MCPB
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Montgomery County Complete Streets Design Guidelines Work Session #3

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RECOMMENDATION

Staff is seeking Planning Board comments on the Public Draft of the Montgomery County Complete Streets Design Guidelines version 1.0. Planning staff and Andrew Bossi, from the Montgomery County Department of Transportation, will summarize and review the guidelines as well as public testimony received as part of the Public Hearing held on July 23, 2020. This review is anticipated to take 4 to 5 work sessions. Work Session #3 will focus on the bikeways (Chapter 8) and transit. At the end of all work sessions and at the Planning Board's direction, staff will consolidate Planning Board comments into a letter to the County Executive and the County Council. Staff will also draft applicable revisions to the guidelines document, which will be forwarded to the County Executive and the County Council along with the letter for further review and consideration.

INTRODUCTION

A public draft of the Montgomery County Complete Streets Design Guidelines (CSDG) version 1.0 has been prepared jointly by Montgomery Planning and the Montgomery County Department of Transportation. This document was provided to the Planning Board for the June 23 Public Hearing. We recommend that Planning Commissioners bring this document to all work sessions.

PUBLIC TESTIMONY

Public testimony received as part of the July 23, 2020 Public Hearing was provided in the September 10, 2020 staff report on Work Session #1.

Work Session # 3 – Summary of Bikeways and Transit Elements

Work Session # 3 will focus on a summary presentation of the bikeways and transit portions of the guide (Chapters 8 for bikeways and portions of Chapters 4 and 6 related to Transit). This work session will also address questions related to the tables in Chapter 3. Staff will also respond to relevant comments received through public testimony. There are 83 comments in these categories, which are provided in Attachment A, along with a staff response for each comment. Attachment B contains comments received from the Maryland Department of Transportation. Staff is requesting Planning Board review of these comments and feedback on the corresponding responses.

For this work session, additional technical staff will be available to help respond to bikeway and floating bus stop questions. These individuals are Dave Anspacher who led the Bicycle Master Plan for Montgomery Planning, and Matt Johnson from MCDOT who worked on the design of the 2nd Avenue and Spring Street separated bikeway projects.

Proposed Re-Organization of Chapters 2 and 3

As part of the proposed response to many of the bikeway comments, staff has developed an alternative approach to presenting the information in Chapters 2 and 3. Chapter 3 would be eliminated, and summary tables 3-3, 3-4, and 3-5 would be moved to the Appendix. Chapter 2 would be revised to include the following changes:

1. Relocation of a revised version of Figure 1-3 with more explanations on the basic zone structure to be placed at the beginning of Chapter 2 before the introduction of the 12 street types. Two different cross sections would be shown in this revised graphic to identify where bike facilities can occur, as they are not located in the same place for every street type. One example would show a separated bike lane and the second example would show an on-road bike lane and a sidepath. A sketch developed using the Streetmix software (see Figure 1 on the following page) shows how this graphic would be modified. The version to be used in the revised document would be consistent in format to graphics in the current CSDG document. A paragraph would also be added to clearly describe this graphic and the general zones, as well as the fact that bicycles accommodations can occur in three different places, a bikeway or sidepath in the Active Zone and a bikeway in the Street Zone.

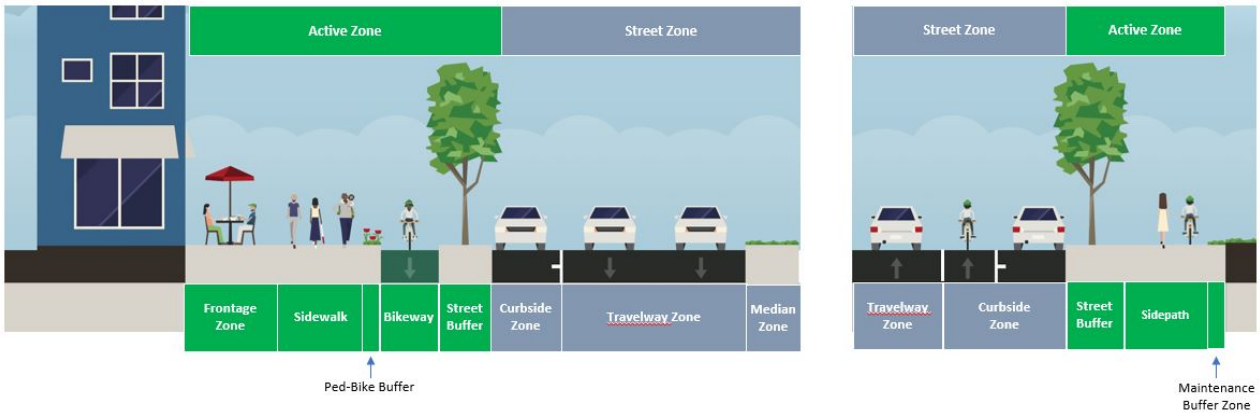

Figure 1: Revised Graphic for Figure 1-3 in Guidelines

2. Consolidation of all design requirements into one table for each street type. This would take elements now presented in Figures 3-2 and 3-3 and break them out into 12 separate tables. A example for the Downtown Boulevard street type is included as Figure 2 on the following page. We feel that these revisions would make the application of these guidelines easier to use, as all the required guidelines would be provided on one graphic for each street type. It also allows for the table to more closely match the street type cross section in format. For example, if the street type has separated bike lanes, on-road bike lanes, or a sidepath, these will be noted as such in the table, matching the street type graphic. Figure 2 is just a prototype. The final version would be modified to be consistent with the CSDG in format, and the information presented in each zone would conform to the order it is shown in the graphic wherever possible to facilitate its use and ease of understanding. In addition, Figure 3-4 would also be broken out into 12 separate tables.

3. Within Chapter 2, the presentation of each street type would include the following information:
   - First page – Description of the street type with typical section in illustrative form,
   - Second page – Three examples of the street type within Montgomery County,
   - Third page – The table detailing the design requirements for the street type (as described in item 2 above), and
   - Fourth page – Streetscape Figure extracted from Figure 3-4.

4. Name changes would be made to more clearly distinguish each zone.
   a. The Sidewalk Zone would be renamed as the Active Zone to reflect the fact that this zone typically would contain both pedestrian and bikeway uses.
   b. Bicycle uses may vary depending on street type; however, when the bicycle facility is a sidepath or a separated bike lane, it would be located within the Active Zone.
   c. The Pedestrian Clear Zone would be renamed as the “Sidewalk” or as the “Sidepath” depending on street type and type of bike facilities.
   d. If bikes are planned within the Active Zone, there would be a buffer between the pedestrian and bikeway spaces. This would be called the “Ped-Bike Buffer.”
   e. The buffer separating the street from the Active Zone would remain as the “Street Buffer.”

It is important to note that some street types, including Neighborhood Connectors, envision a sidewalk on one side of the street and a sidepath on the other side of the street.

