

May 9, 2021

Federal Highway Administration
U.S. Department of Transportation

To the FHWA,

I am writing in regard to the proposed revisions to the Manual on Uniform Traffic Control Devices for Streets and Highways, posted on 12/14/2020. I am a Civil Engineer specializing in bicycle and pedestrian infrastructure, and have consulted for cities across the country on this topic. Overall, the revisions add some useful bicycle treatments that were developed over the past decade, which I will be glad to see formalized in national standards. There are, however, various prohibitions that go too far in removing flexible judgment from states and cities. I have noted my concerns below, along with other clarifications or suggestions regarding the bicycle and pedestrian provisions:

Section 9E.08 Counter-Flow Bicycle Lanes standard states “Counter-flow bicycle lanes shall not be used between a general-purpose lane and an on-street parallel parking lane for motor vehicles.”

Comment: This standard is overly and unnecessarily restrictive, and will prevent installation of the valuable contra-flow bike lane in many urban cases where eliminating on-street parking on the bike lane side is not politically feasible. STRONGLY recommend allowing counter-flow bike lanes between the general-purpose lane and on-street parallel parking for the 30 mph or below roadways (or at least for the 25 mph or below roadways). Counter-flow bike lanes directly adjacent to street parking have been implemented on low speed, low volume one-way streets in many cities without operational or safety issues (see Hudson Street, Baltimore, MD as an example). Counter-flow bike lanes would have less of an issue with door zone or pulling in/out conflict than standard bike lanes since drivers would have a better view facing forward to the oncoming cyclists. To improve safety, precautions can be recommended, such as allowing only on low-speed roads, discouraging around curves, and/or requiring a wider 6’ counter-flow bike lane adjacent to street parking.

Section 3C.01 states “Crosswalk markings shall be provided at non-intersection crosswalk locations.”

Comment: Understood that any crosswalk location not at an intersection must have crosswalk markings, but the statement above could be misunderstood to imply crosswalk markings are not allowable at intersection crossings (which is an allowable option). Consider clarifying to avoid confusion.

Section 3H.03 Aesthetic Treatment in Crosswalks states “Standard: patterns that constitute a purely aesthetic treatment for the interior portion of a crosswalk shall be devoid of...pictographs, symbols, multiple color arrangements...”

Comment: Recommend removing these restrictions. Urban areas have successfully used creative mural or rainbow-colored treatments within their highest pedestrian areas. This is used as a tool to establish a street as prioritized toward pedestrians, keep drivers more alert, and create a general sense of place for special districts. It is understood that intricate designs and colors could cause issues on higher speed roads, but the MUTCD is already adding guidance that the aesthetic treatments should be limited to 30 mph or less. Low speed roads, particularly in urban areas, do not have safety issues with these types of patterns/multiple colors, and in fact can be improved by them.

Section 3H.07 Red-Colored Pavement – 1st “Support” paragraph states “multi-modal facilities where public transit is the primary mode.”

Comment: It is unclear if red-colored pavement is allowable for a transit lane shared with bicycles and other micro-mobility devices. Recommend that this be allowable and stated clearly as such in this section.

Section 4I.05 Pedestrian Detectors provides guidance that if push buttons used, should be located outside curb ramp flare.

Comment: Suggest adding reasonable flexibility by allowing the push button within the curb ramp flare, provided that it meets guidance A within the ADA Section 308 reach limits from the level part of the sidewalk/ramp.

Notes for Figure 6P-49 Shared-Use Path Closure with a Diversion gives guidance that the “temporary paved shared-use path should be at least as wide as that which is temporarily closed.”

Comment: This may be too burdensome or infeasible for wider shared-use paths. Recommend changing to “The temporary paved shared-use path should be at least 10’ wide, or 8’ for short segments in constrained locations. Where the existing shared-use path is wider than 10’, consider making the temporary shared-use path as wide as the path that is temporary closed, particularly where higher user volumes are present.” These minimum dimensions are consistent with AASHTO Bicycle Design Guide.

