Item 31 the use of Bar codes that contain important information would not be detectable or discernible to people who are blind and visually impaired and should not be added.

Item 37 Support item 37 to provide RRFB at midblock and uncontrolled crossing.

Support change 42 as any measure to reduce the proliferation of signs benefits the pedestrian, especially those who are blind or visually impaired.

65 Support Change 65 to increase visibility of ped crossing signs and clarity of state law regulation at pedestrian crossings

2B.59 page 107, lines 20-22 do not agree with allowing sign R10-3j or the features associated with it. Such signs are inaccessible to individuals who are blind or who have low vision. In 4K.01, we disagree with allowing a pedestrian signal to require blind pedestrians to push a pushbutton when sighted pedestrians do not have to do that. Therefore. we don’t believe this sign, R10-3j, should be allowed. We question the use of R10-3k and question the use of the features referred to by that sign since the information on that sign and the additional features are inaccessible to individuals who are blind or who have low vision.

Figure B-26, sign R10-25 Remove new language “Wait for gap in traffic”. That information is inaccessible to pedestrians who are blind or who have low vision and is not accurate. The crosswalk establishes right of way for pedestrians and the addition to this sign seems to ignore that. This instruction could limit pedestrians’ ability to take a step into the crosswalk to claim the crosswalk.

Figure 3D.01 Figure needs to be revised to show curb ramp and crosswalk configurations that are correct. The current figure shows ramps that are not perpendicular where they intersect the gutter; If built that way, it is an inaccessible ramp.

3C.12, Page 373, line 41 -42- Update reference to ADAAG to be to 2010 ADA Standards and/or proposed PROWAG

3H.Page 390, line 12 – page 391 line While artwork is nice, various designs and graphics (aesthetic treatments) within the lines of the crosswalk can be disorienting to pedestrians with low vision. We do not agree with allowing additional colors or designs within the crosswalk and believe most of this section should be deleted and replaced with a standard requiring uniformity of pavement with in the crosswalk markings.

3J.07, page 400, lines 14-17 Change to a Standard. Unless physical separation is required, and specified in such a way that it will be detectable to pedestrians who are vision disabled, the curb extensions will not be accessible to pedestrians who are vision disabled, and they are likely to either fail to use them, thus making their crossings longer than intended, or to enter the vehicular way inadvertently, placing them in danger of injury or death. Add the following language to the standard:

Physical separation or delineation shall be provided where curb extensions are created by pavement markings and pedestrian travel can be expected within the area created by the curb extension. Elements used to provide physical separation or delineation shall have high visual contrast from adjoining pavement so they are visible to pedestrians having reduced vision, and be detectable by vision disabled pedestrians who travel with a long cane. Elements shall be separated by a maximum of 48 inches.

3J.07 , page 400, Lines 30-32 Change to a Standard.

We suggest the following wording:

Where pedestrian travel can be expected within curb extensions created by pavement markings, physical separation or delineation shall be provided by elements that have high visual contrast from adjoining pavement so they are visible to pedestrians having reduced vision, and are detectable by vision disabled pedestrians who travel with a long cane. Elements shall be separated by a maximum of 48 inches.

4D.02,

page 423, Lines 30-32 Change to a standard.

Complexity of modern signalization means that the onset of a vehicular green ball signal does not necessarily mean that the pedestrian walk interval has begun. The presence of a vehicular green ball signal does not always mean that the pedestrian phase is in effect, and the vehicular signal gives pedestrians no indication of how much pedestrian crossing time remains. Since there is no consistent association of vehicular green with pedestrian timing, it is essential to provide pedestrian timing information wherever there is a pedestrian crossing controlled by a signal.

4D.02

Page 423

ll.36-40 YES The ADA regulations (quoted and referenced in the Preamble in section 6 as noted below) require effective communication of information provided for sighted pedestrians and requires that information provided for travel in public rights-of-way be accessible to people who have disabilities. Pedestrian signals that do not have APS are not accessible to pedestrians who are vision disabled, and are therefore in violation of the ADA. No engineering study is needed. We request that this be changed to a Standard.

Standard:

Accessible pedestrian signals (see Chapter 4E.09 through 4E.13 4K) that provide information in non-visual formats (such as audible tones and/or speech messages, and vibrating surfaces) shall be provided with all pedestrian signal heads.