Downtown Boulevard

	Topic	Notes	Page Ref	Value	Priority
General Guidance	Target Speed	Presence, proximity, and volume of pedestrians, bicyclists, passenger vehicles, transit vehicles, and commercial vehicles shall be considered when determining an appropriate target speed. State law requires a minimum posted speed of 25 mph outside of "urban districts" as defined in the law.	p207	25 MPH	N/A
	Maximum # of Vehicle Through Lanes	See Countywide Master Plan of Highways and Transitways for number of travel lanes on specific streets, which supersedes this guidance. These are primarily for new roads and when considering road diets.	p105	6	N/A
	Maximum Spacing for Protected Crossings	These targets are intended to ensure pedestrian crossings are located at reasonable intervals. These general values are aligned with Complete Streets principles; however, site-specific needs and conditions will dictate actual implementation.	p148	400'	N/A
	Generally Accepted Minimum Spacing for Signalized Intersections	Refers to a full signalized intersection or roundabout. These targets are intended to maintain operations at a level that promotes safe movement by all travel modes. Site-specific needs and conditions, as determined through the regulatory approval process or capital project review, will dictate actual implementation.	p148	400'	N/A
Street Zone	Center Median	May be replaced or widened to include a left turn lane at intersections, if needed. Medians may be wider than dimensions provided in some circumstances – consult MCDOT. If street is master planned for a transitway, transit lane dimensions supersede.	p107	Recommended 6'-16'	M
	Dedicated Transitway	The presence of a dedicated transitway is determined in the Countywide Master Plan for Transitways and Highways. If these dimensions vary from those provided in a specific Transitway planning process, those dimensions supersede this document. Dimensions may vary at stations, intersections & other crossing points, and along horizontal curves.	p106	Transitway lanes: 13' default, 12' min Transitway buffer: 6' default, 2' min	M
	Left-Turn Lane	Dimensions only apply if a left turn lane is necessary.	p103	10' default, 9' min	M
	2-Way Left-Turn Lane	Only appropriate under limited circumstances.	p103	N/A	N/A
	Inside Travel Lane	Lane width dimensions are intended for typical tangent (straight) sections. Segments with vertical or horizontal curves may require wider pavements per Section 3.3.10 of the AASHTO Green Book. This includes the lane against the centerline on undivided roads.	p103	10'	N/A
	Outside Travel Lane (against curb or parking)	Lane width dimensions are intended for typical tangent (straight) sections. Segments with vertical or horizontal curves may require wider pavements per Section 3.3.10 of the AASHTO Green Book. If the outside lane is adjacent to a bike lane, the total width (travel lane + bike lane) should be no less than 16'. Guidance also applies to right turn lanes, where needed. Gutter pan is included in parking lane dimensions (below); however, if there is no parking lane, gutter pan is included in these dimensions for the outside travel lane.	p103	11'	N/A
	Parking Lane	Gutter pan is included in parking lane dimensions. If there is no parking lane, the gutter pan is already included in the Outside Travel Lane width.	p95-99	8'	L
Active Zone	Bikeway	SBL = Separated Bike Lane. Default bikeway types apply to streets without master planned bikeways. The widths apply to master planned and non-master planned bikeways. If the Bicycle Master Plan recommends something different for a specific street, that supersedes this guidance. Dimensions do not include the street buffer or pedestrian/bicycle buffer (see below). If bikeway is adjacent to the curb, dimensions include the gutter pan. For corridors designated as Breezeways, see additional guidance in the Bicycle Master Plan.	p201	Two-way SBL on both sides of street. Each SBL: 11' default, 8' min	M
	Street Buffer	Where a Street Buffer is used to separate an on-street bikeway from the Travelway Zone (only permissable as an interim MCDOT-constructed design), the Street Buffer in that case may be reduced to 3' minimum. If on-street parking is part of the Street Buffer zone and abuts the Sidewalk / Sidepath, a minimum 3' offset is required between the face of curb and the Sidewalk / Sidepath, and a minimum of 5' clear Sidewalk / Sidepath is required outside of the door swing zone of a parked car, to maintain accessibility.	p66	8' default, 6' min	H
	Pedestrian / Bicycle Buffer	Provided only if a separated bikeway (excluding a Sidepath) is provided.	p182	6' default, 2' min	M
	Sidewalk / Sidepath	If on-street parking is part of the Street Buffer zone and abuts the Sidewalk / Sidepath, a minimum 3' offset is required between the face of curb and the Sidewalk / Sidepath, and a minimum of 5' clear Sidewalk / Sidepath is required outside of the door swing zone of a parked car, to maintain accessibility. Using the minimum dimension requires a waiver – consult MCDOT.	p74	15' default, 10' min	H
	Frontage Zone	Some or all of the frontage zone may occur on private property.	p75	10' default, 0' min	M
	Maintenance Buffer	Structures not part of the roadway design shall not occur in the public ROW. If there is a structure abutting the property line, a maintenance buffer is required even if this table shows a dimension of 0'. Consult MCDOT.	p63	0'	N/A

Figure 2: Design Criteria for Downtown Boulevard Street Type

5. Additional text is proposed to be added on page 183 of the CSDG to describe interim versus permanent bikeways. This text is provided below. The language comes from pages 128, 129 and 135 of the Bicycle Master Plan.

8.2 General Bikeway Design Guidance

[To be inserted at the end of page 183]

Separated Bike Lanes

Jurisdictions across the United States are using different approaches to implement separated bike lanes. Many are constructing these bikeways as **interim** / low-cost retrofits of existing rights-of-way using flexible delineator posts and paint, while others are constructing more **permanent** forms of separation, such as curb-separated bike lanes, that represent a permanent design standard. Although interim separation types can be easier to implement, agencies have raised concerns about their maintenance costs and aesthetics, noting that some of these separation types provide less protection from adjacent automobile traffic than more permanent solutions, which can be more aesthetically pleasing, although they often carry a higher cost.

Interim Separated Bike Lanes

As with many jurisdictions, Montgomery County is focusing its efforts at building a network of separated bike lanes as quickly as possible to provide responsiveness to public demands for improved bicycling and allow ongoing evaluation of new approaches to bikeways. Interim separated bike lanes address separation from traffic using flexible delineator posts, planters, parking stops, concrete barriers or rigid bollards, and are shown on the following pages. These projects substantially improve the comfort of bicycling by reducing traffic stress and make bicycling accessible to a greater segment of the population.

Interim separated bike lanes can only be constructed as retrofit projects in the capital improvement program.

Widths

Interim separated bike lanes will have the following widths:

• One-way separated bike lanes: 5 feet at a minimum, exclusive of shy distances.

• Two-way separated bike lanes: 8 feet at a minimum, exclusive of shy distances.

Intersections:

While the ultimate objective is to implement protected intersections as part of separated bike lane projects, this will not be feasible with all interim projects. Bike boxes and two-stage turn queue boxes are ways to improve intersections in the interim until full protected intersections can be implemented. Bike lane drops are inappropriate for interim separated bike lanes.

Separation from Traffic:

Interim separated bike lanes address separation from traffic using flexible delineator posts, planters, parking stops, concrete barriers or rigid bollards, and are shown on the following pages. These forms of separation help to reduce the stress of bicycling and can be improved over time as funding becomes available.

Examples of interim one-way separated bike lanes are shown below.

[Move Figure 8-8 to this location in the document]

[Move Figure 8-9 to this location in the document

Permanent Separated Bike Lanes

Permanent separated bike lanes create bicycling environments that are appropriate for people of all ages and bicycling abilities. They expand the capacity of the bicycling network by implementing wide bike lanes that enable passing and incorporate more aesthetically pleasing treatments and stormwater management.

Permanent separated bike lanes are to be constructed as part of development projects and as part of larger capital improvement projects.

Widths:

Permanent separated bike lanes will have the following widths:

• One-way separated bike lanes: 6.5 feet, exclusive of shy distances.

• Two-way separated bike lanes: 11 feet, exclusive of shy distances.

Intersections:

Permanent separated bike lanes will reduce conflicts at intersections with protected intersections and mitigate the remaining conflicts.

