 installation, operation, maintenance, and removal of traffic control devices.

221 03 Uniformity of the meaning of traffic control devices is vital to their effectiveness. Uniformity means
222 treating similar situations in a similar way. Uniformity of devices simplifies the task of the road user
223 because it aids in recognition and understanding, thereby reducing perception/reaction time. Uniformity
224 assists road users, law enforcement officers, and traffic courts by giving everyone the same interpretation.
225 Uniformity assists ~~public~~ highway officials through efficiency in manufacture, installation, maintenance,
226 and administration. [Highway officials might be public or private.]
227

228 Section 1A.02 Traffic Control Devices – General Description

229 Support:

230 01 As defined in Section 1C.02 of this Manual, traffic control devices include all signs, signals,
231 markings, channelizing devices, or other devices that use colors, shapes, symbols, words, sounds, and/or
232 tactile information for the primary purpose of communicating a regulatory, warning, or guidance message
233 to road users on ~~a street, highway, pedestrian facility, bikeway, pathway, or all roads, including~~ site
234 roadways open to public travel, and bikeways. [According to Paragraphs 1 and 2 of Section 1B.01, the
235 MUTCD does not apply to “pedestrian facilities” or “pathways.” The list of facility types in this sentence
236 is proposed to match the list in paragraph 1 of Section 1A.01 (and elsewhere).]

237 02 Infrastructure elements that restrict the road user’s travel paths or vehicle speeds, such as islands,
238 curbs, speed humps, and other raised roadway surfaces, are not traffic control devices. Transverse or
239 longitudinal rumble strips are also not traffic control devices. Operational devices associated with the
240 application of traffic control strategies such as fencing, roadway lighting, barriers, and attenuators are
241 shown in this Manual for context, but their design, application, and usage are not specified since they are
242 not traffic control devices.

243 03 Certain types of signs and other devices that do not have any traffic control purpose are sometimes
244 placed ~~within the highway right-of-way on a road or bikeway~~ by or with the permission of the ~~public~~
245 agency or the official having jurisdiction over the ~~street or highway facility~~. These signs and other devices
246 are not considered to be traffic control devices and provisions regarding their design and use are not
247 included in this Manual. Among these signs and other devices are the following: [This paragraph refers
248 to the “highway right-of-way,” but it needs to also apply to bikeways, to which the MUTCD also legally
249 applies. The definition of *agency* includes those overseeing both public and private roads.]

- 250 A. Devices whose purpose is to assist highway maintenance personnel, such as markers to guide
251 snowplow operators, devices that identify culvert and drop inlet locations, and devices that
252 precisely identify highway locations for maintenance or mowing purposes;
- 253 B. Devices whose purpose is to assist fire or law enforcement personnel, such as markers that
254 identify fire hydrant locations, signs that identify fire or water district boundaries, speed
255 measurement pavement markings, small indicator lights to assist in enforcement of red light
256 violations, and photo enforcement systems;
- 257 C. Devices whose purpose is to assist utility company personnel and highway contractors, such as
258 markers that identify underground utility locations;
- 259 D. Signs posting local non-traffic ordinances; and
- 260 E. Signs giving civic organization meeting information.

261

262 Section 1A.03 Target Road Users

263 Support:

264 01 Traffic control devices can be targeted at operators of motor vehicles, including driving automation
265 systems, and at vulnerable road users.

266 02 Targeted operators of motor vehicles include motorists, public transportation operators, truck drivers,
267 and motorcyclists. Targeted users also include vulnerable road users, who have little to no protection from
268 crash forces. These users are defined in Title 23, U.S.C. 148(a). They include bicyclists and pedestrians,
269 including persons with disabilities. Pedestrians with disabilities might be blind or vision-impaired, have
270 mobility limitations, or other impairments. Protection of vulnerable road users is a priority in this Manual
271 as directed in Section 11135 of the Infrastructure Investment and Jobs Act. [The Pedestrian Joint Task
272 Force is considering a definition for *vulnerable road user*, which could involve changes to this section.]

273 03 Operators of motor vehicles and vulnerable road users are both likely to be present on roadways
274 where adjacent land use suggests that trips could be served by varied modes. Application of traffic control
275 devices on these roadways requires careful consideration of measures to set and design for appropriate
276 speeds; separation of various users in time and space; improvement of connectivity and access for

277 pedestrians, bicyclists, and transit riders, including for people with disabilities; and implementation of
278 safety countermeasures.

279
280 **CHAPTER 1B. LEGAL REQUIREMENTS FOR TRAFFIC CONTROL DEVICES**

281
282 **Section 1B.01 National Standard**

283 **Standard:**

284 01 **The Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) is**
285 **incorporated by reference in 23 Code of Federal Regulations (CFR), Part 655, Subpart F and shall**
286 **be recognized as the national standard for all traffic control devices installed on ~~any street,~~**
287 **~~highway, bikeway, or all roads, including~~ site roadways open to public travel (see definition in**
288 **Section 1C.02), and bikeways in accordance with 23 U.S.C. 109(d) and 402(a).**

289 02 **In accordance with 23 CFR 655.603(a), the MUTCD shall apply to all of the following types of**
290 **facilities:**

291 **A. Any ~~street, roadway, or bikeway~~ open to public travel, either publicly or privately owned;**
292 **including the following:** [Roadway is a subset of street. Using street alone is sufficient, but the
293 proposed more generic term road is more likely to be correctly interpreted.]

- 294 **1. Site roads open to public travel;**
295 **2. Publicly owned toll roads, including those under the jurisdiction of a public agency,**
296 **public authority, or public-private partnership; and**
297 **3. Privately owned toll roads where the public is allowed to travel without access**
298 **restriction, including gated toll roads or roads the public is able to pay to access**
299 [Items 1, 2, and 3 in this list are moved here from items B, C, and D below. They are
300 numbered rather than lettered because they are all subsets of road.]

301 ~~**B.—Streets and roadways on sites that are off the public right-of-way that are open to public**~~
302 ~~**travel without full-time access restrictions. Examples include roadways within shopping**~~
303 ~~**centers, office parks, airports, sports arenas, other similar business and/or recreation**~~
304 ~~**facilities, governmental office complexes, schools, universities, recreational parks, and**~~
305 ~~**other similar publicly-owned complexes and/or recreation facilities. The above-described**~~
306 ~~**examples of streets and roadways are referred to in this Manual as site roadways open to**~~
307 ~~**public travel;**~~ [It is not necessary to provide a detailed description of a site road open to public
308 travel because this definition is included in Section 1C.02.]

309 ~~**C.—Publicly owned toll roads, including those under the jurisdiction of a public agency, public**~~
310 ~~**authority, or public-private partnership;**~~

311 ~~**D.—Privately owned toll roads facilities where the public is allowed to travel without access**~~
312 ~~**restriction. This includes gated toll roads facilities or roadways facilities where the general**~~
313 ~~**public is able to pay to access the facility; and**~~

314 ~~**E.**~~ **Grade crossings of publicly-owned roadways with railroads or light rail transit.**

315 03 **The MUTCD shall not apply to the following types of facilities:**

316 **A. Roadways Facilities within private gated properties where access to the general public is**
317 **restricted at all times;** [The definitions of roadway and road do not include facilities where
318 access to the general public is restricted at all times.]

319 **B. Grade crossings of privately-owned roadways facilities with railroads; and**

320 **C. Parking areas, including the driving aisles within those parking areas, that are either**
321 **publicly or privately owned.**

322 **D. Bicycle facilities that are not on a road or bikeway.**

323 **E. Pedestrian facilities that are not on a road or bikeway.**

324

325 **Section 1B.03 Compliance of Devices**

326 **Standard:**

327 01 **The U.S. Secretary of Transportation, under authority granted by the Highway Safety Act of**
328 **1966, decreed that traffic control devices on all ~~streets and highways~~ roads open to public travel in**
329 **accordance with 23 U.S.C. 109(d) and 402(a) in each State shall be in substantial conformance with**
330 **the Standards issued or endorsed by the FHWA.**

331 **Support:**

332 02 23 CFR 655.603 also requires traffic control devices on all ~~streets, highways, roads and~~ bikeways,
333 ~~and site roadways open to public travel~~ in each State to be in substantial conformance with standards
334 issued or endorsed by the Federal Highway Administrator. [23 CFR 655.603 uses the phrase “on any
335 street, highway, or bicycle trail,” but this paragraph is not a direct quote from CFR, so road is preferred.]

336 **Standard:**

337 03 **After the effective date of a new edition of the MUTCD or a revision thereto, or after the**
338 **adoption thereof by the State, whichever occurs later, new or reconstructed devices installed shall**
339 **comply with the new edition or revision, as required by 23 CFR 655.603.**

340 04 **In cases involving Federal-aid projects for new construction, reconstruction, resurfacing,**
341 **restoration, or rehabilitation of a facility to which this Manual applies, the traffic control devices**
342 **installed (temporary or permanent) shall comply with the most recent edition of the National**
343 **MUTCD before that ~~highway facility~~ is opened or re-opened to the public for unrestricted travel**
344 **[23 CFR 655.603(d)(2) and (d)(3)].** [The word *facility* should be used at the end of the sentence for
345 consistency with the use of this term toward the beginning of the sentence.]
346

347 **Section 1B.05 Experimentation**

348 **Standard:**

349 02 **A traffic control device or application that does not comply with the provisions of this Manual**
350 **shall not be used on any ~~street, highway road or,~~ bikeway, ~~or site roadway open to public travel (see~~**
351 **~~definition in Section 1C.02)~~ without first receiving official approval to experiment from the**
352 **FHWA’s Office of Transportation Operations.**

353 **Support:**

354 03 A request for permission to experiment (see Section 1B.08) will be considered only when submitted
355 by the ~~public~~ agency ~~or toll facility authority~~ responsible for the operation of the road or ~~street~~ bikeway
356 on which the experiment is to take place. For a site roadway open to public travel, the request will be
357 considered only if it is submitted by the ~~private owner or~~ official having jurisdiction. [Agency includes
358 those overseeing both public and private roads. There are many authorities that own and maintain private
359 roads other than “toll facility authorities.” Not all site roads open to public travel are privately owned.]

360 04 A request for experimentation with a novel device or application across multiple jurisdictions as a
361 single experiment with a common hypothesis, evaluation plan, and evaluation team will be considered
362 when submitted jointly by all the authorities responsible for operation of the roads or ~~streets~~ bikeways on
363 which the experiment is to take place. Similarly, a request to add experimental sites to an experimentation
364 approved for another jurisdiction will be considered when submitted jointly by the all the authorities for
365 operation of the roads or ~~streets~~ bikeways on which the experiment is then to take place.

366 05 Manufacturers or inventors of novel devices are encouraged to engage the services of a qualified
367 traffic engineer or other professional who is versed in traffic control devices. Early engagement during the
368 concept and development processes will help ensure the efficacy of the device with regard to human
369 factors, operational, safety, and other considerations prior to an agency requesting experimentation.

370 06 In some cases, an off-road~~way~~ closed-course or laboratory study might be required before a request
371 for experimentation can be considered. The purpose of such a study is to determine whether testing the
372 experimental device or application in an open-road setting could result in an undue safety risk.
373

374 **Section 1B.07 Interim Approvals**

375 Support:

376 01 Interim approval allows for provisional use, pending official rulemaking, of a new traffic control
377 device, a revision to the application or manner of use of an existing traffic control device, or a provision
378 not specifically described in this Manual.

379 02 The FHWA issues an interim approval by official memorandum signed by the Associate
380 Administrator for Operations and posts this memorandum on the MUTCD Web site.

381 03 Interim approval allows for the optional use of a traffic control device or application and does not
382 create a new mandate or recommendation for its use. Interim approval includes conditions that
383 ~~jurisdictions agencies, including toll facility operators, or~~ owners of private roads and site road~~ways~~ open
384 to public travel, agree to comply with in order to use the traffic control device or application until an
385 official rulemaking action has occurred. The issuance by FHWA of an interim approval might result in
386 the traffic control device or application being proposed for adoption in the next scheduled rulemaking
387 process to issue a new edition or revision of this Manual. **[Agency includes those overseeing both public
388 and private roads. A toll facility operator is one of many authorities that own and operate private roads.]**

389 04 If the device or application under interim approval is not proposed in the next rulemaking for a new
390 edition or revision, then a statement of the status of the interim approval, whether it is to be rescinded or
391 remain in effect, will be included in the Federal Register notice for the rulemaking.

392 05 Interim approval is considered based on the results of experimentation, and/or results of analytical or
393 laboratory studies with a traffic control device or application that analytically demonstrates a device
394 effectively communicates its intended meaning. Interim approval considerations include an assessment of
395 relative risks, benefits, costs, impacts, and other factors.

396 06 Section 1B.08 contains information on submitting a request for interim approval.

397 07 Interim approval is ordinarily considered only after published authoritative research and
398 experimentation sufficiently demonstrate that the device or application provides a significant safety or
399 operational improvement. Individual experiments by various jurisdictions, without a research report on
400 the overall findings of the experimental device or application, will not ordinarily qualify for issuance of
401 an interim approval.

402 08 Interim approval ordinarily is not considered based solely on non-U.S. experience with a new traffic
403 control device or application. Differences in regulations, enforcement and penalties, and driver licensing
404 requirements, among other factors, can result in dissimilar road-user behavior. Additionally, due to
405 variations in conventions for traffic control device design, a non-U.S. traffic control device concept might
406 need to be adapted to U.S. criteria to ensure consistency with the provisions and principles of this Manual.
407 However, documented non-U.S. experience can be considered in the development of requests for
408 experimentation (see Section 1B.05) and within the evaluation plan for traffic control device research.

409 **Standard:**

410 09 **~~An agency, jurisdiction, toll facility operator, or~~ including the owner of a private road or site**
411 **road~~way~~ open to public travel, that desires to use a traffic control device or application for which**
412 **FHWA has issued an interim approval shall request and receive permission from FHWA in writing**
413 **prior to applying the device or application.**

414 10 **The request to place a traffic control device or application under an existing interim approval**
415 **shall contain the following:**

416 **A. A description of where the device or application will be used, such as a list of specific**
417 **locations or highway road or bikeway segments or types of situations, or a statement of the**
418 **intent to use the device or application jurisdiction-wide;**

- 419 **B. An agreement to abide by the specific conditions for use of the device or application as**
420 **contained in the FHWA’s interim approval memorandum;**
421 **C. An agreement to maintain and continually update a list of locations where the device or**
422 **application has been installed; and**
423 **D. An agreement to:**
424 **1. Restore the site(s) of the interim approval to a condition that complies with the**
425 **provisions in this Manual within 3 months following the issuance of a final rule on**
426 **this traffic control device or application; and**
427 **2. Terminate use of the device or application installed under the interim approval at any**
428 **time that it determines that safety concerns are directly or indirectly attributable to**
429 **the device or application. The FHWA’s Office of Transportation Operations shall**
430 **have the right to terminate the interim approval at any time if there is an indication**
431 **of safety, operational, or other concerns.**

432 Option:

433 ¹¹ A State may submit a request for permission to use a device or application under an existing interim
434 approval for all jurisdictions in that State, as long as the request contains the information required in
435 Paragraph 9 of this Section.

436 **Standard:**

437 ¹² ~~An agency, jurisdiction, toll facility operator, or including the~~ owner of a private road or site
438 roadway open to public travel, that elects to use a device or application under a statewide interim
439 approval shall inform the State of its use of the device or application.

440 ¹³ Under a statewide interim approval, the respective ~~jurisdictions agencies, including toll facility~~
441 ~~operators, or~~ owners of private roads and site roadways open to public travel, shall maintain and
442 continually update a record of all locations on their roads or bikeways where the device or
443 application is implemented (see Item C of Paragraph 9 of this Section) and shall furnish this
444 information to the State.