Section 9A.01 states the standard “The absence of a marked bicycle lane or any of the other traffic control devices discussed in this Chapter on a particular roadway ~~shall not be construed to mean that bicyclists are not permitted to travel on that roadway.~~”

Comment: removing the “shall not be construed” implies that the manual is forbidding bicycle use on streets without bicycle lanes or other bicycle traffic control device in this chapter. This would be counter to most State and Local laws that allow cyclists to use the roadways the same as motor vehicles, and counter to the MUTCD’s own statement in Section 9A.01 that “bicycles are either legally defined as vehicles or give the operator of bicycle the same rights and duties of an operator of a motor vehicle.” The majority of local roadways are low in traffic and suitable to bicycle use within the motor traffic lane without bicycle marking or control devices. Mandating that a road must have bicycle control devices to be used by cyclists will either put an unnecessarily heavy cost burden for a municipality to install bike control devices on every road (which may not be feasible), or will severely restrict cyclists to use of only a fraction of the roadways, both of which are severely impractical. STRONGLY recommend to leave the original “shall not be construed” phrase.

Section 9C.04 Bicycle Warning and Combined Bicycle / Pedestrian Signs states “Bicycle Warning and combined Bicycle/Pedestrian signs, when used at the location of the crossing, shall be supplemented with a diagonal downward pointing arrow (W16-7P) Plaque to show the location of the crossing.”

Comment: Recommend that this clarify that this sign/supplemental plaque would apply to bike lane and shared lane marking crossings as well (where the bike crossing within the roadway would not fall directly adjacent to the sign at the intersection corner). Also recommend as an alternative allowing a new smaller version of the W1-7 (arrows in both direction) plaque beneath the Bicycle Warning sign to warn drivers of crossing cyclists, placed either at or before the intersection. The smaller W1-7 plaque has been used in some cities to successfully communicate bike crossings going in both directions, and would be useful to have as a standard sign.

Section 9E.01 Bicycle Lanes support states “Where a shoulder is provided or is of sufficient width to meet the expectation of a highway user in that it can function as a space for emergency, enforcement or maintenance activities, avoidance or recovery maneuvers, Section B.15 contains information regarding the Bicycles Use Shoulder Only Sign...”

Comment-Typo: Reference to Section 9B.15 for the Bicycles Use Shoulder Only Sign is a typo, should reference 9B.16 for the Bicycle Use Shoulder Only Sign.

Section 9E.02 Bicycle Lanes at Intersection Approaches guidance states “A buffer-separated or separated bicycle lane should not be shifted away from the adjacent general-purpose lane at an

intersection unless there is sufficient space for a vehicle to queue between the general-purpose lane and the extension of the bicycle lane.

Comment: Shifting the separated bike lane away from the intersection can provide sight and yield benefits even when not done to the full distance of a queued vehicle. Recommend taking this guidance out, as it will create too stringent of a criterion for shifting out the bike lane that often will not be able to be met due to site constraints. This is also the type of guidance that would be better suited in other bicycle guidance documents, such as the FHWA Separated Bike Lane Planning and Design Guide, and not necessary for establishing bike lane marking visual standards in the MUTCD.

Section 9E.02 Bicycle Lanes at Intersection Approaches standard states “Where a mixing zone allows for re-establishing a bicycle lane after bike lanes and general-purpose lanes cross paths, a buffered or physically separated space should be provided between the bicycle lane and the adjacent general-purpose lane.”

Comment: It is not clear if this is a standard or a guidance, as it is in the standard section, but states “should.” Recommend that this be a guidance and not a requirement. While it is beneficial to have a buffer/separation if space is available, it would not be wise to prohibit reestablishing as a standard bike lane if a buffer/separation is not possible with limited space.

Section 9E.03 Extensions of Bicycle Lanes through Intersections standard states “Lane extension markings shall be used to extend buffer-separated/separated bike lanes through intersections and driveways.”

Comment: This standard is in conflict with Section 9E.06 on buffered bike lanes, where it is Guidance for “Lane extension markings should be used to extend a buffer-separated bicycle lane across intersections and driveways,” and not a standard. Please change either to be consistent. It should also be an option to maintain a solid bike lane buffer line through driveways rather than provide the dashed lane extension markings, since driveways can be minor and infrequent.

Section 9E.06 Buffer-Separated Bicycle Lanes standard states “if used, one-directional diagonal markings shall slant away from traffic in the adjacent travel lane for motor vehicle traffic.”