Separation from Traffic:

Permanent separation provides a high level of protection and often has greater potential for placemaking, quality aesthetics and integration with stormwater management. Examples of permanent separation include raised medians and raised separated bike lanes at an intermediate level and are shown on the following pages. Each of these separation types provides an increasingly higher level of comfort for bicycling, separation from traffic and opportunity for improved aesthetics within the streetscape. Permanent separation can reduce maintenance costs associated with temporary separation and improve durability and bicyclists' safety on higher volume roadways.

Examples of permanent two-way separated bike lanes (Figure 8-9) and one-way separated bike lanes (Figure 8-10) are shown below.

[Move Figure 8-7 to this location in the document]

[Move Figure 8-10 to this location in the document]

Sidepaths

Examples of sidepaths are shown below:

[Move Figure 8-11 to this location in the document]

[Move Figure 8-12 to this location in the document]

[Move Figure 8-13 to this location in the document]

Attachment A

Summary of Comments Received and Proposed Responses

Work Session #3

Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
3	Project Team			Bikeways	Disability community concerns about floating bus stops	No action, but definitely a future need. Floating bus stop design continues to be refined in coordination w/ disability groups. This guide opens the door to floating bus stops; a future version will provide more detail once we have something that is agreeable.
14	Kristy Daphnis, Chair PBTSAC			Bikeways	We ask that you consider further guidance on information specific to trail crossings, whether it be in Chapter 2, 6, or another appropriate point within the document; and, that you consider providing more information on how to implement safety countermeasures in areas where the land use may not exactly match with the street type and design.	Pages 178-179 include trail crossings.
40	Jane Lyons, Center for Smart Growth	55		Bikeways	Page 55: We'd like it to be clear that a sidepath is always preferable to bikeable shoulders.	While we agree with this statement in most cases, we do not agree with this in all cases, particularly County Connectors and Country Roads with no nearby destinations. If there are specific instances where sidepaths are desired, this should be considered as part of an update to the Master Plan of Highways and Transitways.
42	Jane Lyons, Center for Smart Growth	82		Transit	Page 82: Bus shelters, in addition to BRT stations, should consider opportunities to provide additional passenger amenities such as seating, local area information, wayfinding, and real time traveler information.	Add a line to Considerations on p82: "Shelters should consider needs for passenger amenities such as additional seating, local area information, wayfinding, real-time traveler information, and heating or cooling capabilities."
72	Peter Gray, WABA	196		Bikeways	P196 - in the comment relating to roads that have a speed limit of 35 mph or higher, we urge that the guidance note that separation of more than 5 feet is required, as opposed to desirable.	We will change "desirable" to "required", for roads with speed limits of 35 MPH+.

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73	Charles Crawford, Past President, Capital Area Guide Dog Users, Inc.			Bikeways	request that the Montgomery Planning Board revisit the entire process and program of complete streets and associated activities such as Vision Zero with a view towards insuring the participation and approval of Montgomery County residents with Disabilities in general and Blindness in particular.	We propose adding the following at the start of the Floating Bus Island section on page 142: "Where separated bike lanes and bus stops exist on the same road, floating bus islands are an integral part of the bikeway and transit network. At the time of publication, floating bus island design was an evolving practice. The guidance included in this section represents best practices. Consult MCDOT for more information." During the public review portion of the project, the CSDG team met with the Commission on Disabilities twice and once with the Getting Around the County group, hosted by Shawn Brennan. At these three meetings, floating bus stops were the primary issue. We recommend that MCDOT continue to coordinate with the Commission on People with Disabilities and other interest groups as they continue to work on and finalize their bus stop policies/design standards where separated bike lanes are located or proposed.
74	Charles Crawford, Past President, Capital Area Guide Dog Users, Inc.			Bikeways	The Capital Area Guide Dog Users, Inc. strongly objects to the construction of the so called " Floating Bus Stops " since they have been constructed to accommodate bicycle lanes along side of sidewalks and thusly creating dangerous crossings for Blind and otherwise disabled person. We have worked with County staff to try and make the bus stops more safe, and while some progress has been made, we still maintain these stops remain dangerous and ought to be torn down and the buses returned to the original stops at the sidewalk.	Floating bus stops are only one small element of the CSDG, and this is simply an adoption of a practice now under development by MCDOT, Transportation Engineering Division. See response to comment #73
75	Charles Crawford, Past President, Capital Area Guide Dog Users, Inc.			Bikeways	While we have seen some increasing activity on the part of the County to work with us and the larger Disability community on the planning and realization of the various plans associated with Vision Zero, we have seen little concrete action on the part of the County to realize an environment that truly meets the objectives of Vision Zero for all community residents. In fact, if you look at the 7 goals of Vision Zero, all but the first are violated by the current County Activities.	Again, this seems to be focused on the Floating Bus Stop Issue. Without more detailed specifics on why the commenter believes that 6 of the 7 Vision Zero goals are violated, we cannot respond in more detail. We disagree with that assessment.
77	Charles Crawford, Past President, Capital Area Guide Dog Users, Inc.			Bikeways	I ask that you work with the County and our community to successfully design an environment where Pedestrians of all stripes can continue to use the infrastructure that has traditionally been constructed for them, Bicyclists and other moving vehicles be given the proper consideration to insure their enjoyment of and safe use of the space made available for them, and that traditional space and sidewalks continue to be available to traffic and Paratransit vehicles.	That is certainly the intent of the CSDG. The floating bus stop issue needs to be resolved by MCDOT into a more formal policy to address concerns from the Commission for Disabilities and the CAPGDU. Future versions of the CSDG can then be amended to incorporate the formal approved design policy.

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86	Dan Wilhelm, GCCA President	141	6.12	Transit	Road Pavement. In section 6.12, the road pavement at bus stops should be constructed with concrete rather than asphalt to keep the road service from being pushed up during hot summers outside of where the tires run. We have seen cases where the asphalt is 3-4 inches higher than the surface where the tires run and vehicles with low clearance actually scrape their under carriage. That condition is unsafe for the operation of cars.	We will add a line on p141 under "Transit Stop Locations" that reads something like: "Where feasible, bus stops should be located on the far-side of intersections. Concrete pavement should be considered, particularly at high-volume bus stops."
87	Dan Wilhelm, GCCA President	141	6.12	Transit	Transit stop locations. WMATA and Ride On need to share bus stops to minimize the confusion to the public and reduce the impact on others using the road. The location of near-side or far-side should consider the impact on reducing road capacity for other vehicles. For example, where there is a high volume of right-turns, the near-side stop should be avoided if possible. (These are problems on New Hampshire Ave northbound at Powder Mill Rd.)	Far side bus stops are preferred as a whole, but it is determined based on the local context.
90	Seth Morgan, Chair, Patricia Gallalee - Vice Chair - Commissions on People With Disabilities	142-143		Bikeways	Bus stops should be located on the sidewalk curb, not a floating bus stop, so the location is predictable and consistent with the most common design standards nationally and internationally. The design of the floating bus stops poses a severe safety risk to peoples who are blind, have low vision, or who have a mobility limitation. We strongly recommend that a moratorium be placed on the installation of floating bus stops and that the existing ones be removed based on the concerns raised by numerous individuals who are blind and advocacy and support organizations	Floating bus stops are inherent to providing separated bike lanes, especially those of a high level of comfort. Floating bus stop design continues to be refined in coordination w/ disability groups. This guide opens the door to floating bus stops; a future version will provide more detail once we have something that is agreeable.
91	Seth Morgan, Chair, Patricia Gallalee - Vice Chair - Commissions on People With Disabilities	180-186		Bikeways	The Commission is not averse to making bike riding safer. The US Census American Community Survey indicates that 1.1% of the population commutes to work. The County should consider locating bike paths on roads that do not have bus routes or consider putting bike lanes in the middle of the road. This would maintain the use of sidewalks by pedestrians of all stages of life who need them to participate and be included in community life.	Thank you for your comment. The CSDG was developed in the context of existing and ongoing Master Plans, including the adopted 2018 Bicycle Master Plan. Bikes are a last mile component of transit service. We do not feel that placing bikeways in medians are generally going to have the same degree of comfort, nor have the same level of engagement between bicyclists and the street frontage (e.g. socializing or retail patronage)
95	Seth Morgan, Chair, Patricia Gallalee - Vice Chair - Commissions on People With Disabilities			Transit	We encourage you to use precious funds to ensure that people have adequate access to public transportation and that sidewalks are installed and maintained as needed.	The CSDG is not by itself a CIP project prioritization tool, but it can be used to determine design elements