445

446 **Section 1B.08 Requesting Official Interpretations, Experiments, Changes to the MUTCD,** 447 **or Interim Approvals**

448 *Guidance:*

449 ⁰¹ ~~An agency, local jurisdiction, toll facility operator, or including the~~ owner of a private road or site
450 roadway open to public travel, that is requesting permission to experiment or permission to use a device
451 or application under an existing interim approval should first check for any State laws, regulations,
452 and/or directives covering the application of the MUTCD provisions that might apply.

453 **Standard:**

454 ⁰² Except as provided in Paragraph 3 of this Section, requests for an interpretation, permission to
455 experiment, a change to the MUTCD, granting of an interim approval, or permission to use an
456 existing interim approval shall be submitted electronically to the Federal Highway Administration
457 (FHWA), Office of Transportation Operations, MUTCD team, at the following e-mail address:
458 MUTCDofficialrequest@dot.gov.

459 Option:

460 ⁰³ If electronic submittal is not possible, requests for an interpretation, permission to experiment, a
461 change to the MUTCD, granting of an interim approval, or permission to use an existing interim approval
462 may instead be mailed to the Office of Transportation Operations, HOTO-1, Federal Highway
463 Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590.

464

465 Support:
466 04 Communications regarding other MUTCD matters that are not related to official requests will
467 receive quicker attention if they are submitted electronically to the MUTCD Team Leader or to the
468 appropriate individual MUTCD technical lead team member. Their e-mail addresses are available through
469 the links contained on the “MUTCD Team” page on the MUTCD Web site at
470 <http://mutcd.fhwa.dot.gov/team.htm>.
471 05 For additional information concerning interpretations, experimentation, changes, or interim
472 approvals, visit the MUTCD Web site at <http://mutcd.fhwa.dot.gov>.

473 CHAPTER 1C. DEFINITIONS, ACRONYMS, AND 474 ABBREVIATIONS USED IN THIS MANUAL 475

476 Section 1C.02 Definitions of Words and Phrases Used in this Manual 477

478 03 The following words and phrases, when used in this Manual, shall have the following
479 meanings:

- 480 8. **Advisory Speed**—a recommended speed for **all** vehicles operating on a section of **highway**
481 **road or bikeway** and based on the **highway road or bikeway** design, operating
482 **characteristics, and conditions.** [Advisory speeds are used on both roads and bikeways. (The
483 MUTCD legally applies to both roads and bikeways.) “All” is proposed to be removed because
484 advisory speeds on roads are usually not “recommended” for bicycles.]
- 485 9. **Agency**—an organization with the responsibility for providing, maintaining, and/or
486 **operating a system of public or private roads and/or bikeways system.** [“Bikeway” is
487 proposed to be added because the MUTCD applies to bikeways in addition to roads.]
- 488 10. **Alley**—a **street or highway road** intended to provide access to the rear or side of lots or
489 buildings in urban areas and not intended for the purpose of through vehicular traffic.
- 490 11. **Annual Average Daily Traffic (AADT)**—the total volume of traffic passing a point or
491 segment of a **highway facility road or bikeway** in both directions for one year divided by
492 the number of days in the year. Normally, periodic daily traffic volumes are adjusted for
493 hours of the day counted, days of the week, and seasons of the year to arrive at annual
494 average daily traffic.
- 495 13. **Approach**—all lanes of traffic moving toward an intersection or a midblock location from
496 **one direction, including any adjacent on-street parking lane(s).** [Parking lane is undefined;
497 it is proposed to be replaced by the defined term *on-street parking* for consistency with the
498 definitions of *roadway* and *traveled way*.]
- 499 14. **Arterial Highway (Street)**—a general term denoting a **highway road** primarily used by
500 through traffic, usually on a continuous route or a **highway road** designated as part of an
501 arterial system. [Arterial is used most often in the MUTCD without being followed by “street”
502 or “highway.”]
- 503 22. **Bicycle**—a pedal-powered vehicle upon which the human operator sits.
- 504 24. **Bicycle Facilities Facility**—a general term denoting **an improvements or and** provisions
505 that accommodates or encourages bicycling, including **bikeways, bicycle** parking and
506 storage facilities, and **shared roadways** not specifically **defined designated** for bicycle **use**
507 **travel but where bicycle travel is permitted.** [Definitions are usually singular rather than
508 plural. A shared roadway must be “officially designated and marked as a bicycle route,”
509 according to the definition. It does not appear to be possible that a shared roadway could be
510 “not specifically defined for bicycle use.” This part of the definition apparently intends to
511 establish that *bicycle facility* includes roadways that do not meet the definition of *shared*
512 *roadway*. The words *defined* and *use* are proposed to be changed to *designated* and *travel*,
513 respectively, to be consistent with the definition of *bikeway*.]

- 514 25. **Bicycle Lane**—a portion of a roadway that has been designated for preferential or
515 exclusive use by bicyclists. A typical bicycle lane is delineated from the adjacent general-
516 purpose lane(s) by longitudinal pavement markings and bicycle lane symbol or word
517 markings and, if used, signs. Other types of bicycle lanes include:
- 518 (a) **Buffer-Separated Bicycle Lane**—a bicycle lane that is separated from the adjacent
519 general-purpose lane(s) by a pattern of standard longitudinal pavement markings
520 that is wider than a normal or wide lane line marking.
- 521 (b) **Counter-Flow Bicycle Lane**—a one-directional bicycle lane that provides a lawful
522 path of travel for bicycles in the opposite direction from general traffic on a roadway
523 that allows general traffic to travel in only one direction. Counter-flow bicycle lanes
524 are designated by the traffic control devices used for other bicycle lanes.
- 525 (c) **Separated Bicycle Lane**—an exclusive facility for bicyclists that is located within ~~or~~
526 ~~directly adjacent to~~ the roadway and ~~that is~~ physically separated from motor vehicle
527 traffic with a vertical element. Separated bicycle lanes are differentiated from other
528 bicycle lanes by a vertical element. [All bicycle lanes are “within the roadway,”
529 according to the definitions of *roadway* and *bicycle lane*. It is not possible for a separated
530 bicycle lane to be anywhere other than “within the roadway.” Note: the BTC is proposing
531 additional changes to the definition of *bicycle lane*.]
- 532 28. **Bikeway**—a generic term for any road, ~~street~~, ~~pathway~~, or way that in some manner is
533 specifically designated for bicycle travel, regardless of whether such facilities are
534 designated for the exclusive use of bicycles or are to be shared with other transportation
535 modes. [The defined term is *pathway*, not *path*.]
- 536 39. **Clear Storage Distance**—when used in Part 8, the distance available for vehicle storage
537 measured between 6 feet from the rail nearest the intersection to the intersection stop line
538 or the normal stopping point on the ~~highway~~ ~~roadway~~. At skewed grade crossings and
539 intersections, the 6-foot distance shall be measured perpendicular to the nearest rail either
540 along the center line or edge line of the ~~highway~~ ~~roadway~~, as appropriate, to obtain the
541 shorter distance. Where exit gates are used, the distance available for vehicle storage is
542 measured from the point where the rear of the vehicle would be clear of the exit gate arm.
543 In cases where the exit gate arm is parallel to the track(s) and is not perpendicular to the
544 ~~highway~~ ~~roadway~~, the distance is measured either along the center line or edge line of the
545 ~~highway~~ ~~roadway~~, as appropriate, to obtain the shorter distance.
- 546 41. **Collector Highway**—a term denoting a ~~highway~~ ~~road~~ that in rural areas connects small
547 towns and local ~~highways~~ ~~roads~~ to arterial ~~highways~~ ~~roads~~, and in urban areas provides
548 land access and traffic circulation within residential, commercial, and business areas and
549 connects local ~~highways~~ ~~roads~~ to the arterial ~~highways~~ ~~roads~~.
- 550 47. **Conventional Road**—a ~~street or highway~~ ~~road~~ other than an expressway or freeway. [The
551 definition of *conventional road* is inconsistent with the definition of *road*, because a
552 conventional road is defined as “a street or highway . . .” *Road* is a subset of *street* and
553 *highway*. The proposed definition of *road* allows the defined term *conventional road* to
554 continue to be used, because *road* is proposed to be synonymous with *street* and *highway*.]
- 555 50. **Crosswalk**—(a) that part of a roadway at an intersection included within the connections
556 of the lateral lines of the sidewalks on opposite sides of the highway measured from the
557 curbs or in the absence of curbs, from the edges of the ~~traversable~~ roadway, and in the
558 absence of a sidewalk on one side of the roadway, the part of a roadway included within
559 the extension of the lateral lines of the sidewalk at right angles to the center line; (b) any
560 portion of a roadway at an intersection or elsewhere distinctly indicated as a pedestrian
561 crossing by pavement marking lines on the surface, which might be supplemented by
562 contrasting pavement texture, style, or color. [Under the current definition of *roadway*, this
563 definition is not ideal, because it does not permit crosswalks to exist across shoulders. The

- 564 proposed definition of *roadway* causes this definition to be largely appropriate as written.
565 However, the term *traversable roadway* is erroneous. The entire roadway is traversable.]
- 566 94. General-Purpose Lane—a **highway roadway** lane ~~or set of lanes~~, other than a Managed
567 Lane (see definition in this Section) or a Preferential Lane (see definition in this Section),
568 that all or most of the traffic that is allowed on that **highway roadway** is also allowed to
569 use. Certain classes of vehicles, such as commercial vehicles or vehicles exceeding a certain
570 weight or size, might be prohibited from using one or more of the general-purpose lanes.
571 A general-purpose lane might also be restricted to certain uses, such as passing or turning
572 or as an auxiliary lane. [General-purpose lane (singular) should not be defined as “a set of
573 lanes” (plural).]
- 574 96. Grade Crossing—the general area where a **highway road or bikeway** and a railroad and/or
575 light rail transit route cross at the same level, within which are included the tracks,
576 **highway road or bikeway**, and traffic control devices for traffic traversing that area.
- 577 100. Highway—a ~~general term for denoting a public way for purposes of travel by vehicles and~~
578 ~~vulnerable road users, including the entire area within the right-of-way.~~ see Road.
- 579 104. HOV Lane—any preferential lane designated for exclusive use by high-occupancy vehicles
580 for all or part of a day—~~including a designated lane~~ on a freeway, ~~other highway, street,~~
581 ~~or conventional road independent roadway on a separate right-of-way.~~ [The portion of the
582 definition proposed for deletion is repetitive and uses inconsistent terminology.]
- 583 105. Hybrid Beacon—a special type of beacon that is intentionally placed in a dark mode (no
584 indications displayed) between periods of operation and, when operated, displays both
585 steady and flashing traffic control signal indications. Hybrid beacons include:
- 586 (a) Emergency-Vehicle Hybrid Beacon—used to warn and control traffic at an
587 unsignalized location to assist authorized emergency vehicles in entering or crossing a
588 ~~street or highway road~~.
- 589 (b) Pedestrian Hybrid Beacon—used to warn and control traffic at an unsignalized
590 location to assist pedestrians in crossing a ~~street or highway road~~ at a marked
591 crosswalk.
- 592 113. Intersection—intersection is defined as follows:
- 593 (a) The area embraced within the prolongation or connection of the lateral curb lines, or
594 if none, the lateral boundary lines of the roadways of two highways that join one
595 another at, or approximately at, right angles, or the area within which vehicles
596 traveling on different highways that join at any other angle might come into conflict.
597 [The proposed definition of *roadway* would change the area within an intersection. The
598 revised definition of *roadway* appears to be more appropriate for the definition of
599 *intersection* than the current definition of *roadway*, because the definition of *intersection*
600 also refers to areas “within which vehicles . . . might come into conflict.” Vehicles on
601 shoulders, including bicycles and motorists using shoulders open to part-time motor
602 vehicle travel, should be considered within an intersection.]
- 603 (b) The junction of an alley, driveway, or site road ~~way open to public travel~~ with a public
604 road ~~way or highway~~ shall not constitute an intersection, unless the public road ~~way or~~
605 ~~highway~~ at said junction is controlled by a traffic control device.
- 606 (c) If a highway includes two roadways separated by a median, then every crossing of
607 each roadway of such divided highway by an intersecting **highway roadway** shall be a
608 separate intersection if the opposing left-turn paths cross and there is sufficient
609 interior storage for the design vehicle (see Figure 2A-5).
- 610 (d) At a location controlled by a traffic control signal, regardless of the distance between
611 the separate ~~intersections roadways~~ as defined in (c) above:
- 612 (1) If a stop line, yield line, or crosswalk has not been designated ~~on the roadway~~
613 ~~(within the median)~~ between the separate ~~intersections roadways~~, the crossings of
614 both roadways ~~two intersections~~ and the ~~roadway (median)~~ between them shall

- 615 be considered as one intersection; [The proposed changes resolve the contradictory
616 phrase “two intersections . . . shall be considered as one intersection.”]
- 617 (2) Where a stop line, yield line, or crosswalk is designated on the roadway on the
618 intersection approach, the area within the crosswalk and/or beyond the
619 designated stop line or yield line shall be part of the intersection; and
- 620 (3) Where a crosswalk is designated on a roadway on the departure from the
621 intersection, the intersection shall include the area extending to the far side of
622 such crosswalk.
- 623 118. Lane Drop—a through lane that becomes a mandatory turn lane on a conventional
624 roadway, or a through lane that becomes a mandatory exit lane on a freeway or
625 expressway. The end of an acceleration lane and reductions in the number of through
626 lanes that do not involve a mandatory turn or exit are not considered lane drops. [The
627 defined term is *conventional road*.]
- 628 120. Lane Reduction—elimination of a through lane by a gradual narrowing of the ~~travel~~
629 ~~pavement roadway~~ (taper) through physical construction or pavement markings at which
630 traffic in the lane being eliminated must merge into the adjacent through lane and
631 continue in the same direction of travel. A lane reduction can occur outside the influence
632 of an intersection or interchange, or within an interchange a short distance downstream of
633 the gore of an exit ramp. Through lanes that become a mandatory turn or exit are
634 considered lane drops rather than lane reductions.
- 635 130. Low-Volume Rural Road—A category of paved or unpaved conventional or special-
636 purpose roadways having an AADT of less than 400 vehicles and lying outside of built-up
637 or urbanized areas of cities, towns, and communities. [Road is used in both the defined
638 terms *conventional road* and *special-purpose road*.]
- 639 134. Managed Lane—a ~~highway lane or set of lanes, or a highway facility~~, for which variable
640 operational strategies such as direction of travel, tolling, pricing, and/or vehicle type or
641 occupancy requirements are implemented and managed in real-time in response to
642 changing conditions. Managed lanes are typically buffer-separated or barrier-separated
643 lanes parallel to the general-purpose lanes of a highway in which access is restricted to
644 designated locations. There are ~~also~~ some highways on which ~~more than one lane, or~~ all
645 lanes, are managed. [Managed lane (singular) should not be defined as “a set of lanes”
646 (plural). The last sentence clarifies that there can be multiple managed lanes on a highway.]
- 647 137. Median—the portion of a highway separating opposing directions of ~~the traveled way~~ or
648 the area between two roadways of a divided highway measured from edge of traveled way
649 to edge of traveled way. The median excludes turn lanes. The median width might be
650 different between intersections, interchanges, and at opposite approaches of the same
651 intersection. [Use of “the traveled way” implies that there is only one traveled way on a
652 highway. Where a median exists, a highway usually has two traveled ways.]
- 653 138. Minimum Track Clearance Distance—the length along a ~~highway roadway~~ over the
654 track(s) where a vehicle could be struck by rail traffic. The minimum track clearance
655 distance is measured from a point upstream from the track(s) on the approach to the
656 grade crossing to a point downstream from the track(s) on the departure from the grade
657 crossing. The length along the ~~highway roadway~~ between the two points is the minimum
658 track clearance distance.
- 659 145. Multi-Lane—more than one lane moving in the same direction. A multi-lane ~~street,~~
660 ~~highway, or~~ roadway has a basic cross-section comprised of two or more through lanes in
661 ~~at least one or both~~ directions. A multi-lane approach has two or more lanes moving
662 toward the intersection, including turning lanes. [“One or both directions” might be read to
663 contradict the first part of the definition, which only counts the number of lanes “in the same
664 direction.”]