Comment: This appears to read counter to elsewhere in the manual where diagonal markings in buffers are to slant TOWARD the direction of travel in the adjacent motor vehicle traffic lane (i.e., Figure 3B-5). It is recommended that the diagonal slant be consistently TOWARD the motor vehicle lane and allowed to be slanted AWAY from the bike lane where diagonals are used instead of chevrons.

Section 9E.06 Buffer-Separated Bicycle Lanes guidance states “Where used, spacing of chevrons/diagonal markings should be 10 ft or greater.”

Comment: Recommended adding a maximum spacing of chevrons/diagonal markings to the guidance so that they are not placed with too large of a gap distance.

Section 9E.07 Separated Bike Lanes standard states “Buffer space 2’ or wider for a separated bicycle lane, including those buffer space where tubular markers are provided, shall use chevron or one-directional diagonal markings within the buffer, unless physical separation is provided that occupies the majority of the buffer space, such as medians or parked vehicles.”

Comment: May want to consider making the chevron/diagonal marking requirement for 3’ or wider instead of 2’ to be consistent with Section 9E.06 requirements for buffer-separated bike lanes.

Section 9E.09 Shared-Lane Markings guidance states “Shared lane marking should not be placed on roadways that have a speed limit of 40 mph or more.”

Comment: Agree that shared lane markings should not be on 40 mph or greater roads. This should be a standard prohibition on 40 mph or more rather than a guidance. Shared lane markings are frequently

abused by DOT's and placed on inappropriately high-speed roadways to avoid having to place more appropriate bike lane or separated facilities. Common bicycle guidance, such as NACTO, generally recommends shared lane markings for roads that are 25 mph or less. Consider the guidance to recommend shared lane markings for 25 mph or less roadways, and limiting use on 30-35 mph roadways to low volume roads or for short distances of mixing zones and transitions from other bike facilities.

Section 9E.09 Shared-Lane Markings standard states “Green Colored pavement shall not be applied as a background to shared-lane markings.”

Comment: Green color-backed shared lane markings are used by many jurisdictions to enhance visibility and effectiveness. Recommend allowing use of green in this case since standard shared lane markings are often not enough to change driver behavior on the roadway. If this is not allowed, other options for enhancing shared lane markings should be included in the MUTCD.

Section 9E.14 Bicycle Route Pavement Markings Standard states “Pavement marking route markers shall be limited to shared-use paths or separated bike lanes, shall not be used in standard bicycle lanes, buffer-separated bike lanes, or in shared lanes.”

Comment: Pavement marking route markers can be great for wayfinding through a bike network, especially on shared lane/bike boulevards projects, which been very successfully used by communities to identify and brand their in-road routes. Route markers should be allowed in the pavement for the bike lane, buffered bike lane, and shared lane facilities. If there is concern with confusing drivers on higher speed roads, allowing these markers on maximum 25 mph or 35 mph roads would make more sense.

In addition to the comments above, please consider adding the following to the Manual:

- Section 9E.09 Shared Lane Markings – Along a shared lane marked route, please address if it is acceptable to place a shared lane marking within an intersection crossing. Recommend allowing a shared lane marking option within the intersection as a means to alert cross-traffic and to guide cyclists through the intersection.
- Need provisions for Micro-mobility E-scooters – Micro-mobility options, such as low speed/light weight e-scooters, have exploded in use in the past few years due to dockless rental programs via smart phone applications. MUTCD did not appear to add any language, markings, or signage related to these devices. E-scooters behave in similar speed and size to bicycles; therefore, it should be stated that the MUTCD bicycle facility sections apply to e-scooters use as well. Options should also be made available for standardized e-scooters symbols in pavement marking and signs, which can supplement the bike lane symbol markings and bike signage.
- R10-15 “Turning Vehicles Yield to Peds” sign – Alternate versions of this sign should include a bike symbol or a bike and pedestrian symbol. Many jurisdictions have added a bike symbol for alerting motorists turning across a bike facility.
- R15-8 Sign – Recommended that the R15-8 “Look” sign allowed at railroad crossings be expanded to optional use at regular traffic intersections where the cross-vehicle movement does not stop. This would be a useful tool particularly where bike facilities cross an intersection, and a means to remind cyclists to look both ways is needed.

Sincerely,

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