MCPB
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Bicycle Master Plan Framework Report Worksession #1

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DESCRIPTION

On July 28, 2016, the Planning Board reviewed the Bicycle Master Plan Framework Report and received testimony from the public. This staff report summarizes public comment and staff responses in a matrix in Attachment A.

Planning Board Commissioners are asked to bring their copy of the Framework Report, which was included in the July 28, 2016 packets.

DISCUSSION

Staff has identified three major issues brought up by the public to be resolved during this work session.

Issue 1: The Report Marginalizes "Moderate-Stress" Bicycling

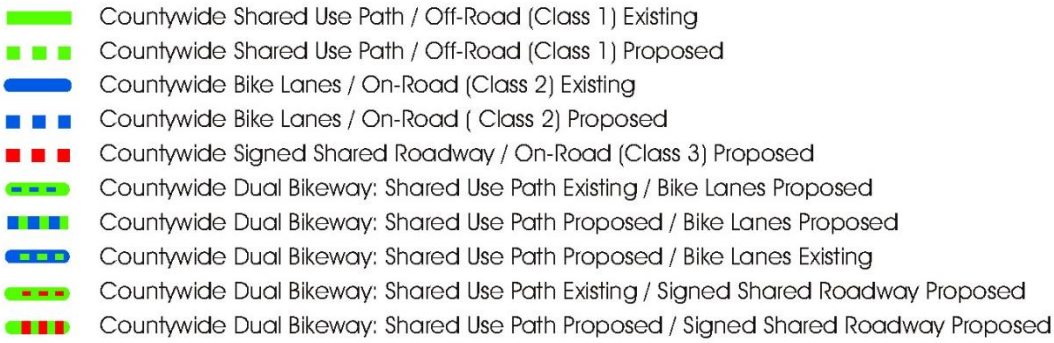
Jack Cochrane of MoBike expressed concern that the Bicycle Master Plan Framework Report marginalizes "moderate-stress" bicyclists by focusing metrics solely on achieving a low-stress bicycling network and asks that the plan include a metric for "moderate-stress" bicycling.

Response: Staff believes the Bicycle Master Plan should focus on achieving a low-stress bicycling network. While many (if not most) existing cyclists tolerate higher levels of traffic stress, that is largely because Montgomery County has built a higher stress bicycling network. The intent of this plan is to attract the 50 percent of the adult population and many children who would bicycle more if they felt comfortable doing so. Our concern with Mr. Cochrane's comment is that if the Bicycle Master Plan prioritizes all user groups, we will end up prioritizing no one. A high-quality, well-designed, fully connected low-stress bike network will serve bicyclists of all abilities and interests.

Issue 2: Concern with replacement of the Dual Bikeway Facility Type

Jack Cochrane stated that he is concerned about the recommendation to replace the dual bikeway category with two separated facilities. He states that "if the plan formally eliminates dual bikeways, the option is likely to be forgotten by planners and road designers and rarely used, even if the plan allows for a combination of two types to be used on the same road."

Response: This recommendation simply represents a change in the name of the bicycle facility type to more clearly articulate the bikeway recommendation to the public. A weakness of the 2005 Countywide Bikeways Functional Master Plan is that the legend in the bikeway map is difficult to follow:



Our approach would simplify the bikeway map legend without actually changing the bikeway recommendation by showing it as two separate lines. This is the approach taken in our most recent plans, including Montgomery Village (2016), White Oak Science Gateway (2015), Long Branch (2013), Chevy Chase Lake (2013), Glenmont (2013), and Burtonsville Crossroads (2012). An example of what the legend in the Bicycle Master Plan could look like is:

Issue 3: Focus on "Low-Stress" Bicycling Will Result in the Removal of Bike Lanes

David Rodgers and Jack Cochrane expressed concern that a focus on low-stress bicycling will result in removal of bike lanes which in their opinion provide an option for faster bicycle riding. They expressed concern that sidepaths and separated bike lanes will require bicyclists to travel at slower speeds than they could achieve in the roadway. Mr. Cochrane stated that moderate-stress bicyclists "typically benefit from having faster facilities, simpler intersections, fewer conflict points with turning cars and fewer pedestrians entering the bike space." He expressed concern that the Framework Report suggests that sidepaths are equivalent to bike lanes for moderate-stress bicyclists.