- 665 148. Occupancy Requirement—any restriction that regulates the use of ~~a facility or~~ one or
666 more lanes of a **facility road** for any period of the day based on a specified minimum
667 number of persons in a vehicle.
- 668 150. On-Street Parking—**parallel, perpendicular, or angle** parking **for motor vehicles** within ~~or~~
669 **along**, and accessed directly from, a **public roadway or a site roadway open to public**
670 **travel**. [The phrase “parallel, perpendicular, or angle” has been moved from definition #156,
671 “Parking Area.” The phrase “within or along” is not quite right. All on-street parking is
672 “within” the roadway. “Along” sounds like it was included to cover situations where on-street
673 parking is not “within” the roadway, but this does not appear to ever be the case. The phrase
674 “for motor vehicles” is proposed to be added to exclude bicycle parking from the definition of
675 *on-street parking*.]
- 676 155. Overhead Sign—a sign that is placed such that a portion or the entirety of the sign or its
677 support is directly above ~~the a~~ roadway or ~~shoulder~~ **bikeway** such that vehicles travel
678 below it. Typical installations include signs placed on cantilever arms that extend over the
679 roadway ~~or shoulder~~, signs placed on sign support structures that span the entire width of
680 the **pavement roadway**, signs placed on mast arms or span wires either independently or
681 that also support traffic control signals, and signs placed on highway bridges that cross
682 over the roadway. [The proposed definition of *roadway* includes shoulders, so it is no longer
683 necessary to mention shoulders here. However, overhead signs can be used on bikeways that do
684 not meet the definition of *roadway*.]
- 685 156. Parking Area—a parking lot or parking garage that is separated from a road~~way~~.
686 **Parallel, perpendicular, or angle parking spaces along a roadway are** **On-street parking is**
687 **not considered a parking area**. [This definition is proposed to refer to the defined term *on-*
688 *street parking* for brevity and to avoid potential confusion associated with “along a roadway.”]
- 689 161. Pathway—a general term denoting a public way for purposes of travel by authorized
690 users outside the traveled way and physically separated from the roadway by an open
691 space or barrier and either within the highway right-of-way or within an independent
692 alignment. Pathways include shared-use paths **and bikeways on independent alignments**
693 **where motor vehicles are prohibited**, but **pathways** do not include sidewalks. [The
694 proposed changes are intended to clarify the relationship between *pathway* and *bikeway*.]
- 695 163. Paved—having a **roadway** surface that has both a structural (weight bearing) and a
696 sealing purpose ~~for the roadway~~, such as a bituminous surface treatment, mixed
697 bituminous concrete, or Portland cement concrete. [Facilities other than roadways can be
698 paved.]
- 699 167. Pedestrian Facility—a general term denoting an ~~location where~~ improvements ~~or and~~
700 ~~provisions have been made to~~ **that** accommodates or encourages pedestrian activity. [The
701 proposed changes better align the definitions of *pedestrian facility* and *bicycle facility*.]
- 702 177. Post-Mounted Sign—a sign that is placed to the side of ~~the a~~ roadway **or bikeway** such
703 that no portion of the sign or its support is directly above the roadway, **including the or**
704 **shoulder, or the bikeway**.
- 705 180. Preferential Lane—a **highway lane or set of lanes, or a highway facility**, reserved for the
706 exclusive use of one or more specific types of vehicles or of vehicles with a specific
707 minimum number of occupants. **Some roadways have more than one preferential lane**.
708 [The term *preferential lane* (singular) should not be defined to refer to “a set of lanes” (plural).
709 The last sentence clarifies that there can be multiple preferential lanes on a roadway.]
- 710 186. Private Road—~~see Site Roadways Open to Public Travel~~. **a road open to public travel but**
711 **not under the jurisdiction of or maintained by a public agency**. [The existing definition is
712 undesirable because: (1) Some roads other than site roads open to public travel are privately
713 owned. (2) Not all site roads open to public travel are privately owned. The proposed
714 definition is structured similar to *public road*. Note: According to the definition, a *road* must be

- 715 open to public travel. A privately-owned facility not open to public travel does not meet the
716 definition of *road*.]
- 717 189. Public Road—~~any road, street, or similar facility~~ under the jurisdiction of and maintained
718 by a public agency and open to public travel.
- 719 197. Raised Pavement Marker—a device mounted on or in a **road pavement** surface that has a
720 height generally not exceeding approximately 1 inch above the **road pavement** surface for
721 a permanent marker, or not exceeding approximately 2 inches above the **road pavement**
722 surface for a temporary flexible marker, and that is intended to be used as a positioning
723 guide and/or to supplement or substitute for pavement markings. Raised pavement
724 markers might also be recessed into or flush with the pavement surface.
- 725 202. Road—~~see Roadway.~~ a general term for denoting a way open to public travel and for
726 purposes of travel by motor vehicles and, in some cases, vulnerable road users, including
727 the entire area within the right-of-way. All site roads open to public travel are roads.
- 728 203. Road User—a vehicle operator, bicyclist, or pedestrian, including persons with disabilities,
729 ~~within the highway or on a site roadway open to public travel~~ on a road or bikeway.
- 730 204. Roadway—that portion of a **highway road** improved, designed, or ordinarily used for
731 vehicular travel, including shoulders and on-street parking lanes, but exclusive of the
732 sidewalk, berm, or shoulder pathway even though such sidewalk, berm, or shoulder
733 pathway is used by persons riding bicycles or other human-powered vehicles. In the event
734 a highway includes two or more separate roadways, the term roadway as used in this
735 Manual shall refer to any such roadway separately, but not to all such roadways
736 collectively.
- 737 205. Roadway Network—a geographical arrangement of intersecting roadways. [Network is
738 used in a high-level sense and is not intended to be limited to just the roadway.]
- 739 207. Rumble Strip—a series of intermittent, narrow, transverse areas of rough-textured,
740 slightly raised, or depressed **road pavement** surface that extend across the travel lane to
741 alert vehicle operators to unusual traffic conditions or are located along the shoulder,
742 along the roadway center line, or within islands formed by pavement markings to alert
743 road users that they are leaving the travel lanes.
- 744 208. Rural **Highway Road**—a type of roadway normally characterized by lower volumes,
745 higher speeds, fewer turning conflicts, and less conflict with pedestrians. [The existing
746 definition incorrectly defines “rural highway” as “a type of roadway.” Highway and roadway
747 mean different things.]
- 748 219. Shared-Use Path—~~a bikeway outside the traveled way and physically separated from~~
749 ~~motorized vehicular traffic by an open space or barrier and either within the highway~~
750 ~~right-of-way or within an independent alignment. Shared-use paths are also used by a type~~
751 of pathway improved, designed, or ordinarily used for travel by bicyclists, pedestrians
752 (including skaters, users of manual and motorized wheelchairs, and joggers), and other
753 authorized motorized and non-motorized users, and designated for bicycle travel. All
754 shared-use paths are bikeways.
- 755 220. Shoulder—a longitudinal ~~area portion of the roadway contiguous with the traveled way~~
756 that is used for accommodation of stopped vehicles for emergency use and for lateral
757 support of base and surface courses, and that is graded for emergency stopping. A
758 shoulder might be paved or unpaved. A paved shoulder might be opened to part-time
759 travel by some or all vehicles and might also be available for use by pedestrians and/or
760 bicycles in the absence of other pedestrian or bicycle facilities. Shoulders are within the
761 traveled way only when they are open to part-time travel by motor vehicles.
- 762 247. Site Roadways Open to Public Travel—~~Roadways and bikeways~~ a road on the sites of a
763 shopping centers, office parks, airports, schools, universities, sports arenas, recreational
764 parks, and or other similar business, governmental, and/or recreation facilities that are is
765 publicly or privately owned but where the public is allowed to travel without full-time

766 access restrictions. Two types of **roadways facilities** are not included in this definition: (1)
767 **roadways facilities** where access is restricted at all times by gates and/or guards to
768 residents, employees, or other specifically-authorized persons; and (2) private highway-
769 rail grade crossings. Site roadways open to public travel do not include parking areas (see
770 definition in this Section), including the driving aisles (see definition in this Section) within
771 those parking areas. [The proposed definition of *road*, rather than *roadway*, more accurately
772 describes this facility. Defined terms are usually singular, not plural. It is inconsistent with the
773 definition of *bikeway* for *site road open to public travel* to be defined as a roadway or bikeway.
774 The definition of *bikeway* includes both public and private facilities, so it is not necessary to
775 mention here. The facilities numbered (1) and (2) do not meet the definition of *roadway*.]

776 250. **Speed Limit**—the maximum (or minimum) speed applicable to a section of **highway**
777 **roadway or bikeway** as established by law or regulation.

778 251. **Speed Zone**—a section of **highway roadway or bikeway** with a speed limit that is
779 established by law or regulation, but which might be different from a legislatively-
780 specified statutory speed limit.

781 257. **Street**—see **Highway Road**.

782 262. **Temporary Traffic Control Zone**—an area of a **highway, pedestrian or bicycle facility**
783 **road, including the sidewalk, or a bikeway** where **road-user** conditions are changed
784 because of a work zone or incident by the use of temporary traffic control devices,
785 **flaggers, uniformed law enforcement officers, or other authorized personnel**. [The changes
786 align this definition with the MUTCD’s legal applicability in Section 1B.01, but *sidewalk* is
787 added to emphasize that a TTC zone is needed for work that affects a sidewalk. *Sidewalk* is
788 proposed, rather than *pedestrian facility*, because there are many pedestrian facilities to which
789 the MUTCD does not apply. The meaning of “road user conditions” is unclear. Other changes
790 to this definition are being considered by the TTC TC.]

791 267. **Toll Collection**—manual or electronic methods and elements used to collect a fee for use of
792 a toll facility. Toll collection methods include:

793 (a) **Electronic Toll Collection (ETC)**—a cashless system for automated collection of tolls
794 from moving or stopped vehicles through wireless technologies such as radio-
795 frequency communication or optical scanning. ETC systems are classified as one of
796 the following:

797 (1) systems that require users to have registered toll accounts, with the use of
798 equipment inside or on the exterior of vehicles, such as a transponder or barcode
799 decal, that communicates with or is detected by roadside or overhead receiving
800 equipment, or with the use of license plate optical scanning, to automatically
801 deduct the toll from the registered user account,

802 (2) systems that do not require users to have registered toll accounts because vehicle
803 license plates are optically scanned and invoices for the toll amount are typically
804 sent through postal mail to the address of the vehicle owner, or

805 (3) systems that allow electronic toll collection for both registered and non-registered
806 toll accounts.

807 (b) **Open-Road Tolling (ORT)**—a system designed to allow electronic toll collection
808 (ETC) from vehicles traveling at posted speeds. Open-road tolling might be used on
809 toll roads or toll facilities in conjunction with toll plazas. Open-road tolling is also
810 typically used on managed lanes and on toll facilities that only accept payment by
811 ETC.

812 (c) **Manual Toll Collection**—a system of toll collection from stopped vehicles through
813 acceptance of cash, toll tickets, tokens, or credit cards, and may involve issuance of
814 receipts. Toll collection may be by a machine or toll booth attendant.

815 (1) **Toll-Ticket System**—a toll system in which the user of a toll **road facility** must
816 stop to receive a ticket from a machine or toll booth attendant upon entering the

- 817 toll facility. The ticket denotes the user’s point of entry and, upon exiting the toll
818 system, the user surrenders the ticket and is charged a toll based on the distance
819 traveled between the points of entry and exit. *[Road is proposed to be changed to*
820 *facility for consistency with the end of the sentence.]*
- 821 (2) Attended Lane (Manual Lane)—a toll lane adjacent to a toll booth occupied by a
822 human toll collector who makes change, issues receipts, and performs other toll-
823 related functions. Attended lanes at toll plazas typically require vehicles to stop
824 to pay the toll.
- 825 (3) Exact Change Lane (Automatic Lane)—a non-attended toll lane that has a
826 receptacle into which road users deposit coins totaling the exact amount of the
827 toll. Exact Change lanes at toll plazas typically require vehicles to stop to pay the
828 toll.
- 829 272. Traffic—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and other
830 conveyances either singularly or together while using for purposes of travel any **highway**
831 **or road, including a** site roadway open to public travel, **or bikeway.**
- 832 273. Traffic Control Device—all signs, signals, markings, channelization devices, or other
833 devices that use colors, shapes, symbols, words, sounds, and/or tactile information for the
834 primary purpose of communicating a regulatory, warning, or guidance message to road
835 users on **a street, highway, pedestrian facility, bikeway, pathway, or all roads, including**
836 **site roadways** open to public travel, **and bikeways.** Section 1A.02 contains information
837 regarding items that are not traffic control devices.
- 838 277. Traveled Way—the portion of the roadway for the movement of vehicles, exclusive of **the**
839 **shoulders, berms, sidewalks, and on-street parking lanes.** **The traveled way includes**
840 **shoulders only when they are open to part-time travel by motor vehicles.**
- 841 291. Wayside Horn System—a stationary horn (or a series of horns) located at a grade crossing
842 that is used in conjunction with train-activated or light rail transit-activated warning
843 systems to provide audible warning of approaching rail traffic to road users on the
844 highway **approaches to a grade crossing** or **pathway users on the** pathway approaches to a
845 grade crossing, either as a supplement or alternative to the sounding of a locomotive horn.
846 *[Road user is defined to include people using roads and bikeways, but not all pathways are*
847 *bikeways. Since this definition applies to all pathways, the term pathway users is proposed.]*
- 848 292. Worker—a person on foot whose duties place him or her within the right-of-way of a
849 **street, highway, or pathway road or bikeway**, such as: construction and maintenance
850 forces; survey crews; utility crews; responders to incidents within the right-of-way; and
851 law enforcement personnel when directing traffic, investigating crashes, and handling lane
852 closures, obstructed roadways, and disasters within the right-of-way.

853
854 **CHAPTER 1D. PROVISIONS APPLICABLE TO TRAFFIC CONTROL DEVICES IN**
855 **GENERAL**
856

857 **Section 1D.01 Purpose and Principles of Traffic Control Devices**

858 Support:

859 01 The purpose of traffic control devices, as well as the principles for their use, is to promote **highway**
860 **transportation** safety, inclusion and mobility of all road users, and efficiency by providing for the orderly
861 movement of road users on **streets, highways, bikeways, and all roadways, including** site roadways open
862 to public travel, **and bikeways** throughout the Nation. Section 1A.03 contains additional information on
863 target road users.

864 02 This Manual contains the basic principles that govern the design and use of traffic control devices for
865 all **streets, highways, roads and** bikeways, **and site roadways open to public travel (see definition in**

866 ~~Section 1C.02~~ regardless of type or class or the **public** agency, official, or owner having jurisdiction. The
867 text of this Manual specifies the restriction on the use of a device if it is intended for limited application
868 or for a specific system. It is important that these principles be given primary consideration in the
869 selection and application of each device.