“Under Title II of the Americans with Disabilities Act (ADA), all State and local governments are required to take appropriate steps to ensure that their communications with people with disabilities are as effective as communications with others. [28 CFR 35.160(a)]. Effective communication means that whatever information is conveyed by or on behalf of a public entity must be as clear and understandable to people with disabilities as it is for people who do not have disabilities. The ADA requires public entities to furnish auxiliary aids and services—which include the acquisition or modification of equipment or devices—where necessary to afford individuals with disabilities an equal opportunity to participate in, and enjoy the benefits of, a service, program, or activity of a public entity. [28 CFR 35.160(b)(1)]. The provision of pedestrian facilities in the public right of- way is generally recognized as a service provided by the public entity that owns such facilities.” Docket (FHWA-2020-0001) (/docket/FHWA-2020-0001) Item 463

In addition, we have made this same comment and change request in our comments on the 2009 MUTCD. Research between 1998 and now have repeatedly shown safety problems, delayed starts, and finishing crossing after the vehicles have received green on the street being crossed for pedestrians who are blind or who have low vision at locations without APS. FHWA needs to seriously consider the safety of pedestrians who cannot see the pedestrian signal, including many elderly pedestrians, and require the installation of APS at all locations where pedestrian signals are installed. The increased flexibility of signal controllers and actuated intersections, and new pedestrian timing plans being used, such as LPIs, have made the information traditionally used by pedestrians who are blind or who have low vision unreliable.

4I.05 p.471 ll.33-34 We agree with proposed addition of language about touch-free activation of push buttons. However, as noted in the NPA, this is in addition to other required push button features. Not stated, but important, is that this include all required features of APS, where used, as well as standard push buttons.

4I.05 p. 472 ll.33-37 We disagree with the Option allowing pushbuttons to be closer together or on the same pole when an exclusive pedestrian phase is used at an intersection and the pedestrian signals for both crosswalks provide the walk indication at the same time. Pedestrians who are vision disabled use the location of accessible pedestrian signals to help them determine a correct crossing location. Pedestrians who are deafblind need the vibrotactile indication to be near the crosswalk being signaled. When two pushbuttons are on the same pole, one of them will almost always be farther from the crosswalk being signaled and not close to the crosswalk line furthest from the center of the intersection

4I.06 p.474 l.49- p.475, l. 1-2

This Guidance should be a Standard. There can be no reasonable justification for not providing an APS where median-mounted pedestrian signals detectors are provided. The ADA clearly requires that signal information be clear and understandable to people with disabilities. A median-mounted pedestrian detector is effectively invisible to people who are vision disabled, and therefore not usable by them. There is no justification for failure to provide an APS, which potentially leaves them stranded in a median. Furthermore, the Standard in 4K.01, p.481, ll.35-37 requires an APS at a median if the pedestrian clearance time is sufficient only to cross from the curb to a median. In both places, this should be a Standard.

4I.06 p.475 l.10-12 This Guidance should be a Standard. A leading pedestrian interval without an APS sets up a well-known conflict, as stated in the following Support, that can be expected to place pedestrians who are vision disabled at risk of injury or death. Unless a signal providing a leading pedestrian interval includes an APS, it fails to comply with the ADA requirement for accessible and effective communication.

4J.01 p.477 ll.36 This Guidance should be a Standard. “Accessible pedestrian signals shall be installed in conjunction with a pedestrian hybrid beacon.” A pedestrian hybrid beacon that does not effectively communicate its presence (by a locator tone) and provide accessible walk indications (rapid percussive tone and vibrating arrow) fails to provide clear and understandable signal information to people who are vision disabled as required by the ADA.

4K.01, p 480, lines 11-34 Delete this guidance and require the installation of APS wherever pedestrian signals are installed.

4K.01

p.480

ll.43-47 The information from the APS should be the same as the information provided by the visual pedestrian signals. Blind pedestrians should not have to push a button at locations where the visual pedestrian signals is displayed each cycle. Change to Standard and add a guidance or option statement regarding length of audible signal.

Standard: At locations with pretimed traffic control signals or non-actuated approaches where it is not necessary for pedestrians to push a push button detector to receive a WALKING PERSON signal indication, accessible pedestrian signals shall provide the accessible walk indication whenever the walk indication is displayed.

Guidance: As described in 4K.03, page 482, lines 8-11, the length of the audible walk indication should be limited to 10 seconds with the option to recall the audible signal if there is adequate time remaining in the pedestrian clearance time.

4K.02 p.481 ll.24-34 We are concerned that deletion of A and B in the 2009 MUTCD implies that two APS less than 10 feet apart do not require pushbutton locator tones and a tactile arrow. We doubt that this is the intent of FHWA. These features must be provided on all APS.

4K.03 p.482 ll.1-3 NCHRP 3-62 found that when the vibrotactile arrow was not located on the push button, it was less likely to be found and used. We object to the MUTCD permitting the vibrotactile arrow to be ocated elsewhere on the speaker box

4K.03 p.482 ll.13-38. We offer an alternate order of this information to FHWA for consideration as an editorial change.