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135	Gil Chlewicki	95-102	5.3	Transit	Section 5.3 - Curbside zone needs to include transit stops. Ride Hailing Loading/ Unloading Zones can be an issue on neighborhood and rural roadways where there is nowhere to pull off and can block bike lanes.	We will add a section near 5.3 for transit stops that basically just directs readers to sections 4.8 and 6.12
153	Gil Chlewicki	138-139	6.11	Bikeways	Bike Crossings at Freeway Ramps do not necessarily require grade separation if the ramp can be designed at a slow speed at the crossing. Elements of this are at ICC/MD 97 (which I designed).Unsignalized treatments are possible and shouldn't be anti-recommended, especially if the context does not require controlled treatments.	Please refer to Montgomery Planning's Bicycle Facility Toolkit, which has proposed at-grade bike crossing recommended designs.
168	Miriam Schoenbaum			Bikeways	3. Just as we build roads for peak motorist activity, we should build sidewalks and bike lanes for peak pedestrian/bicycle activity. For example, sidewalks and crosswalks next to schools should be big enough to accommodate all users without delay at arrival and dismissal.	Agreed. This is what this guide is seeking to do. ...Well, other than explicitly for schools, as per previous comments about possibly adding an overlay.
169	Miriam Schoenbaum			Bikeways	Shared-use sidepaths should not be the default bicycle/pedestrian facility. They are bad for both pedestrians and bicyclists. The default should be to separate the modes: sidewalks for pedestrians, protected bike lanes for bicyclists.	We disagree that sidepaths are necessarily bad for both pedestrians and bicyclists. There are many locations in the county where demand is low and where interactions by pedestrians and bicyclists will be limited. The default bicycles facilities vary by Street Type as shown in Figure 3-3. The default facility for pedestrians is a sidewalk or a sidepath. Separating both modes in all contexts is not feasible. This seeks to strike some balance with fiscal and right-of-way constraints. Separated bikeways are provided in higher-volume areas, and functional plans + area master plans can override these defaults if higher-separation facilities are justified.
178	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	The tables and text do not adequately explain certain street and bikeway configurations	The CSDG was not intended to inform all possible street and bikeway configurations. There may be opportunities for enhancements in future versions of this guide
179	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	the whole guide may lack enough detail to fully inform street designs.	The CSDG was not intended to inform all possible street and bikeway configurations. There may be opportunities for enhancements in future versions of this guide
184	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	What zones are separated bike lanes in? The document is confusing and contradictory as far as which zone SBLs are in. Are they in the Sidewalk Zone? The Curbside Zone? Some pages imply that they're always on the sidewalk side of the "street buffer" and thus in the Sidewalk Zone (p. 32), yet other pages put them in the Curbside Zone (p. 64 and figs. 5-1 and 5-2). Fig. 1-3 actually puts them in the "street buffer". None of the zone-specific chapters lay claim to SBLs in the text, though some include SBLs in their diagrams.	Figure 1-3 is confusing. Staff proposes a revised figure that more clearly shows that bikeways can be located in two locations: 1) the Street Zone, 2) the Active Zone.

Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
185	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	In any case, I'd like to see SBLs placed in one zone and only one zone, regardless of whether they're street-level or sidewalk-level. This avoids having to always distinguish between street-level and sidewalk-level SBLs. But whatever is decided, just make it clear in the guide. If SBLs can be in two different zones, state that clearly and always say "street-level SBL" and "sidewalk-level SBL", not simply "SBL".	The Street Zone illustration (Figure 1-3) is confusing. Staff proposes a revised figure that addresses a number of issues, including that bikeways can be located in two locations: 1) the Street Zone, 2) the Active Zone.
190	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	This row does not appear to reflect the fact that when an SBL is present, this buffer is positioned between the SBLs and the Street Zone. In this case, the "minimum" width should be 3', and the "preferred" width something wider (4'? 6'?).	We propose to revise Chapter 2 to present all dimensions and standards by street type. Chapter 3 would be eliminated. Current tables in Chapter 3 would be moved to the Appendix. This will allow more customization and consistency between the graphic and the table shown in terms of zones. It will also be much more user-friendly when considering one street type.
191	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	If the bikeway is a conventional bike lane (or buffered bike lane), this statement is not true: "The street buffer is the space between the travel or parking lanes and the bikeway or sidewalk." The line needs to indicate which bikeway type(s) it's referring to, and do it correctly.	To address this comment, staff proposes combining Chapters 2 and 3 so that all information is organized by street type. An example of this is provided in Figure 1 in the staff report.
192	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Table	Generally sentences of that form are difficult to parse. Instead of saying "between A or B and X or Y", say "between A or B on one side, and X or Y on the other".	Thank you for your comment. Reader clarity is important. We will review the CSDG to address issues similar to the example provided.
193	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	If on-street parking is part of the buffer zone and abuts the Pedestrian Clear Zone… How can parking be part of the buffer zone? This contradicts the statement "The street buffer is the space between the travel or parking lanes and the bikeway or sidewalk."	To address this comment, staff proposes combining Chapters 2 and 3 so that all information is organized by street type. An example of this is provided in Figure 1 in the staff report.
194	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	If on-street parking is part of the buffer zone and abuts the Pedestrian Clear Zone, a minimum 2’ offset is required between the face of curb and the Pedestrian Clear Zone, and a minimum of 5’ clear zone is required outside of the door swing zone of a parked car, to maintain accessibility. Is this taking bicyclists into account? The 2' and 5' aren't nearly enough if the PCZ is a sidepath. If it's a sidepath, extra space is needed for cyclists in order to prevent dooring, conflicts with people loading/unloading their car, and conflicts with people standing at the parking meter.	We will make the following changes on page 55: "Where on-street parking is present, a minimum 3' offset is required between the face of the curb and the Pedestrian Clear Zone or any adjacent bikeway."
195	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Table	The caveat "(if sidewalk or sidepath is provided)" stated for Country Connector should be stated for Country Road as well.	Agreed
196	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	Where it says "buffer zone", it apparently means "Street Buffer Zone" (fix this in the entire table).	Agree, with modifications as proposed to Chapters 2 and 3, we will use two buffers: "Street Buffer" and "Pedestrian-Bicycle Buffer" (or "Ped-Bike Buffer" for short).