870 *Guidance:*

871 03 *To be effective, a traffic control device should:*

872 A. *Fulfill a need;*

873 B. *Command attention;*

874 C. *Convey a clear, simple meaning;*

875 D. *Command respect ~~from road users~~; and*

876 E. *Give adequate time for proper response.*

877 04 *Design, placement, operation, maintenance, and uniformity are aspects that should be carefully*
878 *considered in order to maximize the ability of a traffic control device to be consistent with the five*
879 *principles listed in Paragraph 3 of this Section. Vehicle speed and road-user types should be carefully*
880 *considered as an element that governs the design, operation, placement, and location of various traffic*
881 *control devices.*

882 05 *The proper use of traffic control devices should provide ~~the~~ road users with the information*
883 *necessary to travel safely, efficiently, and lawfully ~~use the streets, highways, pedestrian facilities, and~~*
884 *~~bikeways~~.* [It is not necessary to provide another list of facility types; this section already has a list in two
885 other places. This list incorrectly includes pedestrian facilities, to which the MUTCD may not apply.]

886 **Standard:**

887 06 **Traffic control devices used on site roadways open to public travel shall have the same shape,**
888 **color, and meaning as those required by the MUTCD for use on public highways roads, except as**
889 **provided otherwise elsewhere in this Manual. Sign size exceptions are noted in each Part as**
890 **applicable.**
891

892 **Section 1D.02 Responsibility and Authority for Traffic Control Devices**

893 **Standard:**

894 01 **The responsibility for the design, placement, operation, maintenance, and uniformity of traffic**
895 **control devices in compliance with the provisions of this Manual shall rest with the **public** agency or**
896 **the official having jurisdiction, ~~or, in the case of site roadways open to public travel, with the~~**
897 **~~private owner or private official having jurisdiction.~~** [Agency is defined to include organizations
898 overseeing both public and private roads. Site roads open to public travel do not necessarily have private
899 owners.]

900 02 **All regulatory traffic control devices shall be supported by laws, ordinances, or regulations.**

901 03 **Traffic control devices, public announcements or notices, and other signs or messages within**
902 **the highway right-of-way of a road or bikeway shall be placed only as authorized by **a public****
903 **authority the agency or the official having jurisdiction, ~~or, in the case of site roadways or private~~**
904 **~~toll roads open to public travel, by the private owner or private official having jurisdiction,~~ for the**
905 **purpose of regulating, warning, or guiding traffic.**

906 04 **When the **public** agency or the official having jurisdiction over a street or highway road or**
907 **bikeway ~~or, in the case of site roadways open to public travel, the private owner or private official~~**
908 **~~having jurisdiction,~~ has granted proper authority, others such as contractors and public utility**
909 **companies shall be allowed to install temporary traffic control devices in temporary traffic control**
910 **zones. Such traffic control devices shall comply with the provisions of this Manual.**

911 05 **Signs and other devices that do not have any traffic control purpose that are placed within the**
912 **highway right-of-way of a road or bikeway shall not be located where they will interfere with, or**
913 **detract from, traffic control devices.**

914 Support:
915 06 States are encouraged to adopt, through policy or legislation, the provisions of 23 CFR 750.108 that
916 restrict outdoor advertising from resembling traffic control devices.
917

918 Section 1D.03 Engineering Study and Engineering Judgment

919 Support:
920 04 The MUTCD does not mandate, and is not intending to imply, that an engineer must make the final
921 decision whether to implement or execute the determination or advice of an engineer by installing or
922 constructing the traffic control device to the engineer's specification in the field. Rather, the engineer,
923 individual under supervision of an engineer, or other individual as duly authorized by State law to engage
924 in the practice of engineering, develops an engineering-based solution that includes the specifications for
925 selection and placement of traffic control devices, but the responsibility for a final decision to implement
926 that solution rests with the agency having jurisdiction over the road ~~way~~ or bikeway, after consultation
927 with and based on advice from the engineer.

928 *Guidance:*
929 05 *The decision to use a particular device at a particular location should be made on the basis of either*
930 *an engineering study or the application of engineering judgment by an engineer, someone under the*
931 *direct supervision of an engineer, or other individual as duly authorized by State law to engage in the*
932 *practice of engineering. Thus, while this Manual provides Standards, Guidance, and Options for design*
933 *and application of traffic control devices, this Manual should not be considered a substitute for*
934 *engineering judgment. Engineering judgment should be exercised in the selection and application of*
935 *traffic control devices, as well as in the location and design of roads and ~~streets~~ bikeways that the devices*
936 *complement.*
937 06 *Early in the processes of location and design of roads and ~~streets~~ bikeways, engineers should*
938 *coordinate such location and design with the design and placement of the traffic control devices to be*
939 *used with such roads and ~~streets~~ bikeways.*
940 07 *~~Jurisdictions~~ Agencies, ~~or including~~ owners of site road ~~ways~~ or private ~~toll~~ roads open to public*
941 *travel, with responsibility for traffic control that do not have an engineer on their staff who is trained*
942 *and/or experienced in traffic control devices should seek engineering assistance from others, such as the*
943 *State transportation agency, their county, a nearby large city, or a traffic engineering consultant.*
944

945 Section 1D.09 Placement and Operation of Traffic Control Devices

946 **Standard:**
947 01 **Before any ~~highway, site roadway open to public travel (see definition in Section 1C.02)~~ road**
948 **or bikeway, detour, or temporary route is opened to public travel, all traffic control devices**
949 **necessary for safe operation shall be in place.** [Detours and "temporary routes" fall under the broad
950 **category of road. There does not appear to be a need to list them separately.]**

951 **Option:**
952 02 Temporary traffic control devices, as provided for in Part 6 of this Manual, may be used in place of
953 permanent devices that have yet to be installed for safe operation.

954 *Guidance:*
955 03 *Placement of a traffic control device should be within the road user's view so that adequate visibility*
956 *is provided. To aid in conveying the proper meaning, the traffic control device should be appropriately*
957 *positioned with respect to the location, object, or situation to which it applies. The location and legibility*
958 *of the traffic control device should be such that a road user has adequate time to make the proper*
959 *response in both day and night conditions.*

960

961 **Section 1D.11 Crashworthiness of Traffic Control Devices and Other Roadside**
962 **Appurtenances**

963 **Standard:**

964 01 **In accordance with various Sections of this Manual, certain traffic control devices and their**
965 **supports, and/or related appurtenances shall be crashworthy (see definition in Section 1C.02).**
966 **Crashworthiness provisions in this Manual shall apply to all ~~streets, highways, and site roadways~~**
967 **~~open to public travel~~ roads and bikeways.**

968 **APPENDIX – COMPLETE DISCUSSION OF PROPOSED CHANGES**

969 Section 1C.02 of the MUTCD currently defines *highway* and *roadway* as follows:

970
971
972 **100. Highway**—a general term for denoting a public way for purposes of travel by vehicles and
973 **vulnerable road users, including the entire area within the right-of-way.**

974
975 **204. Roadway**—that portion of a highway improved, designed, or ordinarily used for vehicular
976 **travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder even though**
977 **such sidewalk, berm, or shoulder is used by persons riding bicycles or other human-**
978 **powered vehicles. In the event a highway includes two or more separate roadways, the**
979 **term roadway as used in this Manual shall refer to any such roadway separately, but not**
980 **to all such roadways collectively.**

981 *Highway* is a broad term that encompasses the entire right-of-way, including the roadway,
982 median, shoulders, and sidewalks. A roadway is a “portion of a highway” that includes only the
983 “vehicular travel and parking lanes.” The definition of *roadway* specifically excludes “the
984 sidewalk, berm, or shoulder.”

985
986 Table 1 shows which key elements in the highway right-of-way are included in the definition of
987 *roadway*.

988
989 **Table 1: Parts of the Highway Included in the Roadway**

Elements of a highway right-of-way	Part of the roadway?
raised median	NO
motor vehicle lanes, including turn lanes	YES
bicycle lanes (contiguous or separated)	YES
parking lanes (undefined)	YES
shoulder	NO
sidewalk	NO

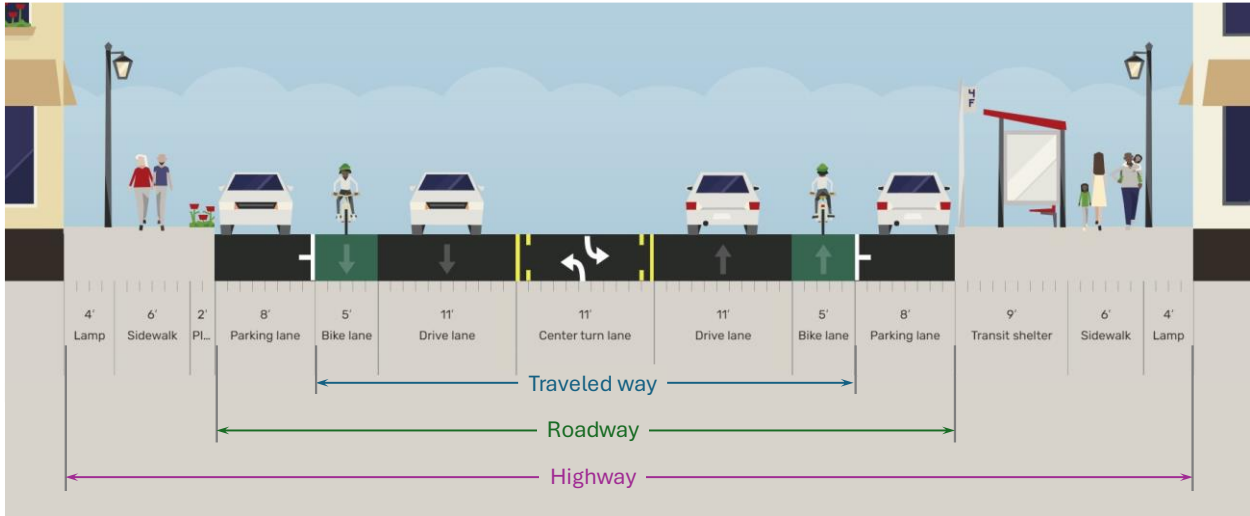
990
991
992 Bicycle lanes are part of the roadway because the roadway is intended for “vehicular travel,”
993 and bicycles are vehicles, according to the MUTCD definition:

994
995 **22. Bicycle**—a pedal-powered vehicle upon which the human operator sits.

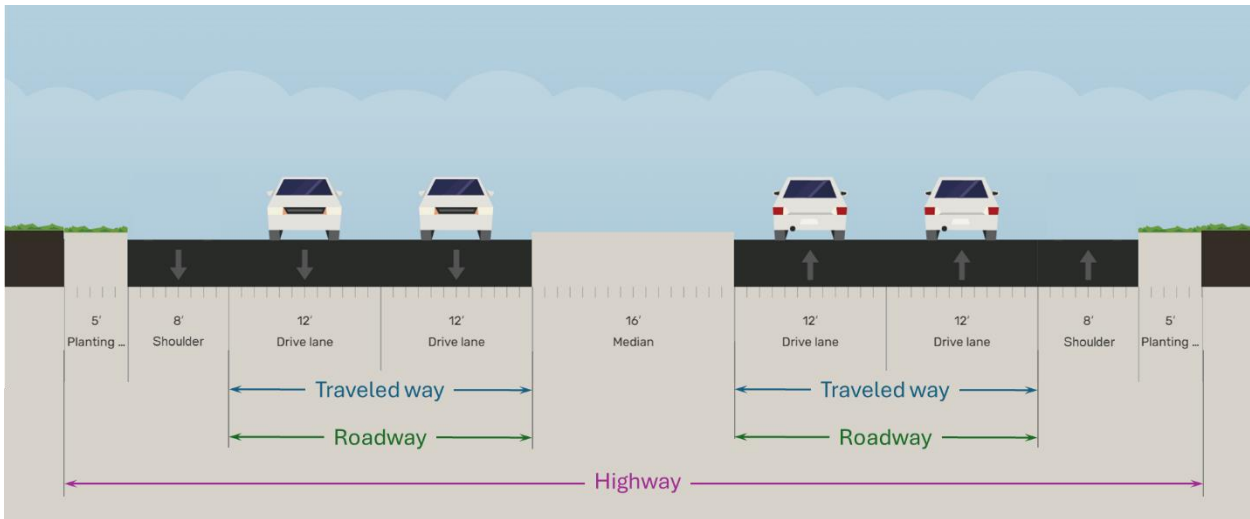
996 A related term, *traveled way*, is defined in the MUTCD as follows:

997
998 **277. Traveled Way**—the portion of the roadway for the movement of vehicles, exclusive of the
999 **shoulders, berms, sidewalks, and parking lanes.**

1000 There is only one difference between *roadway* and *traveled way*. Parking lanes are included in
1001 the roadway but excluded from the traveled way. *Parking lane* is not defined in the MUTCD.
1002 Figure 1 illustrates the extents of the highway, roadway, and traveled way for examples of two
1003 cross sections.
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Figure 1: Locations of the Traveled Way, Roadway, and Highway on Example Cross-Sections

The Millennium (2000) Edition of the MUTCD was the first to include a list of definitions in Part 1. The definitions of *roadway* and *traveled way* in the 11th Edition of the MUTCD are identical to those in the Millennium Edition. Few terms were defined in the MUTCD prior to the Millennium Edition, but *roadway* was defined starting in the 1978 Edition. Its definition in 1978 was very similar to its current definition:

Unless otherwise defined herein, the term “roadway” shall be defined as: “That portion of a highway improved, designed, or ordinarily used for vehicular travel, exclusive of the berm or shoulder. In the event a highway includes two or more separate roadways, the term ‘roadway’ as used herein, refers to any such roadway separately, but not to all such roads collectively.”

1016
1017

1018 The only substantive changes to the definition of *roadway* since 1978 are the inclusion of
1019 parking lanes and the exclusion of sidewalks. Both of these changes were effective with the
1020 Millennium Edition.

1021
1022 The MUTCD also defines *street* as a synonym for *highway* and *road* as a synonym for *roadway*.

1023
1024 **257. Street—see Highway.**

1025
1026 **202. Road—see Roadway.**

1027 1028 **The Problem with *Highway***

1029 The definition of *highway* changed in the 11th Edition of the MUTCD. In the 2009 edition, it was
1030 defined as follows:

1031
1032 **84. Highway—a general term for denoting a public way for purposes of vehicular travel,**
1033 **including the entire area within the right-of-way.**

1034 The definition in the 11th Edition is as follows:

1035
1036 **100. Highway—a general term for denoting a public way for purposes of travel by vehicles and**
1037 **vulnerable road users, including the entire area within the right-of-way.**

1038 There are three known problems with this definition.

1039 1040 ***Highway Problem Category 1: Vulnerable Road Users***

1041 The first problem was introduced in the 11th Edition. The definition says a highway is for “travel
1042 by vehicles and vulnerable road users.” The conjunction *and* means that a facility is only
1043 considered a highway if it accommodates **both** vehicles **and** vulnerable road users. The
1044 MUTCD does not contain a definition for *vulnerable road user* in Section 1C.02 among the other
1045 defined terms, but Section 1A.03 mentions a definition of this term in Title 23, U.S.C. 148(a):
1046 “bicyclists and pedestrians, including persons with disabilities.” Under this definition of *highway*,
1047 for example, most freeways are not considered highways, because freeways typically
1048 accommodate only vehicles and not vulnerable road users.

1049
1050 This problem compounds because *highway* is used in so many other defined terms. For
1051 instance, *freeway* is defined in Section 1C. 02 as “a divided highway with full control of access.”
1052 However, if a facility does not meet the definition of *highway* because of the vulnerable road
1053 user issue, then it also does not meet the definition of *freeway*, since all freeways are highways.