Standard:

**Standard:**

The audible walk indication shall be a percussive tone, except that where two accessible pedestrian signals on one corner, or in a median, that are associated with different phases are placed less than 10 feet apart, the audible walk indication shall be a speech walk message (see Paragraph 3 in Section 4K.02). The audible walk indication shall be a percussive tone at midblock crossings, on corners where only one accessible pedestrian signal is present, in a median, and on corners where two accessible pedestrian signals are separated by a distance of at least 10 feet.

**Audible tone walk indications shall repeat at eight to ten ticks per second. Audible tones used as walk indications shall consist of multiple frequencies with a dominant component at 880 Hz.**

**Automatic volume adjustment up to a maximum volume of 100 dBA in response to ambient traffic sound level shall be provided.** [note—all the Standard sections have been combined]

*Guidance: [note--2 Guidance sections have been combined]*

*The volume of audible walk indications and push button locator tones (see Section 4K.04) should be set to be a maximum of 5 dBA louder than ambient sound, except when audible beaconing is provided in response to an extended push button press.*

*The sound level of audible walk indications and push button locator tones should be adjusted to be low enough to avoid misleading pedestrians who have visual disabilities when the following conditions exist:*

*A. Where there is an island that allows unsignalized right turns across a crosswalk between the island and the sidewalk.*

*B. Where multi-leg approaches or complex signal phasing require more than two pedestrian phases, such that it might be unclear which crosswalk is served by each audible tone.*

*C. At intersections where a diagonal pedestrian crossing is allowed, or where one street receives a WALKING PERSON (symbolizing WALK) signal indication simultaneously with another street.*

4K.03 p.483 ll.40-42 We strongly support the proposed additional Standard requiring that, if used, speech walk messages in a language other than English shall be stated first in English and then stated in the other language and then repeated, alternating back and forth while the walk interval is timing.

4K.04 p.484 l.2 The NPA adds “and to help them align with the crosswalk.” However, the tactile arrow is not intended as the sole cue for alignment. If a pedestrian with a vision disability requests that additional wayfinding information be provided for them at a crossing that has visual information, such as crosswalk lines, corners, and/or pedestrian signal heads, the ADA requires that similar information be communicated to the person with a disability by non-visual means. One of the effective ways to do this is to provide audible beaconing as described in 4K.05.

4K.04 p.484 ll.4-5 We disagree with the concept that the vibrotactile arrow may be located anywhere other than on the push button. Research in NCHRP 3-62 found that vibrotactile arrows that were not on the push button itself were not found as quickly or used as frequently as vibrotactile arrows on the push button.

4K.04 p.484 ll.37-39 We support proposed addition of this Guidance statement that push button locator tones should be audible 6 to 12 feet from the push button, or to the building line, whichever is less. This is not a new concept, but locating it here, with other information about the push button locator tone is appropriate.

4K.05 p.485 ll.4-6 We believe the deleted Standard requiring an explanatory sign about the use of an extended button press to request additional crossing time needs to be retained.

4L.03 p.488 ll.37-38 The Guidance, now located at page 488, lines 37-38, should be a Standard and located with the standard and guidance text at page 489, lines 39-44.

Standard: An audible information device shall be used with pedestrian-actuated Warning Beacons to assist pedestrians with visual disabilities.

6A.02, Page 520, Lines 6-8 and 12-14 YES Change to Standard

Should needs to be shall to meet ADA requirements for effective communication

TA 28, page 639, Lines 8 -25 We strongly support this standard. Believe it should also appear in text in 6C.03, rather than just as a note on a TA

TA 29, page 641, Line 8-14 YES We strongly support this standard. Believe it should also appear in text in 6C.03, rather than just as a note on a TA

463 Support item 463 I support the addition of change 463. This will insure that projects related to construction insure that there is adequate accessible pedestrian access and notification of changes during construction.

465 Support item 465 It is imperative that “ a public entity take appropriate steps to ensure that communications with applicants, participants, members of the public, and companions with disabilities are as effective as communications with others.”

Oppose change 388 . Roundabouts do not provide adequate pedestrian informatioon needed to determine when it i safe to cross in the absence of an accessible pedestrian signal. 388. In Section 4B.05 (existing Section 4B.04) Alternatives to Traffic Control Signals, FHWA proposes to clarify in Option Item M that to reduce vehicular conflicts, a roundabout is an alternative to a traffic control signal. In addition, FHWA proposes to add a Support statement referencing Part 8 regarding installation of roundabouts in proximity to grade crossings. FHWA proposes these changes to reflect Official Change Request 4(09)-76(C).