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Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
197	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	These concerns also apply to Fig. 8-25 on p. 201.	Agreed. Need to ensure all of Jack's comments on p55 are also applied to p201.
198	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2 Default Bikeway Type and Width ROW	Bikeways	Default bikeway types apply to streets without master planned bikeways. This is redundant with "If the Bicycle Master Plan recommends something different for a specific street, that supersedes this guidance"	Agreed. Delete the latter part, RE: superseding?
199	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2 Default Bikeway Type and Width ROW	Bikeways	That line also implies that streets without master-planned bikeways should usually get the default treatment. Calling a bikeway type the "default" gives it too much weight. See my comment below. The width guidelines listed in the Default Bikeway Type column of the table are helpful, however.	The Bicycle Master Plan identifies a default bikeway. This document is reflecting that.
200	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2 Default Bikeway Type and Width ROW	Bikeways	These parenthetical references are a problem: "Dimensions do not include the street buffer (see below) or sidewalk buffer (ranges from 0'-6', see Section 6.2)." Referring readers to the next row of the table – "(see below)" – refers them to the extremely simplified (and for now, incorrect) definition of street buffers, when it should just refer them to the bike chapter. Also, "Section 6.2" is not the correct section.	Reorganizing the CSDG per response in Comment 190 would also address this issue.
201	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2 Default Bikeway Type and Width ROW	Bikeways	If bikeway is adjacent to the curb, dimensions include the gutter pan. It should say "If bikeway is at street level and adjacent to the curb…" to exclude the case where the SBL is at sidewalk level (on the high side of the curb).	Agreed. We will modify the text to make this more clear.
202	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2 Default Bikeway Type and Width ROW	Bikeways	These concerns also apply to Fig. 8-25 on p. 201.	Agreed. Need to ensure all of Jack's comments on p55 are also applied to p201.
203	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2 Pedestrian Clear Zone ROW	Table	In the Description, state the definition first: "This is either a sidewalk or sidepath."	Add as an initial sentence: "The Pedestrian Clear Zone can either be a sidewalk or a sidepath." Note that with a reorganization of Chapter 2, the Pedestrian Clear Zone may be renamed at the pedestrian and bicycle zone.
204	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Table	The fundamental table problem on p. 55 is that it bites off more than it can chew. As a result, it oversimplifies bike considerations, yet it's already too large. I would break it into multiple tables. But some changes might help:	Reorganizing the CSDG per response in Comment 190 would also address this issue. Figure 3-2 would be moved to the Appendix.

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Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
205	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	To nominally improve the table, add an additional row for "Sidewalk Buffer", which would make it clear that there is more than one buffer in the SBL case. It would say something like "This is the buffer between the SBL and the Pedestrian Clear Zone, if an SBL is present". It would also note that if the SBL is at street-level and the street buffer is narrow, the sidewalk buffer is where to put bike docks, trash cans, etc. (If you decide SBLs go in the Street Zone, ignore this comment).	Reorganizing the CSDG per response in Comment 190 would also address this issue. Figure 3-2 would be moved to the Appendix.
206	Jack Cochrane, Montgomery Bicycle Advocates	55	Figure 3-2	Bikeways	To further improve the table, use separate rows for each major type of bikeway (sidepath, on-road, and SBL), since each has a different role in the cross section. That means two additional rows.	Reorganizing the CSDG per response in Comment 190 would also address this issue. Figure 3-2 would be moved to the Appendix.
207	Jack Cochrane, Montgomery Bicycle Advocates	201	Figure 8-25	Bikeways	The table in Figure 8-25 on page 201 adds no value. The table on p. 201 is in the bikeway chapter, but it's little more than an excerpt of the table on p. 55, even though the excerpt addresses more than just bikeways. The table on p. 201 should be more specific, detailed, and useful.	As with similar tables in other chapters, its just a recap of everything related to bikeways in Figure 3-2. Perhaps in CSDG 2.0 we can address this.
208	Jack Cochrane, Montgomery Bicycle Advocates	64	Diagram	Bikeways	Based on the diagram and text on p. 64, the SBL are never in the Sidewalk Zone. This is wrong based on my understanding. The "sidewalk buffer" is also never mentioned.	Agree, with modifications as proposed to Chapters 2 and 3, we will use two buffers: "Street Buffer" and "Pedestrian-Bicycle Buffer" (or "Ped-Bike Buffer" for short).
211	Jack Cochrane, Montgomery Bicycle Advocates		4	Bikeways	Street Chapter 4 should clarify that if the SBL has just a narrow street buffer, as is typical for street-level SBLs, things like trash cans and bike docks should go in the sidewalk buffer, not the street buffer.	Agreed. We will modify the text to make this point.
212	Jack Cochrane, Montgomery Bicycle Advocates	93		Bikeways	The text on p. 93 does not have SBLs in the "Curbside Zone". But the diagram on that page shows them there.	Yes, we will add "on-street bike facilities" into the list of uses included in the Curbside Zone.
213	Jack Cochrane, Montgomery Bicycle Advocates	184-186		Bikeways	It would be extremely helpful to show the main cases of bikeway treatments in 3D perspective. These 2D diagrams are more difficult to comprehend visually. Parked cars are hard to distinguish from moving ones. Bike lanes are hard to distinguish from travel lanes.	This could be modified in future versions of the CSDG.
214	Jack Cochrane, Montgomery Bicycle Advocates	184-186		Bikeways	It would be helpful to show the recommended dimensions for each bikeway and buffer. Be sure to require at least a 3' buffer between parking and an SBL.	This can be considered in future versions of the CSDG

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Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
215	Jack Cochrane, Montgomery Bicycle Advocates	185	Figure 8-9	Bikeways	Figure 8-9, the configuration is labeled "interim", but this is often preferred over the Fig. 8-10 configuration labeled "permanent". Setting the SBL further back from the street can lead to reduced visibility of/by traffic, greater pedestrian encroachment, more frequent obstruction by drivers waiting to pull out from side streets, and greater difficulty turning or shifting into the travel lanes (by bikes). At this rate, separated bike lanes will be so distant from the roadway that they'll be little more than sidepaths, which are inappropriate in an urban area. Intersections are by far the most dangerous part of an SBL anyway.	We disagree that Figure 8-9 is preferred over Figure 8-10.
216	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	Listing the street types associated with each cross-section is tying street types too closely to their default bikeway types. The master plan is full of streets that don't use the default bikeway type.	This is what the recommendations in the Bicycle Master Plan are largely based on. Where there is an inconsistency between the default bikeway and the Bicycle Master Plan recommendation, the Bicycle Master Plan supersedes the default bikeway.
217	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	More cross-sections should be depicted in these figures, corresponding to the most common bikeway permutations as described below. No figure even shows on-road bike lanes, despite being master-planned on several streets.	More updates may be considered in future versions of the CSDG. We do not feel that more are needed at this time
218	Jack Cochrane, Montgomery Bicycle Advocates	184-186		Bikeways	Factors like the position and type of bikeways result in several bikeway permutations, each of which might impose different width requirements on each cross section element. I've identified the following 14 permutations, which cover most streets. Except for the first three, make sure each permutation has its own diagram on pp. 184-186.	The sections are not intended to be comprehensive.
219	Jack Cochrane, Montgomery Bicycle Advocates	184-186		Bikeways	Each of these permutations should have "preferred" and "required" widths for each element.	This can be considered in future versions of the CSDG
220	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	Default bikeway type – general considerations. The concept of a "default" bikeway for each street type is very simplistic. For any street improvement, a wide array of bikeway options must be considered and evaluated. The "default" indication could prejudice designers against using other types. For example, one-way vs. two-way SBLs are probably used with equal likelihood. Something as complex as the choice between one-way and two-way SBLs should not influenced by one cell of a giant table. If "default" must be retained, the term must be defined and explained in the bike chapter.	Most of the recommendations in the Bicycle Master Plan correspond to the default bikeway. Where there is an inconsistency, the Bicycle Master Plan supersedes the default bikeway. On non-master planned streets, deviation from the default bikeway type must be justified.
221	Jack Cochrane, Montgomery Bicycle Advocates	184-186		Bikeways	Similarly, the diagrams showing the default type (pp. 184-186) could prejudice designers against 2-way separated bike lanes if they aren't shown.	We do not share this concern.

Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
222	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	Conventional bike lane door zone: The combined width of a conventional bike lane and adjacent parking lane must be a minimum of 14', preferably 15', so the bike lane can lie outside the car door zone. If it's a buffered bike lane, the combined width of the bike lane, parking, and buffer must meet this requirement.	We do not share this concern as we shouldn't be installing conventional bike lane in places where car doors are opened frequently. Few conventional bike lanes are recommended in the Bicycle Master Plan.
223	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	SBL door zone: A minimum 3' buffer is required between a parking lane and an SBL to keep cyclists out of the "door zone". 4' is preferred. 2' is not enough.	Agree. This change will be made in Chapter 8 and the revised Chapter 2
224	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	SBLs without parking are often preferred over SBLs with parking. State this in the guide. SBLs behind parked cars are often a problem due to visibility issues, blocking by cars waiting to pull out from side streets/driveways, pedestrians walking to/from their car, more frequent encroachment by pedestrians, and difficulty for cyclists to exit the SBL mid-block. Consider moving parking to one side of the street and putting a 2-way SBL on the other side if parking must be retained.	At bicycle conflict points: parking can be restricted as to provide for improved visibility between bicyclists and other users. The comment regarding moving parking to one side, and a bikeway onto the other side is a valid consideration: the CSDG allows for this to happen. This will be taken under consideration on a project-specific basis. We note that the prioritization already generally ranks parking lower than bikeways.
225	Jack Cochrane, Montgomery Bicycle Advocates	213-214	9.3	Bikeways	Curb extensions and bumpouts: Installing curb extensions or bumpouts that block an existing shoulder should be done in a way that does not needlessly block the shoulder for cyclists. The solution is usually to provide a slot through the bumpout or a ramp that goes up and over the bumpout that cyclists can use. Sometimes MCDOT does this, but other times they forget. The consideration applies even if there's a parallel sidepath or SBL.	Agreed
226	Jack Cochrane, Montgomery Bicycle Advocates	214	9.3	Bikeways	Traffic-calming median islands – Installation of small median islands to create neckdowns for drivers can result in the elimination of short segments of shoulder used by bicyclists. The solutions are not as easy as with curb extensions, but shoulder bicyclists should at least be considered in every such case, and if necessary a small shoulder should be continued through the neckdown.	Agreed
227	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	Breakout gaps – Gaps in the barrier separating the SBL from the travel lanes are important for multiple reasons. Such gaps or "breakouts" are needed so cyclists can cross the street between sanctioned crossings (to turn left, for example), go around obstacles like debris or pedestrians, and shift left as needed to make conventional left turns. The easiest solution is just to make the barrier "porous" by constructing it using curbstops, planters or flex posts.	Disagree that we should use curbstops, planters or flex posts in the "permanent" bikeway to provide "breakouts". These degrade the quality of the buffer. You should be able to go from the Separated Bike Lane to the sidewalk if needed, which is a benefit of the intermediate level Separated Bike Lane.

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Summary of Comments Received and Proposed Responses

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228	Jack Cochrane, Montgomery Bicycle Advocates	46		Bikeways	Major Highways (p. 46, etc.) – Fully grade-separated highways like the ICC are often ideal places to put such parallel trails because of the lack of at-grade crossings. Instead of implying that these highways don't need bike/ped accommodations unless noted in a master plan, stipulate that every new major highway should include a shared use path (or hiker-biker trail) by default. Also emphasize that every crossing over or under the highway should include bike/ped accommodations.	Agree that every overpass or underpass of a highway should include bicycle and pedestrian accommodations.
229	Jack Cochrane, Montgomery Bicycle Advocates			Bikeways	Sidepath/street buffer allocation - For sidepaths, an 8' sidepath next to a 4' street buffer is preferable to a 10' sidepath next to a 2' street buffer. One exception may be if there's a wide shoulder (which acts as a sort of buffer).	We agree that an inadequate street buffer space next to a bike or pedestrian facility contributes to poor levels of traffic stress or levels of comfort. Providing an adequate width street buffer should be a high priority.
232	Jack Cochrane, Montgomery Bicycle Advocates	55		Bikeways	In reality, for bicycling purposes, a full 8' or 10' shoulder is welcome but not needed. Onerous minimum width requirements could push designers into giving up on bikeable shoulders and just providing a shared use path instead, which on rural roads is usually the wrong choice.	We are proposing to make 5' the minimum shoulder width to make them useable as bikeable shoulders, with the exception of Major Highways.
234	Jack Cochrane, Montgomery Bicycle Advocates	42, 44		Bikeways	Country Connector/Country Road accommodations (p. 42 and p. 44) – The text for both of these road types (Country Roads, not just Country Connectors) should indicate that the roads may be popular recreational bike routes. Also for both road types it says, "Due to higher speed vehicle traffic, designs should provide ample separation from vehicle traffic for pedestrians and bicyclists." But "separation" might not be the right word, as it implies separated bikeways, which are often not the best solution on these roads.	Agree. We will add these sentences.
235	Jack Cochrane, Montgomery Bicycle Advocates	42, 44		Bikeways	Default bikeway type for country connectors and roads. For Country Connectors and Country Roads, the draft guide correctly states that one of the default bikeway types is the shoulder bikeway (if you're specifying defaults at all). But some members of the public have asked that these roads only have sidepath as a default.	Figure 8-18: change to "Standard shared lane markings" The CSDG follows the Bicycle Master Plan guidance. Sidepaths are the default pedestrian facility on Country Connectors and County Roads.
236	Jack Cochrane, Montgomery Bicycle Advocates	138		Bikeways	Ramp crossings (p. 138). The text says grade-separated crossings should "be a minimum of 12 feet wide (2-foot-wide buffer, 8-foot-wide sidepath, 2-foot-wide buffer) between walls and railings where the connecting bikeway is a sidepath". Is there always a railing? Suffice it to say that providing just a two foot buffer between a sidepath and the curb is not appropriate unless there's a railing. Bicyclists could easily fall into the roadway.	Grade-separated crossings should always have a barrier, otherwise pedestrians and bicyclists could fall.