1054
1055 The phrase “vehicles and vulnerable road users” is also somewhat contradictory when it comes
1056 to bicyclists. A bicycle is a vehicle, according to the MUTCD definition. A person riding a
1057 bicycle is both a vehicle and a vulnerable road user. The phrase “vehicles and vulnerable road
1058 users” may erroneously lead MUTCD readers to think that bicycles are not vehicles since
1059 bicyclists are likely considered vulnerable road users.

1060 1061 ***Highway Problem Category 2: Bikeways***

1062 The second problem existed in the 2009 and prior editions of the MUTCD and continues to be
1063 an issue in the 11th Edition. Because bicycles are vehicles, the term *highway* includes facilities
1064 that only accommodate bicycles and **not** motor vehicles. For instance, a shared-use path on an

1065 independent alignment meets the definition of *highway*. This is not consistent with the plain-
1066 English definition of *highway* and is likely counterintuitive for many MUTCD readers.

1067
1068 An example of this problem can be found in Paragraph 16 of Section 9D.12, which says, “Where
1069 a shared-use path is within the highway right-of-way or crosses a street or highway, an
1070 alternative lettering style shall not be used.” A shared-use path is, by definition, a bikeway. A
1071 bikeway, by definition, accommodates bicycles. A bicycle, by definition, is a vehicle. A
1072 highway, by definition, accommodates vehicular travel. Therefore, **all** shared-use paths are
1073 highways. This is not consistent with the wording of Paragraph 16, which is worded as though
1074 some shared-use paths are “within the highway right-of-way” and some are not. This paragraph
1075 is more consistent with common usage that does not consider shared-use paths to be
1076 highways.

1077 1078 **Highway Problem Category 3: Private Facilities**

1079 The third problem, also long-standing, relates to the phrase *public way* in the definition of
1080 *highway*. *Public way* is potentially ambiguous. It could mean either of the following:

- 1081 1. A way that is publicly owned
- 1082 2. A way that is open to public travel, whether publicly or privately owned

1083
1084 The following MUTCD text suggests that the second of these interpretations is intended:
1085

- 1086 • Paragraph 2 of Section 1B.01 refers to “any street, roadway, or bikeway open to public travel,
1087 either publicly or privately owned.” The mention of public or private ownership in this
1088 section is only appropriate if some highways are public and some are private, which
1089 appears to preclude the first interpretation above.
- 1090 • Paragraph 5 of Section 1A.01 says the MUTCD is intended to apply “to facilities open to
1091 public travel independent of the type of ownership or jurisdiction (public or private).” This
1092 wording closely matches the second interpretation of *public way*.
- 1093 • The definition of *site roadway open to public travel* in Section 1C.02 includes the phrase
1094 “publicly or privately owned.”

1095 While context suggests that the second interpretation of *public way* is intended by the MUTCD,
1096 the ambiguity could lead some MUTCD readers to be confused about whether private facilities
1097 are included in the definition of *highway*. Some private facility owners are unaware of the
1098 MUTCD’s applicability, so the manual should be very clear about whether private roads open to
1099 public travel are included in the definition of *highway*.

1100 1101 **The Problem with *Road* and *Roadway***

1102 The MUTCD does not always use *roadway* and *road* consistent with their definitions. The
1103 MUTCD uses *roadway* 1,308 times and *road* 674 times.¹ For many of these uses, the
1104 definitions of the terms are not particularly important. For example, the phrase “right-hand side
1105 of the roadway” is usually understandable regardless of the definition. However, of the total
1106 1,982 uses of *road* and *roadway*, about 270 uses (nearly 14 percent) are not consistent with the
1107 definitions.

1108

¹ This count does not include uses of *road* as part of the compound term *road user*. The count also excludes uses of the words in proper names, the legend of signs, the table of contents, and closed compounds such as *railroad*, *roadside*, and *roadblock*.

1109 The inconsistent uses of the terms can be grouped broadly into four categories.

1110

1111 **Roadway Problem Category 1: Shoulders**

1112 Some provisions in the MUTCD are written as though *roadway* is defined to include shoulders,
1113 which is not the case. Following are examples of this problem category:

1114

1115 • Paragraph 15 of Section 2G.03 requires that certain signs comply with the provisions for
1116 overhead mounting “if any portion of the sign extends over the roadway.” This standard
1117 should also apply where any portion of a sign extends over a shoulder.

1118

1119 • Paragraph 5 of Section 2N.03 requires that the Evacuation Route sign be mounted “not
1120 less than 6 feet or more than 10 feet to the right of the right-hand roadway edge.” This standard
1121 is perhaps acceptable for roadways with no adjacent shoulder. But on roadways with
1122 adjacent shoulders, this standard is unacceptable, because it requires the lateral offset
1123 of the sign to be measured from the right-hand edge of the right-most lane, not the right-
1124 hand edge of the shoulder. On roadways with adjacent shoulders that are more than 10
1125 feet wide, this standard requires that the sign be installed *within* the shoulder, which is
1126 contrary to common sense.

1127

1128 • Paragraph 1 of Section 3K.01 refers to rumble strips as “slightly raised or depressed road
1129 surfaces.” It is true that some rumble strips, such as center line rumble strips, are located
1130 on the “road.” However, rumble strips installed in the shoulder are not within the “road.”
1131 It is incorrect to refer to rumble strips as “road surfaces” when they are located outside
1132 the road.

1133

1134 • Paragraph 8 of Section 9E.01 requires that “a portion of the roadway shall not be established
1135 as both a shoulder and a bicycle lane.” It is impossible to establish a portion of the roadway
1136 as both a shoulder and a bicycle lane, by definition, because it is impossible for a portion
1137 of the roadway to be established as a shoulder at all. Shoulders are expressly excluded
1138 from the definition of *roadway*.

1139

1140 The shoulder issue is more concerning now that the 11th Edition of the MUTCD for the first time
1141 sanctions part-time motor vehicle travel on shoulders. Shoulders are excluded from the
1142 definition of *roadway*, and this exclusion apparently applies even when a shoulder is open to
1143 part-time motor vehicle travel.

1144

1145 The exclusion of shoulders is problematic because many uses of *roadway* appear to be
1146 intended to include shoulders open to part-time motor vehicle traffic, such as the following:

1147

1148 • Section 1C.02 defines *crosswalk* as “part of a roadway . . .” Since shoulders are not part
1149 of the roadway, it is impossible for a crosswalk to exist across a shoulder. This appears
1150 to be unintentional, because crosswalks are frequently striped across shoulders (even
1151 when the shoulders are not open to part-time motor vehicle travel).

1152

1153 • According to Item A.3 of Paragraph 1 in Section 4A.03, pedestrians facing a CIRCULAR
1154 GREEN indication “are permitted to proceed across the roadway within any marked or
1155 unmarked associated crosswalk.” Apparently pedestrians are not permitted to proceed
1156 across a shoulder, since shoulders are not part of the roadway and a crosswalk cannot
1157 exist across a shoulder, as noted above.

1158

- 1159
- Item C.3 of the same paragraph admonishes pedestrians to “not enter the roadway” when facing a CIRCULAR RED or steady RED ARROW indication. However, pedestrians are not prohibited from entering the shoulder, even when the shoulder is open to part-time motor vehicle travel.
- 1160
- 1161
- 1162
- 1163
- Paragraph 11 of Section 6H.01 recommends advance warning signs “where any part of the roadway is obstructed or closed,” but does not recommend any such signs where the shoulder is obstructed or closed, even where the shoulder is open to part-time motor vehicle travel.
- 1164
- 1165
- 1166
- 1167

1168

1169 There is also a disconnect between the MUTCD’s definition of *roadway* and the definition in *A Policy on Geometric Design of Highways and Streets*, also known as the Green Book, published by the American Association of State Highway and Transportation Officials (AASHTO) most recently in 2018. The Green Book defines *roadway* as follows:

1170

1171

1172

1173

Roadway—The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.

1174

1175

1176 The Green Book’s definition is very similar to the definition in the AASHTO *Transportation Glossary*, which is referred to in Paragraph 1 of Section 1C.02 of the MUTCD for definitions of terms other than those included in the manual:

1177

1178

1179

Roadway 1) The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways.
2) In construction specifications, the portion of a highway within limits of construction.

1180

1181

1182 The AASHTO *Highway Safety Manual* (HSM) continues the theme:

1183

roadway—the portion of a highway, including shoulders, for vehicular use.

1184

1185

1186 The Green Book, the *Transportation Glossary*, and the HSM include shoulders in their definitions of *roadway*, exactly the opposite of the MUTCD’s treatment of shoulders. It is challenging for practitioners to contend with substantially different definitions of *roadway*—including and excluding shoulders—in such fundamental publications.

1187

1188

1189

1190

Roadway Problem Category 2: Bicycle Facilities

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1192 As noted earlier, *roadway* is defined as the portion of a highway “used for vehicular travel.” Because the MUTCD defines bicycles as vehicles, any portion of the highway used for bicycle travel is part of the roadway, except the sidewalk, berm, and shoulder, which are expressly excluded.

1193

1194

1195

1196

1197 Bicyclists frequently operate in bicycle lanes, which are unquestionably part of the roadway, and
1198 they frequently operate on sidewalks, which are unquestionably **not** part of the roadway.
1199 Bicyclists also frequently operate on shared-use paths, and it is not as easy to determine
1200 whether shared-use paths are part of the roadway.

1201
1202 The relationship between sidewalks and shared-use paths is not straightforward. Some
1203 agencies, for instance, construct what they call a “sidewalk” on one side of a street and what
1204 they call a “shared-use path” on the opposite side. One example of such a street is shown in
1205 Figure 2.

1206

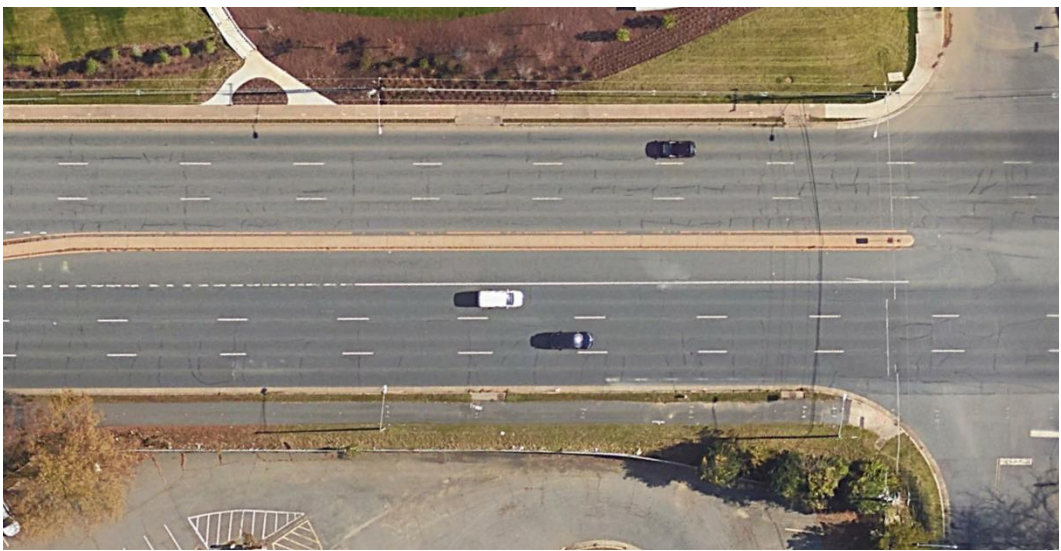


Figure 2: Different Pedestrian and Bicyclist Accommodations by Side of the Street

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On such streets, the sidewalks might be narrower than shared-use paths and constructed with concrete pavement. The shared-use paths might be wider than sidewalks, wide enough to allow two-way bicycle traffic, and constructed with asphalt pavement. However, the definitions of *sidewalk* and *shared-use path* in the MUTCD make no mention of either width or pavement surface material:

221. Sidewalk—that portion of a street between the curb line, or the lateral line of a roadway, and the adjacent property line or on easements of private property that is paved or improved and intended for use by pedestrians.

219. Shared-Use Path—a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent alignment. Shared-use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users.

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Shared-use path is defined as “a bikeway . . .” The MUTCD’s definition of *bikeway* is helpful for a complete understanding of what constitutes a shared-use path:

28. Bikeway—a generic term for any road, street, path, or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

1232 Although some MUTCD readers might consider a particular pedestrian facility to be **either** a
1233 sidewalk **or** a shared-use path, the MUTCD permits some facilities to meet **both** definitions. To
1234 meet the MUTCD’s definition of *sidewalk*, a pedestrian facility must meet two criteria:

- 1235 • It must run alongside a roadway.
- 1236 • It must be “paved or improved and intended for use by pedestrians.”

1237
1238 Under this definition, the pedestrian facilities on **both** sides of the street in Figure 2 are
1239 considered sidewalks, even though they vary in width and surface material.

1240
1241 To meet the MUTCD’s definition of *shared-use path*, a facility must be “a bikeway.” To be a
1242 bikeway, a facility must be “designated for bicycle travel.” As such, if a facility meets the
1243 MUTCD’s definition of *sidewalk* **and** is designated for bicycle travel, then it is **both** a sidewalk
1244 and a shared-use path. The facility in Figure 3 is one example. It runs alongside a roadway, is
1245 intended for use by pedestrians, and is designated for bicycle travel, so it is both a sidewalk and
1246 a shared-use path.

1247
1248 If a facility is designated for bicycle travel but does **not** run alongside a roadway, then it is a
1249 shared-use path but not a sidewalk. Figure 4 shows an example of this type of facility. It does
1250 not run alongside a roadway, so it is not a sidewalk, but it is designated for bicycle travel, so it is
1251 a shared-use path.

1252



Figure 3: A Facility that is a Shared-Use Path and a Sidewalk

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Figure 4: A Facility that is a Shared-Use Path but not a Sidewalk

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The reason this distinction is important is that sidewalks are expressly excluded from the definition of *roadway*, but shared-use paths are not. If a facility meets the definition of *shared-use path* but not *sidewalk*, such as the facility in Figure 3, then the facility is a roadway, because it is intended for bicycle travel, and bicycles are vehicles.

There is a further complicating factor. The MUTCD defines *pathway* as follows:

161. Pathway—a general term denoting a public way for purposes of travel by authorized users outside the traveled way and physically separated from the roadway by an open space or barrier and either within the highway right-of-way or within an independent alignment. Pathways include shared-use paths, but do not include sidewalks.

This definition indicates that pathways are “separated from the roadway” and that pathways “include shared-use paths, but do not include sidewalks.” This definition is inconsistent with the discussion above for two reasons:

- It considers pathways, even shared-use paths, to be “separated from the roadway,” even though, as discussed above, other MUTCD definitions indicate that shared-use paths are *part* of the roadway when they do not also meet the definition of *sidewalk*.
- It does not appear to consider that some pedestrian facilities meet the definition of both *shared-use path* and *sidewalk*. It is not clear whether these facilities are included in the definition of *pathway*, because shared-use paths are expressly included and sidewalks are expressly excluded from *pathway*.

This convoluted relationship among *sidewalk*, *shared-use path*, *pathway*, and *roadway* is unlikely to be what the authors of the MUTCD intended. The plain-English definition of *roadway* does not include situations such as Figure 4. There are many provisions in the MUTCD that refer to roadways but are clearly not intended to apply to situations such as Figure 4. Following are a few examples of these provisions:

- 1290 • Paragraph 5 of Section 3B.01 says, “a single solid yellow line shall not be used as a center
1291 line marking on a two-way roadway.” A two-way shared-use path that is not a sidewalk *is* a
1292 roadway, so this standard should apply. However, Paragraph 1 of Section 9E.13
1293 conflicts with it: “Where shared-use paths are of sufficient width to designate two minimum
1294 width lanes, a solid yellow center line may be used to separate the two directions of travel.”
1295
- 1296 • Paragraph 7 of Section 9D.06 says, “Certain uninterrupted, long-distance interstate bicycle
1297 routes can largely be on shared-use paths, or other off-roadway facilities.” A shared-use path is
1298 only an “off-roadway facility” if it is also a sidewalk, and this does not appear to be what
1299 this provision intends to refer to.
- 1300
- 1301 • Paragraph 4 of Section 9E.09 prohibits the use of shared-lane markings in “physically-
1302 separated bikeways, either in the roadway or on an independent right-of-way.” A physically
1303 separated bikeway is in the roadway unless it is also a sidewalk. A physically separated
1304 bikeway on an independent right-of-way is in the roadway because it is not a sidewalk,
1305 and this is exactly the opposite of the way this provision is framed.
1306

1307 **Roadway Problem Category 3: Road User**

1308 In over 70 percent of the places where *road* is used in the MUTCD, it is part of the compound
1309 term *road user*, which is used 844 times in the MUTCD and is defined as follows:
1310

1311 **203. Road User—a vehicle operator, bicyclist, or pedestrian, including persons with disabilities,**
1312 **within the highway or on a site roadway open to public travel.**

1313 It is curious that *road user* is defined as someone “within the highway,” even though *road* is only
1314 a subset of *highway*. For instance, a pedestrian or bicyclist on a sidewalk is not using the
1315 “road,” because sidewalks are excluded from the definition of *road*. Bicyclists and pedestrians
1316 traveling on the shoulder are also not using the road, because the shoulder is not part of the
1317 road. It is counterintuitive that *road user* includes people who are not using the road, and this
1318 lack of precise language likely contributes to the misuse of the terms elsewhere.
1319

1320 The 11th Edition of the MUTCD introduced the term *vulnerable road user* for the first time; it is
1321 used ten times. As noted earlier, Section 1A.03 points out that this term is defined in Title 23,
1322 U.S.C. 148(a) to mean “bicyclists and pedestrians, including persons with disabilities.” However, a
1323 complete review of 23 U.S.C. 148 reveals that the term is defined parenthetically as “vulnerable
1324 road users (including motorcyclists, bicyclists, pedestrians).”² The MUTCD does not
1325 acknowledge that motorcyclists are considered vulnerable road users in 23 U.S.C. 148.
1326

1327 It is a support statement in which the 23 U.S.C. 148 definition is mentioned. In contrast, the
1328 definitions in Section 1C.02 are standards. This difference in level of mandate suggests that the
1329 definition of *vulnerable road user* in 23 U.S.C. 148 does not carry the same force of law as the
1330 definitions in Section 1C.02. It appears that MUTCD users are not required to consider the
1331 definition in 23 U.S.C. 148 as the official definition of *vulnerable road user*.
1332

1333 The definition in 23 U.S.C. 148 also does not limit vulnerable road users to highways and site
1334 roads open to public travel (SROPT), as is the case for the official MUTCD definition of *road*
1335 *user*. According to 23 U.S.C. 148, a person is apparently a vulnerable road user when walking

² <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title23-section148&num=0&edition=prelim>.

1336 on a private walkway from the street to a single-family home, and a person is apparently a
1337 vulnerable road user when walking inside a building. A vulnerable road user only becomes a
1338 road user when that person begins to travel on a highway or SROPT.

1339
1340 The Pedestrian Joint Task Force is currently considering a definition for *vulnerable road user*.

1341

1342 **Roadway Problem Category 4: Parking Lanes**

1343 The definition of *roadway* uses the term *parking lane*, but *parking lane* is undefined in the
1344 MUTCD. Most readers might agree that parallel parking adjacent to a travel lane is intended to
1345 be considered a parking lane, but readers might not agree about whether other types of on-
1346 street parking, such as perpendicular or angle parking, are considered to be parking lanes. This
1347 uncertainty can create confusion about whether perpendicular and angle parking are intended to
1348 be included in the definition of *roadway*.

1349

1350 **Word Choice Problems**

1351 In addition to the problems with the definitions of *highway* and *roadway* discussed above, the
1352 text of the MUTCD sometimes uses a term that does not accurately convey the intent. A few
1353 examples are as follows:

1354

- 1355 • In Section 1C.02, *conventional road* is defined as “a street or highway other than an
1356 expressway or freeway.” It is inconsistent to use *road* as part of the defined term
1357 *conventional road* when the definition refers to “a street or highway.” A road is “a portion
1358 of a highway,” so it is inconsistent for *conventional road* to be defined to include the
1359 entire right-of-way.
- 1360
- 1361 • Paragraph 8 of Section 3B.25 refers to “the left shoulder of a one-way or divided roadway.”
1362 While it is possible for a highway to be divided, the term *divided roadway* is not
1363 consistent with the definitions of *highway* and *roadway*.
- 1364
- 1365 • Paragraph 8 of Section 4S.02 says, “An Intersection Control Beacon should not be mounted
1366 on a pedestal in the roadway unless the pedestal is within the confines of a traffic or pedestrian
1367 island.” It is impossible to install a pedestal “in the roadway,” because if a pedestal were
1368 in place, that area would cease to be a portion of the highway “ordinarily used for
1369 vehicular travel.” A pedestal on a “traffic or pedestrian island” is also not within the
1370 roadway, for the same reason, which contradicts the wording of this provision.

1371

1372 Usually, word-choice problems are relatively easy to correct by selecting a more appropriate
1373 term that is consistent with the MUTCD definitions.

1374

1375 **Proposed Solution**

1376 Correcting the problems noted above will be a large undertaking because the terms at issue are
1377 widely used in the MUTCD. The terms are also used in contexts beyond the MUTCD, such as
1378 in federal regulations and state laws. Changing the MUTCD definitions for *highway*, *roadway*,
1379 and *road* may present challenges due to the amount of coordination needed for implementation,
1380 and this coordination may extend well beyond the MUTCD.

1381

1382 Conversely, the purpose of the definitions in the MUTCD is to allow users of the manual to best
1383 understand when and where its provisions apply or do not apply. MUTCD definitions that

1384 conflict with each other complicate users' ability to obtain complete and accurate information
1385 about traffic control devices.

1386
1387 While it is true that federal and state laws and regulations often have meanings for terms such
1388 as *roadway*, *road*, and *highway*, these meanings are in many cases already inconsistent
1389 between jurisdictions. The Edit Committee task force reviewed state motor vehicle codes from
1390 every state in the U.S. and the District of Columbia. The review focused on two questions
1391 relevant to this proposal:

- 1392
- 1393 • **Are shoulders included in the jurisdiction's definition of *roadway*?** The task force
1394 found that the majority of jurisdictions, 42 of 51, exclude shoulders from the roadway.
1395 While the definitions in some jurisdictions were not entirely clear on this issue, it is likely
1396 that shoulders are included in the roadway in the other nine jurisdictions.
1397
 - 1398 • **Are shared-use paths included in the jurisdiction's definition of *roadway*?**
1399 Typically, this situation occurs when a jurisdiction considers a roadway to be "for
1400 vehicular travel" and the jurisdiction also defines bicycles as vehicles. (This is the same
1401 reason shared-use paths are considered roadways by the current MUTCD definitions.)
1402 The task force found that shared-use paths are likely included in the roadway in 28
1403 jurisdictions and excluded from the roadway in 23 jurisdictions. As with shoulders, the
1404 definitions in some jurisdictions were not perfectly clear.
1405

1406 These findings documented considerable disagreement among jurisdictions about definitions of
1407 common terms. Many jurisdictions already have definitions that conflict with the MUTCD.

1408
1409 If the question is whether or not a traffic control device complies with the MUTCD, it is the
1410 MUTCD definitions that control, not how terms are defined in federal, state, or local law or
1411 regulation. The MUTCD has an obligation to provide definitions that are clear to readers and
1412 free of internal conflicts. The process of changing definitions may indeed affect publications and
1413 documents other than the MUTCD, and it may affect agencies other than the Federal Highway
1414 Administration's MUTCD Team. However, this fact alone does not appear to be a sufficient
1415 reason to allow conflicting and unclear definitions to remain in the MUTCD for years or decades
1416 to come.

1417
1418 If the definitions are to be improved, the NCUTCD is a reasonable and sensible organization to
1419 start the process. NCUTCD's acknowledgement of these issues and support for the proposed
1420 revisions can help call attention to the issues among the affected agencies and help lead the
1421 charge for change.

1422
1423 The solution can be separated into the following two steps:

- 1424
- 1425 • **Step 1: Decide on any changes to definitions.** MUTCD definitions could be written in
1426 more than one way, but the most uniformity is likely to be achieved when the definitions
1427 most closely conform to plain English usage.
1428
 - 1429 • **Step 2: Review the MUTCD to ensure that the text, figures, and tables are
1430 consistent with the definitions.** This step is likely to involve all technical committees
1431 because changes are expected to be needed in every part of the MUTCD.
1432

1433 Because of the scale involved in Step 2, it is not reasonable for a single NCUTCD ballot
1434 proposal to address the entire issue at one time. Rather, this proposal is intended to
1435 accomplish Step 1 by proposing updates to several definitions. In addition, this proposal
1436 provides a sample of Step 2, illustrating how the definition changes would be applied to a
1437 portion of the MUTCD. The intent of the sample is to help confirm that the proposed definitions
1438 are reasonable when applied to actual MUTCD content. Part 1 of the MUTCD was chosen for
1439 this purpose, for two reasons:

- 1440 • Part 1 is entirely within the purview of the Edit Committee.
- 1441 • This proposal includes changes to several definitions other than those noted above, all
1442 of which are in Part 1. It is important to identify all changes to definitions to ensure that
1443 defined terms are applied correctly during Step 2.

1444
1445 Based on the number of pages, Part 1 constitutes about 3.4 percent of the MUTCD.

1446
1447 The subsequent discussion in this proposal offers rationale for the changes in definitions
1448 proposed as part of Step 1.

1449
1450 After this Step 1 proposal is approved by the NCUTCD Council, it should not be immediately
1451 sent to FHWA as a recommendation. Rather, after Council approves this Step 1 proposal,
1452 technical committees should begin work on Step 2. Both Step 1 and Step 2 proposals would be
1453 sent to FHWA only after the NCUTCD Council approves Step 2 proposals.

1454 1455 **Proposed Definitions of *Highway* and *Road***

1456 It is possible that the MUTCD's definitions of *highway* and *street* contribute to the problems with
1457 *road* and *roadway*. *Highway* and *street* are synonyms in the MUTCD, but this is not the way the
1458 two words are commonly used in plain English. Common definitions of these words are as
1459 follows, based on a review of a few dictionaries:

- 1460 • Highway: A main road, especially one connecting major towns or cities
- 1461 • Street: A thoroughfare, especially in a city or town

1462
1463 Typically, when two terms are synonyms, it is not necessary to mention both terms in a
1464 sentence (in either the MUTCD or any other text). For example, the MUTCD defines *dynamic*
1465 *message sign* and *variable message sign* as synonyms of *changeable message sign*. It does
1466 so in exactly the same way it defines *street* as a synonym of *highway*.

1467
1468 **70. Dynamic Message Sign—see Changeable Message Sign.**

1469
1470 **283. Variable Message Sign—see Changeable Message Sign.**

1471
1472 **257. Street—see Highway.**

1473 Other than these definitions, when the MUTCD refers to changeable message signs, it never
1474 mentions the synonyms. For example, the title of Chapter 2L is merely "Changeable Message
1475 Signs," not "Changeable Message Signs, Dynamic Message Signs, and Variable Message
1476 Signs." Any one of the synonyms is sufficient to convey the intent, and using more than one is
1477 redundant and excessively wordy.

1478
1479 The same principle is not applied to *highway* and *street*. Although they are synonyms, the
1480 MUTCD uses both terms together in the same sentence frequently (in at least 62 places), such
1481 as the phrases "streets and highways" and "street or highway." (Perhaps the most notable of

1482 these instances is the title of the MUTCD: *Manual on Uniform Traffic Control Devices for*
1483 *Streets and Highways.*)

1484
1485 If the terms *highway* and *street* were truly synonyms, there would never be a need to refer to
1486 them together in this way, just as *changeable message sign* is universally used alone. It is
1487 possible that *street* and *highway* are used together so pervasively because the MUTCD's
1488 authors are concerned that referring only to a highway might cause some readers to envision a
1489 plain-English definition of *highway* ("a main road, especially one connecting major towns or
1490 cities") and not consider that a street ("a thoroughfare, especially in a city or town") is also a
1491 highway.

1492
1493 This is one reason why it would be helpful to define *road* as a synonym of *highway* and *street*.
1494 *Road* is a more generic term than *highway* and *street* in plain-English usage. A plain-English
1495 definition of road is: "a way leading from one place to another, especially one with a surface
1496 vehicles can use." It seems possible that using *road* instead of *highway* or *street* might help
1497 convey the intent that the term is intended to apply to both rural highways and urban streets.

1498
1499 In virtually every instance where *road* is used in the MUTCD, it is used in a generic sense and is
1500 not intended as a synonym of *roadway*. An initial review reveals that among the 1,518 times
1501 that *road* is used in the MUTCD, only about nine might need to be revised if *road* is redefined to
1502 be a synonym of *highway*. These nine instances consist of the following:

- 1503
- 1504 • Paragraph 10 of Section 2B.53 says, "In rural and certain other areas the legends NO
1505 PARKING ON PAVEMENT (R8-1) or NO STOPPING ON PAVEMENT (R8-5) are generally
1506 suitable and may be used where parking or stopping is allowed on an unpaved shoulder or border
1507 adjacent to the paved portion of the road." If *road* is redefined as proposed, the "paved
1508 portion of the road" might have different limits, so a revision may be necessary.
 - 1509
 - 1510 • Four instances in Parts 2 and 6 refer to the "edge of the road" where the precise location
1511 of the edge of the road is relevant to the context. One example is in Paragraph 1 of
1512 Section 2C.72, which says, "Obstructions not actually within the roadway are sometimes so
1513 close to the edge of the road that they need a marker." This sentence uses both *road* and
1514 *roadway* interchangeably, and if *road* is redefined as proposed, "edge of the road"
1515 should probably be revised to "edge of the roadway" for consistency.
 - 1516
 - 1517 • Four instances in Parts 3 and 6 refer to "run-off-the-road" crashes or vehicles. The term
1518 *run-off-the-road* to describe this crash type is common in the industry, but it is not
1519 consistent with the proposed new definition of *road*. (A vehicle can be involved in a run-
1520 off-the-road crash even if it does not leave the highway.) It might be appropriate to
1521 instead refer to these crashes as "roadway departure" or "lane departure" crashes.
1522 These terms are also common in the industry and are more consistent with the existing
1523 and proposed MUTCD definitions.

1524
1525 A more detailed review might identify other instances.

1526
1527 Redefining *road* as a synonym of *highway* would largely address the first problem associated
1528 with the term *road user*. If *road* included the entire area within the right-of-way, then *road user*
1529 would more accurately convey that it is intended to include pedestrians, bicyclists, and other
1530 travelers who are not using the roadway itself.

1531

1532 If *road* and *roadway* were no longer synonymous, then future NCUTCD ballot proposals and
1533 other new MUTCD content would need to be deliberate about which of these two words is most
1534 appropriate.