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Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
237	Jack Cochrane, Montgomery Bicycle Advocates	107		Bikeways	Median width (p. 107) – Text states "the minimum median width is 6 feet for all street types" in bold. But there are places where the median must be reduced to just a narrow strip in order to fit a bikeway in. This should be addressed in the bike section.	We do not see this as an issue as the table also indicates that medians are not required (just recommended or optional) on most street types. So where there is insufficient width to accommodate a bikeway and a median, priority should go to the bikeway.
238	Jack Cochrane, Montgomery Bicycle Advocates	192-193		Bikeways	Sharrows (pp. 192-193) – It's unclear if these terms all refer to the same thing: "shared lane marking" (in the figure caption and text), "priority shared lane marking" (in the heading and text), and "standard shared lane marking" (in the text). Yet nowhere is the word "sharrow" used, which is the common name. Also, the minimum distance from the curb to the sharrow in case of parking isn't given, despite the note saying sharrows may be used to keep cyclists out of the door zone. This distance in case of parking should be at least 13', never 11'.	The three terms are intended to be different. A shared lane is when a bicyclist rides in traffic. A shared lane marking is a sharrow. A priority shared lane marking is a sharrow with a green backing. A few changes are needed: Figure 8-18: change to "Standard shared lane markings" Page 193: in the last paragraph, "priority" should be added before "shared lane markings" in each instance.
239	Project Team	139		Bikeways	Last Paragraph of Bike Crossings at Freeway Ramps -- the link for "Montgomery County's Bicycle Facility Design Toolkit (Appendix B)" does not work.	Change link to: https://montgomeryplanning.org/wp-content/uploads/2018/05/Appendix-B-PB-Final-5.3.18.pdf
250	Project Team	55-57		Table	p55 gives a 0-7 ft frontage zone for Country Connectors p57 gives N/A as a priority for frontage zones on Country Connectors One of these needs to change: either zero the frontage zone, or assign it a Low priority.	On p55 - make the Frontage Zone for Country Connector 0 ft
251	Project Team	54-55		Table	Some page references on p54/55 do not appear to be correct, such as Default Bikeways ref p195 should instead ref either p176 or p201.	We will make these edits.
252	Project Team			Bikeways	Should Bikeways (Ch8) be moved up, such as between Ch5 and Ch6?	We will move Bikeways from Chapter 8 to between Chapter 5 (Street Zone) and Chapter 6 (Intersections). We will also consider including some references to this Chapter alongside narrative in Chapter 4 (Active Zone).
253	Project Team			Table	Could we work Open Section Roadways info (p84) into the Street Buffers info on p55?	We will make these edits.
286	MDOT SHA - OHD-ICD	187	8.2	Bikeways	It is recommended to have the MdMUTCD referenced instead of the Federal MUTCD.	We will make this edit.
287	MDOT SHA - OOTS	190	8.2	Bikeways	It is recommended to add a figure for buffered bike lanes and counterflow bike lanes, as they will most likely be used more frequently than advisory bike lanes.	We agree and will consider adding these graphics into future versions.
288	MDOT SHA - OOTS	191	8.2	Bikeways	t doesn't mention anything about marking or signing "Bikeable Shoulders." Are they typically marked or signed in Montgomery County or is the space just provided?	Bikeable shoulders require a minimum width. They could potentially be marked & signed, though they aren't typically.

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Comment #	Who made the comment?	Page Number	Section	Subject Area	Comment	Draft Response
289	MDOT SHA - OOTS	194	8.2	Bikeways	In the second sentence, it should state "...on shared roadways..."	We will make this edit.
303	MDOT SHA - OHD-ICD	194	8.2	Bikeways	Shared Roads in Rural Conditions – - Vehicles operating at higher speeds may not be wary of oncoming cyclists, especially around curves and hills where sight distance is limited. - Recommend alerting vehicles to the presence of cyclists through pavement markings (or other features), depending on the number existing or predicted cyclists in an area.	We will make edits per this input.
304	MDOT SHA - OHD-ICD	199	8.3	Bikeways	Figure 8-24. Image of a Bicycle Ramp - Image shows a marked bicycle lane along an asphalt road transition to a concrete sidewalk ramp that ties into a wide sidewalk, which allows the cyclist to seamlessly go from riding within the marked bike lane to riding along the sidewalk. - The design could lead those with a visual impairment directly into the road. Has this design been vetted by the visually impaired? - Recommend receiving confirmation that visually impaired individuals would be aware and have the experience on how to navigate an area such as this.	While the text says a detectable warning surface should be provided, the image doesn't show this. Staff will either replace the image with a more appropriate photo or remove the photo.
305	Project Team	55	3.2	Table	Amend the last sentence of the Dedicated Transitway note to read: "Dimensions may vary at stations, intersections, and along horizontal curves."	We will make this edit.
306	Project Team	55	3.2	Table	Frontage Zone for the Neighborhood types and Country Road are all 0' But the Frontage Zone for Major Highway is N/A. Should these all just be 0' ? Or all be N/A?	Will change Major Highway Frontage Zone to 0 ft.
311	Project Team	82	4.7	Transit	Need to review the Figure 4-19. I'm not sure the lateral distances (5' behind the shelter; 8' between building & street light) reflect our concept of Ped Clear Zones & Street Buffers.	We will make these edits.
313	Project Team	184	8.2	Bikeways	Figure 8-7 and Figure 8-8 should be labeled as permanent and interim bikeways, per the Bicycle Master Plan.	We will make these edits.
314	Project Team	183	8.2	Bikeways	Add text that describes "interim" and "permanent" bikeways.	We will make these edits.
315	Project Team			Bikeways	Use "Contraflow (Counterflow)" when referring to these types of bike facilities. Not "Counterflow (Contraflow)"	We will make these edits.

Attachment B

Comments from MDOT SHA

Montgomery County Complete Street Design Guidelines
April 2020 Public Hearing draft
MDOT SHA Review

September 1, 2020

General Comments

- Please note that safety for all users is MDOT's top priority. As part of ensuring safety for all users, MDOT SHA is implementing its new "Context Driven – Access and Mobility for All Users" guide that focuses MDOT SHA on creating a safe, accessible, and balanced multimodal transportation system. A core tenet reestablished in this guide is the need to appropriately balance accessibility and mobility. In this guide, MDOT SHA established six context zones, ranging from urban core to rural, to ensure this balance is set to meet the specific needs of Maryland's varied communities. In each zone, MDOT SHA will pursue zone-appropriate improvements that reinforce or newly implement the appropriate balance between accessibility and mobility. One of the approaches MDOT SHA now is taking is reducing roadway speed in Maryland's most urban areas, an approach that has been shown to reduce the likelihood and severity of pedestrian crashes. When applied appropriately, reducing speed limits not only improves safety for all users but also smooths traffic flow.
- The CSDG generally aligns with the Context Driven guidelines and SHA's approach to balance access and mobility. MDOT SHA's Context Zone topographies and the CSDG's street type designations appear in concert.
- The CSDG traffic engineering discussion generally aligns with SHA's Pedestrian Safety Treatments Best Practices Guidelines.
- The CSDG specifies when implementation would occur: when designing new or reconstruction projects; during capital improvement projects; or during resurfacing work. (Internal note: There may be an opportunity for the Context Guide to adopt a similar position which could potentially better manage external expectations.)
- Comments were submitted recently by the Pedestrian Bicycle Traffic Safety Advisory Committee (PBTSAC) and the County Council PTA Safe Routes to School Committee. Both recommended more discussion regarding the following: school zone consideration (a "school road" street type designation was recommended); commercial vehicle curb side management and goods movement; and the future role of Connected and Autonomous Vehicle (CAV) technology.
- From an editorial point, the subject guide is well-drafted, although it reads at points like a compilation of existing guide documents and term definitions. There could be an opportunity to condense.
- The CSDG was easy to read, with only a few clarifications asked when needed. Additionally, the introduction and charts at the beginning of each chapter gave a clear summary of what the chapter intended to explain.

- MDOT SHA Office of Highway Development defers to the District Office and the Office of Traffic and Safety for all comments relating to roadway features, speed, crossings, and intersections.