1535
1536 Because *road* is expected to be a more generic term than either *highway* or *street*, the existing
1537 definition of *highway* is proposed to be moved to *road*. The definition of *highway* is proposed to
1538 refer to the new definition of *road*, as follows:

1539
1540 **100. Highway—~~a general term for denoting a public way for purposes of travel by vehicles and~~**
1541 **~~vulnerable road users, including the entire area within the right-of-way.~~ [see Road.](#)**

1542 The proposed definition of *road* is intended to accomplish three goals, which correspond to the
1543 three problems with the existing definition of *highway* discussed beginning on page 24:

- 1544 • To recognize facilities that prohibit vulnerable road users (such as freeways) as roads
- 1545 • To prevent *road* from applying to facilities where motor vehicles are prohibited, such as
1546 shared-use paths on independent alignments
- 1547 • To resolve the ambiguity about whether private facilities are roads

1548
1549 These goals can be achieved with the following definition:

1550
1551 **202. Road—a general term for denoting a [public way open to public travel and](#) for purposes of**
1552 **travel by [motor vehicles and, in some cases,](#) vulnerable road users, including the entire**
1553 **area within the right-of-way. [All site roads open to public travel are roads.](#)³**

1554 The phrase “in some cases” solves the first problem in the list above, because a facility would
1555 not be required to accommodate vulnerable road users to meet the definition of *road*.

1556
1557 Under this definition, shared-use paths on independent alignments would no longer meet the
1558 definition of *road*, which is more consistent with plain English. This is accomplished with the
1559 phrase “travel by motor vehicles,” which excludes facilities open only to bicycles. Each use of
1560 the terms *road*, *highway*, and *street* in the MUTCD would need to be reviewed to determine if
1561 they are intended to apply to facilities where motor vehicles are prohibited in addition to those
1562 where motor vehicles are permitted.

1563
1564 The proposed definition also resolves the ambiguity about private facilities by replacing the
1565 phrase “public way” with “way open to public travel.” This text clarifies that a facility can meet
1566 the definition of *road* whether it is publicly or privately owned as long as it is open to public
1567 travel.

1568
1569 The existing definition of *highway* and the proposed definition of *road* are both broad enough to
1570 include SROPT. The MUTCD is not consistent in whether SROPT are included as a subset of
1571 *highway*. The following examples illustrate two differing treatments:

- 1572 • In Section 1C.02, SROPT are defined as “roadways and bikeways.” A roadway is “a
1573 portion of a highway,” so an SROPT must therefore be a subset of *highway*.
- 1574 • Paragraph 1 of Section 1A.01 provides this list of facilities to which the MUTCD applies:
1575 “streets, highways, pedestrian and bicycle facilities, and site roadways open to public
1576 travel.” This list has several problems, but it lists SROPT separate from “streets” and

³ This definition marks up the existing definition of *highway* to note the changes. The existing definition of *road* is:
“see Highway.”

1577 “highways,” suggesting that SROPT are in a different category altogether and not part of
1578 the highway. If SROPT were intended to be a subset of *highway*, this list could have
1579 been rendered as “streets and highways, including site roadways open to public travel,
1580 and pedestrian and bicycle facilities.”

1581
1582 The final sentence in the proposed definition of *road* resolves this issue by clarifying that all
1583 SROPT are roads. If SROPT is used in the MUTCD in a way that conflicts with this definition
1584 (such as the example in the second bullet above), a change will be needed to MUTCD content.
1585

1586 Furthermore, clearly distinguishing SROPT as roads will help ensure that MUTCD provisions
1587 that refer to *road*, *street*, *highway*, or *roadway* will apply to SROPT (in addition to other roads)
1588 even when SROPT is not specifically mentioned.
1589

1590 **Proposed Definitions of *Roadway* and *Shared-Use Path***

1591 As discussed above, *roadway* expressly excludes shoulders, which is inconsistent with context
1592 in many cases, and *roadway* does not clearly exclude shared-use paths, some of which meet
1593 the definition of *roadway* when considering other MUTCD definitions.
1594

1595 The first problem is proposed to be solved by adding shoulders to the definition of *roadway*.
1596 This treatment of shoulders would be consistent with the overwhelming majority of uses in the
1597 MUTCD. However, If shoulders were added to the definition of *roadway*, several changes to
1598 MUTCD content would be needed:
1599

- 1600 • About 25 instances in the MUTCD use the phrase “over the roadway” or similar wording.
1601 One example is in Section 4H.09, which says, “The bottom of the signal housing (including
1602 brackets) of a bicycle signal face that is not located over a roadway or shoulder shall be a
1603 minimum of 7 feet above the sidewalk or ground.” This example is consistent with the
1604 current MUTCD definitions, but the phrase “or shoulder” should be deleted if *roadway* is
1605 redefined to include shoulders. Alternatively, if there is a need for a provision to
1606 emphasize that it applies to shoulders, the phrase “over a roadway or shoulder” could be
1607 revised to “over a roadway, including the shoulder.” (About a third of the 25 instances
1608 use “over the roadway” incorrectly under the current definition of *roadway*, where by
1609 context they should say “over the roadway or shoulder.” The proposed redefinition of
1610 *roadway* would correct these erroneous instances without any changes to MUTCD
1611 content.)
1612
- 1613 • About 40 instances in the MUTCD use the phrase “edge of the roadway” or similar
1614 wording. Revisions would be needed to many of these instances to acknowledge that
1615 the revised definition of *roadway* would change the location of the “edge of the roadway.”
1616 (Notably, “edge of the roadway” is used incorrectly in the MUTCD to refer to the edge of
1617 the shoulder in many cases. The proposed new definition of *roadway* would correct
1618 these erroneous instances without any changes to MUTCD content.)
1619
- 1620 • Many other common phrases are also likely to need a review to determine if wording
1621 changes are needed. These include phrases such as “crossing the roadway,” “portion of
1622 the roadway,” and “outside the roadway,” in which the specific boundary of the roadway
1623 may be relevant to context. Most of these uses are unlikely to require changes, but a
1624 complete review is needed, and some changes undoubtedly will be identified.
1625

1626 A key benefit of adding shoulders to the definition of *roadway* is that the new definition would
1627 better align with most readers' understanding of the word. It would also provide a better parallel
1628 with the definition in AASHTO publications.

1629
1630 The second problem, dealing with shared-use paths, is more complicated to solve. It appears
1631 that two changes to MUTCD definitions are necessary to untangle the contradictions related to
1632 bicycle facilities. First, the definition of *shared-use path* should be changed, as follows:

1633
1634 **219. Shared-Use Path—~~a bikeway outside the traveled way and physically separated from~~
1635 ~~motorized vehicular traffic by an open space or barrier and either within the highway~~
1636 ~~right-of-way or within an independent alignment. Shared-use paths are also used by a type~~
1637 ~~of pathway improved, designed, or ordinarily used for travel by bicyclists, pedestrians~~
1638 ~~(including skaters, users of manual and motorized wheelchairs, and joggers), and other~~
1639 ~~authorized motorized and non-motorized users, and designated for bicycle travel. All~~
1640 ~~shared-use paths are bikeways.~~**

1641 This definition would redefine *shared-use path* as a “type of pathway . . .” rather than as “a
1642 bikeway . . .” The existing definition of *pathway* is repeated here for reference:

1643
1644 **161. Pathway—a general term denoting a public way for purposes of travel by authorized
1645 users outside the traveled way and physically separated from the roadway by an open
1646 space or barrier and either within the highway right-of-way or within an independent
1647 alignment. Pathways include shared-use paths, but do not include sidewalks.**

1648 The current definition of *shared-use path* is somewhat counterintuitive for two reasons:

- 1649
- 1650 • A key feature of a shared-use path is that it is open to use by multiple modes, including
1651 pedestrians and bicyclists. The word *shared* in the name clearly indicates permissible
1652 use by more than one mode. Defining *shared-use path* first and foremost as “a bikeway”
1653 disregards the primary intent that a shared-use path serves multiple modes.
1654
 - 1655 • The term *bikeway* is very broad and includes every facility “designated for bicycle travel,”
1656 which includes more types of facilities than just pathways. This breadth is another
1657 reason why *bikeway* is not a logical starting point for the definition of *shared-use path*.
1658 However, all shared-use paths are indeed bikeways, and the last sentence proposed to
1659 be added to the definition clarifies this point.
1660

1661 There is considerable overlap in the current definitions of *pathway* and *shared-use path*. Both
1662 definitions indicate that they are “outside the traveled way and physically separated . . . by an
1663 open space or barrier and either within the highway right-of-way or within an independent
1664 alignment.” The wording is not identical in both definitions, but it is similar enough that the
1665 repetition seems unnecessary. Defining *shared-use path* as a “type of pathway” means that the
1666 repetitive text would not be needed in the definition of *shared-use path*, because all pathways,
1667 including shared-use paths, would have these characteristics in common.
1668

1669 Defining *shared-use path* as a “type of pathway” would also eliminate the case where a
1670 particular facility is considered both a shared-use path and a sidewalk. If a shared-use path is
1671 defined first as a “type of pathway,” it becomes clear from the definition of *pathway* that
1672 sidewalks are not considered pathways. This means that no facility could ever meet the
1673 definitions of both *shared-use path* and *sidewalk*.
1674

1675 The penultimate clause proposed to be added to the definition acknowledges that shared-use
1676 paths must be “designated for bicycle travel.” The reason that all shared-use paths are
1677 bikeways is that they are designated for bicycle travel. To meet the definition of *bikeway*, a
1678 facility must be “specifically designated for bicycle travel.”
1679

1680 The 5th Edition of AASHTO’s *Guide for the Development of Bicycle Facilities*, published in
1681 December 2024, has a slightly different definition of *shared use path*:
1682

shared use path—a bikeway outside the traveled way and physically separated from motorized vehicular traffic by an open space, buffer or barrier and either within the highway right-of-way (also referred to as a side path) or within an independent alignment. Shared use paths are also used by pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers) and other authorized motorized and non-motorized users and therefore must meet pedestrian accessibility surface requirements.

1683
1684
1685 Much of the AASHTO definition is identical to the definition in the 11th Edition of the MUTCD.
1686 However, if the MUTCD were to adopt the AASHTO definition, it would not be possible to
1687 resolve the issues discussed above. Consequently, it appears that the MUTCD and AASHTO
1688 definitions are likely to differ, at least in the near term.
1689

1690 Some adjustments to MUTCD content will be necessary to reflect the proposed change in the
1691 definition of *shared-use path*. For instance, paragraph 15 of Section 6N.04 says, “On-road
1692 bicyclists should not be directed onto a path or sidewalk intended for pedestrian use except where such a
1693 path or sidewalk is a shared-use path . . .” This provision considers that a sidewalk might also be a
1694 shared-use path, which is consistent with the current definition but would not be consistent with
1695 the proposed definition.
1696

1697 The second change necessary to resolve the issue with bicycle facilities is in the definition of
1698 *roadway* itself. The definition of *roadway* should be changed to expressly exclude pathways.
1699 The definition of *pathway* already indicates that pathways are “physically separated from the
1700 roadway,” but adding this exclusion to the definition of *roadway* would ensure consistency
1701 between these two definitions.
1702

1703 While the proposed definition changes related to bicycle facilities are more extensive than those
1704 related to shoulders, there are fewer related instances of text in the MUTCD. In many of the
1705 instances where *roadway* is used in the MUTCD related to shared-use paths, the context
1706 suggests that shared-use paths are considered to be out of the roadway, potentially conflicting
1707 with the current definition. The proposed new definitions would cause these instances to be
1708 correct as written.
1709

1710 An additional change to the definition of *roadway* is needed to address the uncertainty of the
1711 undefined term *parking lane*. The MUTCD appears to intend that **all** on-street parking is within
1712 the roadway, whether or not the parking complies with a reader’s vision of what a parking lane
1713 might be. This intent can be determined from MUTCD provisions such as the following:
1714

- The definition of *overhead sign* in Section 1C.02 indicates that it is a sign “directly above the roadway or shoulder such that vehicles travel below it.” This definition must apply to all on-street parking, whether or not it is considered a parking lane. An overhead sign

1718 mounted above angled parking must have the same mounting height as an overhead
1719 sign mounted above any other part of the roadway.

1720
1721 • Likewise, the definition of *post-mounted sign* applies to signs where “no portion of the
1722 sign or its support is directly above the roadway or shoulder.” A sign mounted directly
1723 above any kind of on-street parking certainly does not conform with the plain-English
1724 definition of *post-mounted sign*. Therefore, this definition appears to intend that all on-
1725 street parking is included in the definition of *roadway*.

1726
1727 • Section 4H.09 refers to the mounting height of bicycle signal faces, permitting a
1728 mounting height as low as 7 feet for signal faces “not located over a roadway or
1729 shoulder.” This provision cannot apply to any on-street parking, because if a bicycle
1730 signal face were mounted above any kind of on-street parking, more than 7 feet would
1731 be needed to ensure adequate clearance.

1732
1733 Because *roadway* is intended to include all on-street parking, not just “parking lanes,” the
1734 undefined term *parking lane* is proposed to be replaced with the defined term *on-street parking*
1735 in the definition of *roadway*.

1736
1737 When considering the shoulder issue, the bicycle facility issue, and the parking-lane issue, the
1738 proposed new definition of *roadway* is as follows:

1739
1740 **204. Roadway**—that portion of a **highway road** improved, designed, or ordinarily used for
1741 vehicular travel, **including shoulders** and **on-street parking lanes**, but exclusive of the
1742 sidewalk, berm, or **shoulder pathway** even though such sidewalk, berm, or **shoulder**
1743 **pathway** is used by persons riding bicycles or other human-powered vehicles. In the event
1744 a highway includes two or more separate roadways, the term roadway as used in this
1745 Manual shall refer to any such roadway separately, but not to all such roadways
1746 collectively.

1747 **Proposed Definitions of *Traveled Way* and *Shoulder***

1748 A change to the definition of *traveled way* is necessary to address the shoulder issue. Normally,
1749 shoulders are appropriately excluded from the traveled way. However, when shoulders are
1750 open to part-time motor vehicle travel, the shoulders need to be included in the traveled way.
1751 Following are a few examples of conflicts that exist when shoulders open to part-time motor
1752 vehicle travel are excluded from the traveled way:

1753
1754 • *Clear zone* is defined to start from “the edge of the traveled way.” When shoulders are
1755 open to part-time motor vehicle travel, it would be more appropriate to measure the clear
1756 zone from the edge of the shoulder open to motor vehicle travel.
1757
1758 • *Pedestrian clearance time* is defined as the time for a pedestrian “to travel to the far side
1759 of the traveled way.” If shoulders open to part-time motor vehicle travel were not
1760 included in the definition of *traveled way*, then the pedestrian clearance time would not
1761 be long enough to account for pedestrian crossings of these shoulders.

1762
1763 Two additional changes to the definition of *traveled way* are proposed:

1764
1765 • As noted above, *traveled way* is defined as a “portion of the roadway.” As such,
1766 components that are not included in the roadway cannot be included in the traveled way.

1767 Specifically, it is not necessary to exclude berms and sidewalks from the definition of
1768 *traveled way*, because berms and sidewalks are already excluded from the definition of
1769 *roadway*. The mention of berms and sidewalk as specific exclusions from *traveled way*
1770 may incorrectly communicate that these elements are included in the roadway.

- 1771
- 1772 • For consistency with the definition of *roadway*, the undefined term *parking lane* is
- 1773 proposed to be replaced with the defined term *on-street parking*.
- 1774

1775 The proposed new definition of *traveled way* is as follows:

1776

1777 **277. Traveled Way**—the portion of the roadway for the movement of vehicles, exclusive of ~~the~~
1778 ~~shoulders, berms, sidewalks, and on-street parking lanes~~. The traveled way includes
1779 shoulders only when they are open to part-time travel by motor vehicles.

1780 This change to the definition of *traveled way* also creates a need for a change to the definition of
1781 *shoulder*, which is currently defined as follows:

1782

1783 **220. Shoulder**—a longitudinal area contiguous with the traveled way that is used for
1784 accommodation of stopped vehicles for emergency use and for lateral support of base and
1785 surface courses, and that is graded for emergency stopping. A shoulder might be paved or
1786 unpaved. A paved shoulder might be opened to part-time travel by some or all vehicles
1787 and might also be available for use by pedestrians and/or bicycles in the absence of other
1788 pedestrian or bicycle facilities.