District 3 Traffic

- The CSDG offers flexibility with the use of specific treatments and primarily avoids "shall" statements. For example, on page 59 Figure 3-4, speed humps and raised crosswalks are at most recommended and primarily designated as optional.
- Page 123- It should be noted that SHA typically considers a SU-40 or 50 as the standard design vehicle. The County considers a SU-30.
- Page 129- MDOT SHA's Context Driven Toolkit considers Centerline Hardening as an Innovative Treatment. The application is currently being evaluated by the Office of Traffic and Safety.
- Page 140- Continental crosswalks are identified as the prime crosswalk treatment at intersections and uncontrolled crossings in Montgomery County which is consistent with Context Driven Guideline's use of "shall" in Zones A through C.
- Page 149- it should be pointed out that the document highlights the use of forecasted non-motorized travel to justify signal warrants.
- For the signal phasing for pedestrian discussion, is the County's policy to include the yellow and red clearance interval with the pedestrian walk time under further consideration

Office of Traffic and Safety

- Page 10 – Last paragraph, the MDOT SHA should be spelled out to include Department of Transportation.
- Pages 59 and 131- Under the Intersections section, it may be recommended to change pedestrian lighting to "Pedestrian/Highway Lighting", or change the requirements to optional on some of the higher speed roadways if it stays Pedestrian Lighting. Not all intersections will/should have pedestrian scale lighting.
- Page 64- The pedestrian clear zone provides minimums and defaults for Country Connectors and Country Roads, making it seem like sidewalks, shared use paths, etc. are required. This does not seem feasible for these types of roadways. Perhaps, there could be a notation stating, "if facilities are provided."
- Page 68- It states that bike racks should be placed a minimum of 14 feet from a hydrant; however, on page 70 it states that bikeshare stations should be placed a minimum of 5 feet from hydrants. Why such a difference for similar items?
- Page 97- Should MVA be spelled out to MDOT MVA?
- Pages 131 and 59- Protected intersections, bike boxes, two-stage queue boxes may not be feasible/appropriate on all country connectors, country roads, and major highways

based on mobility/accessibility needs, fiscal restraints, maintenance, etc., especially on state-owned and maintained roadways. It states that these design features are required, but it is recommended to perhaps put recommended instead of required for various street types.

- Page 137- It should be noted that Bike Boxes have interim approval from FHWA. Also the link to the appropriate FHWA IA should be included for bike boxes and two-stage turn queue boxes, similar to how its linked for bicycle signal faces.
- Does Montgomery County use (or will they ever use) red-colored pavement for transit lanes? If there is a possibility, it may be worth mentioning on page 141 with a link to the IA (https://mutcd.fhwa.dot.gov/resources/interim_approval/ia22/ia22.pdf).
- Page 147- doesn't include RRFB as an option - is it included in the Pedestrian Hybrid Beacon category or not included at all?
- Page 150- Last sentence should read "conform" instead of "confirm."
- Page 151- Mentions that MDOT has been granted approval for use of RRFB's in all municipalities within the State; however, this just means that MDOT SHA reviews, approves, and tracks the locations within the State on behalf of FHWA. This is true for all IA's by FHWA; therefore, similar comments should be made for all IA treatments and approval from MDOT SHA should always be requested per section 1A.10 of the MdMUTCD.
- Page 153- It is recommended to have the MdMUTCD referenced instead of the Federal MUTCD.
- Page 187- It is recommended to have the MdMUTCD referenced instead of the Federal MUTCD.
- Page 190- It is recommended to add a figure for buffered bike lanes and counterflow bike lanes, as they will most likely be used more frequently than advisory bike lanes.
- Page 191- It doesn't mention anything about marking or signing "Bikeable Shoulders." Are they typically marked or signed in Montgomery County or is the space just provided?
- Page 194- In the second sentence, it should state "...on shared roadways..."
- Page 209- It is not recommended to have Curb Extensions/Bulb Outs and Neckdowns/Chokers on Major Highways. Perhaps this could be changed to Not Permitted.
- Page 221- Under the Proposed section, it should state "Signal timing allows continued..." instead of continues.
- Page 230- Should it state MDOT SHA and MDOT MTA?
- Page 235- Should it state MDOT SHA?
- Page 236 - In the first paragraph under Construction and Maintenance, it should reference Bicyclists needing temporary traffic control direction as well.

Office of Highway Development - Innovative Contracting Division (ICD)

This review lists Montgomery County's text, followed by ICD's comments.

- *Page 55 of 248 (Figure 3-2. Street Design Parameters Summary), Maintenance Buffer – "Structures not part of the roadway design shall not occur in the public ROW. If there is a structure abutting the property line, a maintenance buffer is required even if this table shows a dimension of 0'. Consult MCDOT."*
    i. Please provide more information about the maintenance buffer in the CSDG.
    ii. Consider adding information about the maintenance buffer related to its purpose, typical features within, and examples of how it is used.

- *Page 59 of 248 (Figure 3-4. Street Design Features), Street Zone – Accessible Parking*
    i. Facilities available to the general public require accessible parking.
    ii. Recommend changing 'Accessible Parking' to 'Required' in all street type categories.
- *Page 63 of 248, "See County Code 5.2.3.A21"*
    i. The County code seems to reference Animal Control.
    ii. Recommend verifying this code and other code referenced throughout the document.
- *Page 65 of 248 (Figure 4-3. Design Elements in the Sidewalk Zone), Sidewalk Zone – Pedestrian/Bicycle Wayfinding*
    i. Please provide more information about wayfinding in the CSDG.
    ii. Recommend providing a definition and examples to ensure readers understand the purpose, intent, and limitations of wayfinding.
- *Page 81 of 248, "Signs indicating the transit stop should be installed 2 feet behind the curb."*
    i. Consider adding "…behind the curb, but not interfere with the Pedestrian Clear Zone."

- *Page 85 of 248, "At the driveway ramp, the sidewalk should narrow to 3 feet wide."*
    i. Pedestrian paths can reduce to 3 feet wide for a maximum of 200 feet.
    ii. Recommend adjusting wording to say, "At the driveway ramp, the sidewalk can narrow to 3 feet wide."

- *Page 129 of 248 (Figure 6-15. Design Guidance for Intersections by Street Type)*

a. *Intersections – Pedestrian Recall on Signals*
    i. Missing an "X" under "Industrial Street"

- *Page 140 of 248 (Figure 6-24. Bus Bulb Design), Figure shows 6-foot curb bump-out with sidewalk leading up to the clear area for the bus drop-off and pick-up.*

i. The figure shows features that do not align with the rest of the CSDG. For example, the figure shows 4-foot minimum sidewalk width, however, the CSDG outlines the minimum width for sidewalk is 6 feet.
ii. Consider updating Figure 6-24 or creating new figure to ensure it aligns with the rest of the document.

- *Page 190 of 248, Shared Roads in Rural Conditions –*
    i. *"In general, shared lane markings are not likely to appropriate on most rural roadways due to their higher operating speeds."*
    ii. *"There are a number of signs that can be used to alert motorists of potential encounters with bicyclists and that, accordingly, motorists should be mindful and respectful of bicyclists. However, signs are not a substitute for appropriate geometric design measure to address operational issues, as the addition of these signs will not significantly improve bicycling conditions. Use of the 'SHARE THE ROAD' plaque is not recommended as it does not provide a clear message to users."*
        1. Vehicles operating at higher speeds may not be wary of oncoming cyclists, especially around curves and hills where sight distance is limited.
        2. Recommend alerting vehicles to the presence of cyclists through pavement markings (or other features), depending on the number existing or predicted cyclists in an area.

- *Page 195 of 248 (Figure 8-24. Image of a Bicycle Ramp), Image shows a marked bicycle lane along an asphalt road transition to a concrete sidewalk ramp that ties into a wide sidewalk, which allows the cyclist to seamlessly go from riding within the marked bike lane to riding along the sidewalk.*
    i. The design could lead those with a visual impairment directly into the road. Has this design been vetted by the visually impaired?
    ii. Recommend receiving confirmation that visually impaired individuals would be aware and have the experience on how to navigate an area such as this.