1789 The problematic portion is that shoulders are defined as “contiguous with the traveled way.”
1790 The proposed new definition of *traveled way* considers shoulders to be *within* the traveled way,
1791 not contiguous with it, when the shoulders are open to part-time motor vehicle travel. A
1792 proposed new definition of *shoulder* is as follows:

1793

1794 **220. Shoulder**—a longitudinal ~~area portion of the roadway contiguous with the traveled way~~
1795 that is used for accommodation of stopped vehicles for emergency use and for lateral
1796 support of base and surface courses, and that is graded for emergency stopping. A
1797 shoulder might be paved or unpaved. A paved shoulder might be opened to part-time
1798 travel by some or all vehicles and might also be available for use by pedestrians and/or
1799 bicycles in the absence of other pedestrian or bicycle facilities. Shoulders are within the
1800 traveled way only when they are open to part-time travel by motor vehicles.

1801 The phrase “contiguous with the traveled way” is proposed to be replaced with a sentence at
1802 the end of the definition that clarifies when shoulders are in the traveled way.

1803 **Proposed Definition of Road User**

1804

1805 The proposed definition of *road user* is as follows:

1806

1807 **203. Road User**—a vehicle operator, bicyclist, or pedestrian, including persons with disabilities,
1808 ~~within the highway or on a site roadway open to public travel~~ on a road or bikeway.

1809 The proposed changes to this definition are as follows:

- 1810 • Replacing *highway* with *road* to be consistent with the term *road user* and to be more
- 1811 likely interpreted to include both urban streets and rural highways
- 1812 • Omitting *site roadway open to public travel*, which is included in the proposed definition
- 1813 of *road*

- 1814 • Adding *bikeway*

1815
1816 The proposed definition of *road* corrects the first problem with *road user* discussed on page 31.
1817 The sidewalk and shoulder are currently excluded from the definition of *road*, but they are
1818 included in the proposed definition. Consequently, a person using the sidewalk or shoulder
1819 would be consistently considered a road user if *road* is redefined as proposed.

1820
1821 Because *road* is proposed to be redefined to include only facilities open to motor vehicle travel,
1822 a new problem is introduced with respect to *road user*. Bikeways meet the current definition of
1823 *highway*, because bicycles are vehicles and a highway is any public way open to vehicular
1824 travel. Under the proposed definition of *road*, bikeways where motor vehicles are prohibited
1825 would no longer be considered roads (which is consistent with the plain-English definition of
1826 *road*).

1827
1828 Without an additional change, *road user* would no longer apply to people using bikeways where
1829 motor vehicles are prohibited. It appears that there are two possible solutions to this problem:

- 1830 • *Road user* could be redefined to include people on bikeways in addition to roads.
- 1831 • A new term could be defined to include people traveling on both bikeways and roads.

1832
1833 Each of these approaches has advantages and disadvantages. The task force initially
1834 considered the second option, because by adding *bikeway* to the definition of *road user*, a road
1835 user might be someone who is not using the road (a situation that also exists in the 11th
1836 Edition). However, a new term could be difficult to institutionalize, considering the widespread
1837 use of *road user* in the MUTCD. If a new term is introduced, each instance of *road user* would
1838 need to be evaluated to determine if it should be kept or changed to the new term. This process
1839 would be laborious. As such, the task force elected to add *bikeway* to the definition of *road user*
1840 as the more preferable of these two options.

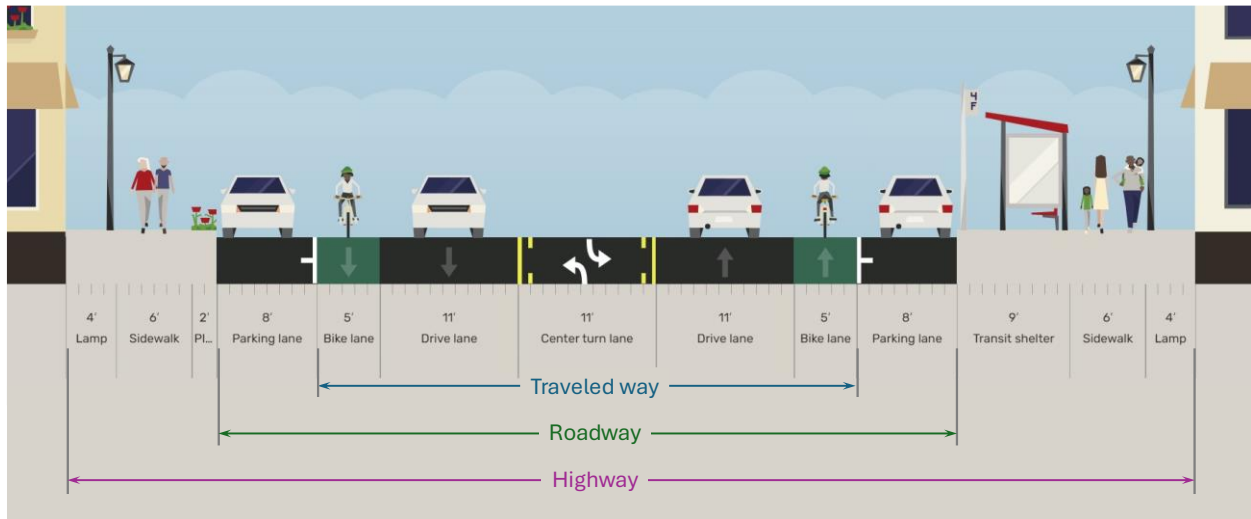
1841
1842 The task force observes that automated vehicles might also be considered road users,
1843 considering that automated vehicles increasingly obtain information from traffic control devices.
1844 The task force elected not to include automated vehicles in the definition of *road user* because it
1845 is beyond the scope of this proposal. Others, such as the Connected and Automated Vehicles
1846 Joint Task Force, may wish to consider this issue.

1847
1848 This proposal also does not recommend a definition of *vulnerable road user* because this
1849 definition does not appear to be necessary to address the issues with *road*, *roadway*, and
1850 *highway*. A definition of *vulnerable road user* is currently being considered by the Pedestrian
1851 Joint Task Force.

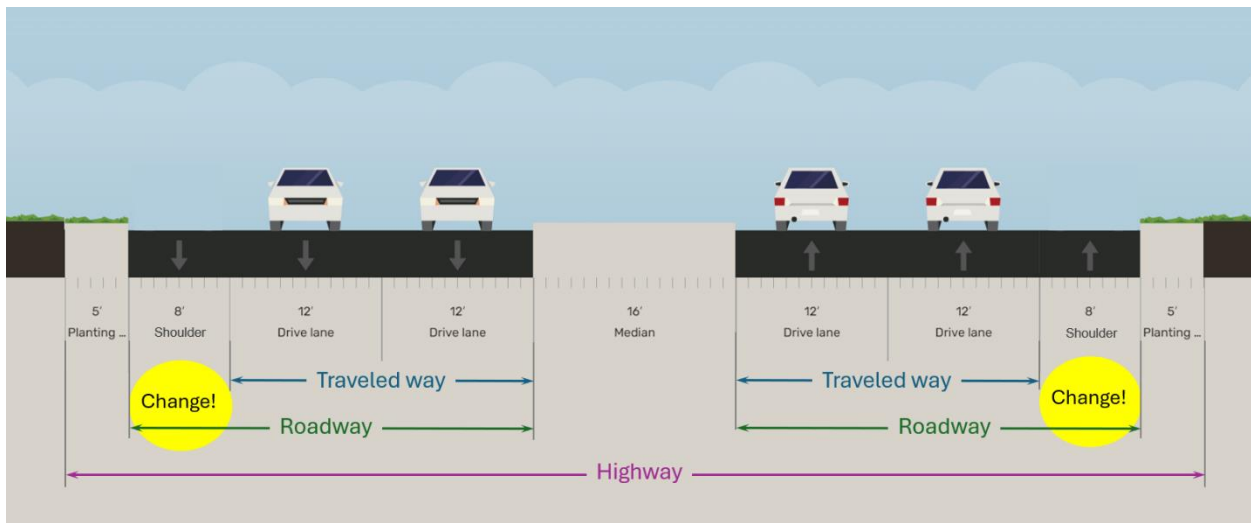
1852 1853 **Overview of Proposed Changes to Definitions**

1854 Existing MUTCD definitions are shown on example cross-sections in Figure 1 on page 23. As a
1855 comparison, Figure 5 shows how these terms would apply to the same sections using the new
1856 definitions. Only the second example has changes when compared to existing definitions; the
1857 changes are highlighted with yellow circles.

1858



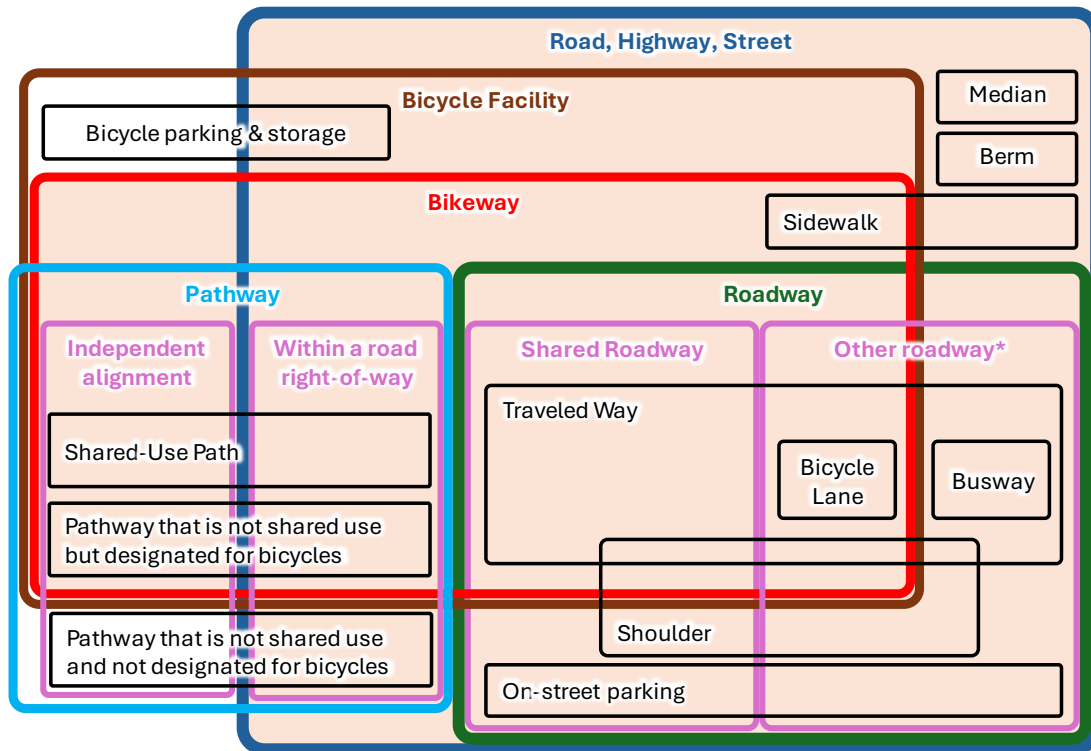
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Figure 5: Locations of Proposed Definitions of the Traveled Way, Roadway, and Highway on Example Cross-Sections

Figure 6 shows this proposal's intended relationship among several MUTCD defined terms. Figure 7 shows this proposal's intended relationship among MUTCD ownership and applicability terms.



* This term is not defined in the MUTCD but is shown here for parallelism.

Background color legend:

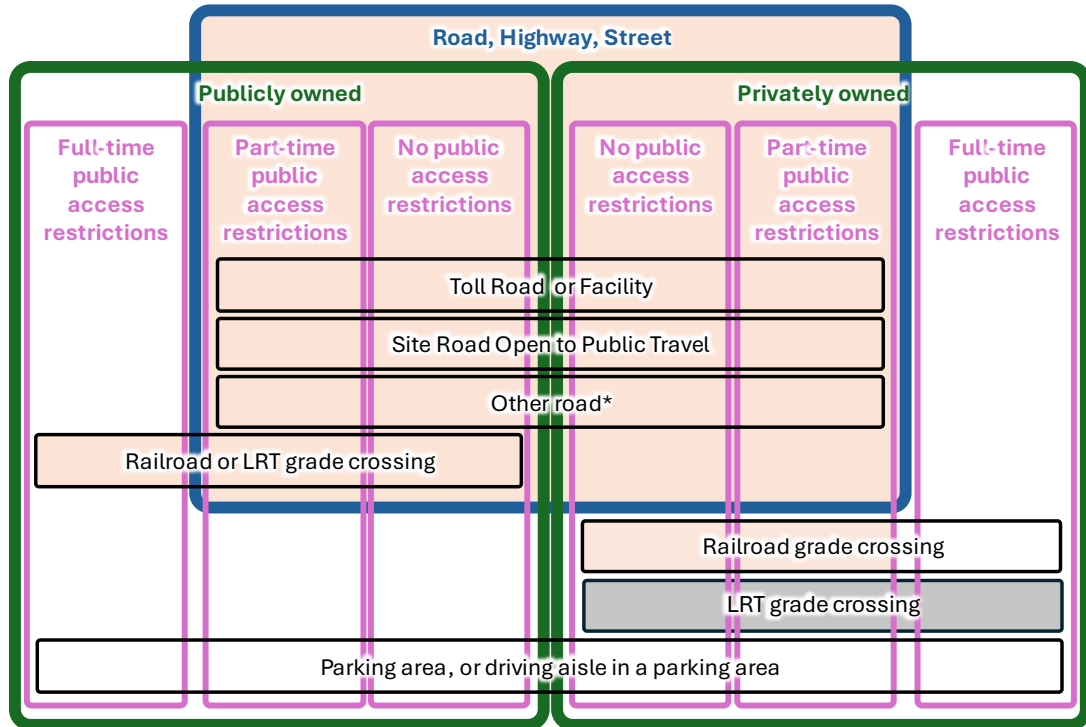
- The MUTCD legally does not apply.
- The MUTCD legally applies.

Figure 6: Proposed Relationship Among MUTCD Terms

Next Steps

Following approval of this Step 1 proposal by the NCUTCD Council, the Edit Committee task force can assist technical committees with Step 2. It may be desirable to expand the task force to include representation from technical committees. The task force would create guidelines for technical committees' use as they prepare proposals to ensure that all portions of the MUTCD are consistent with the definitions in Step 1. Technical committees may also need individual task forces.

Relationship among MUTCD ownership and applicability terms



* This term is not defined in the MUTCD but is shown here for parallelism.

Background color legend:

- The MUTCD legally does not apply.
- The MUTCD legally applies.
- The MUTCD has conflicting provisions about whether it legally applies.
- The MUTCD is silent on whether it legally applies.

Figure 7: Proposed MUTCD Applicability by Ownership and Access

Conclusion

MUTCD users look to the manual for clear direction on the use of traffic control devices. The authors of the MUTCD (including members of the NCUTCD and FHWA) are typically exceptionally precise about the provisions that apply to different devices. One reason for the precision is well stated in Paragraph 5 of Section 1D.09, which says, "Inconsistent placement or use of a device can result in disrespect for the device at locations where the device is needed and appropriate."

It is also true that inconsistent use of terminology in the MUTCD can result in disrespect for the same terminology when used correctly elsewhere in the manual. The authors of the MUTCD must strive to be as precise about word choice as they are about traffic control device provisions. The definition changes in this proposal should help eliminate some inconsistencies and encourage more accurate word choice in the manual in the future.