Response: Bicyclists rely on the ability to bicycle at high speed for travel efficiency. The suburban pattern of development in the County creates a greater distance between destinations and therefore bicycling is only a feasible option for many bicyclists who travel longer distances when they can travel at

a higher speed. (Note: a typical bicyclist travels at a speed of 8 to 12 mph while faster bicyclists typically travel at a speed of 15 to 20 mph – both are below the posted speed limit of most roads in the County).

We believe there is a misunderstanding of the Framework Plan, which intends to preserve the ability of bicyclists to travel at a high speed where appropriate. The intent of sidepath recommendations in the Framework Report is to improve the safety of bicycling by recommending improved design quality of sidepaths where pedestrian volumes are low and to provide a network of separated bike lanes where shared use with pedestrians would be unsafe. However, there is a legacy of poor design of sidepaths throughout the United States, which warrants concern. Historically, sidepaths were built to substandard designs that resulted in surface cracking and bumps. They were built to substandard widths with poor sight distance, no or limited separation from traffic, obstructions within the path or a meandering path to avoid obstructions, and/or a lack of consideration of conflicts with turning vehicles. The intent of the Framework Report is to create a standard for sidepath and separated bike lane design that elevates the design to be **equivalent** to the design of a street with high quality construction, appropriate widths, straight designs, elimination of vertical hazards, etc. This recommendation will take time to implement, so the focus will be on "High Priority Bikeways" that connect the County's major activity centers (p. 59).

While we do recommend phasing from conventional bike lanes to separated bikeways (sidepaths and separated bike lanes) over time, this is only appropriate to do once separated bikeways are designed to the equivalence of a street.

Bill Schultheiss of Toole Design Group will walk the Planning Board through a review of sidepath and separated bike lane designs in the Netherlands, which enable bicyclists to travel safely while minimizing delay on a network that reduces conflicts with motor vehicles.

ATTACHMENTS

Attachment A – Matrix of Responses to Public Testimony

ATTACHMENT A: Bicycle Master Plan Framework Report
Responses to Comments from Public Testimony

#	Commenter	Location	Comment	Response
1	David Rodgers	Page 13 – 14	Goal 1 is stated differently on page 13, using "trips" and on page 14 using "rates". Trips is the better choice in my view.	We believe "rates" better reflect the change that the bike plan envisions. We will update page 13.
2	David Rodgers	Pages 15 – 26	The objectives under goal 1 include commuting "to work" and biking to school. But other forms of bike trips are quite valuable and should be considered. Some examples include: a) biking for errands and shopping b) biking to parks, libraries, theaters, and other entertainment options c) biking to a restaurant d) biking for recreation Therefore, the overall goal to increase bike trips should include these important bike trips. Without measuring those bike trips, it will be difficult to assess bike lane use, trail use, and whether bikers are getting the services they need. Suggest some added objectives to measure trips that fall into these categories and develop data collection to measure and monitor these trips. This is noted on page 29 and would be very important for the entire plan to be properly implemented and assessed. Furthermore, it would be helpful to understand what proportion of the various types of trips (commuting, school, errands,	While we agree that a more comprehensive analysis of Goal 1 would include the types of bike trips that are suggested, we are purposefully limiting the number of objectives, new data collection, and complexity of the analysis. We believe that the process will become unwieldy if we take on too much analysis in this first monitoring report. However, page 29 includes a list of "aspirational objectives" that should be considered once we prove that the initial set of objectives can be adequately analyzed.

#	Commenter	Location	Comment	Response
			recreation, etc….) match with the target category of "interested but concerned". For example, many people with a 15+ mile commute will not be able to use their bike even if interested. But many people may be able to get their bike out for a 2-3 mile errand or pharmacy run, etc. This emphasis on non-commuting trips matches well with the provisions in Goal 2 to provide bicycle parking at "…..commercial areas and public facilities, including schools, libraries, recreation centers and parks."	
3	David Rodgers	Page 18 – 20	Goal 2 starts out with an admirable intention for a highly connected, convenient and low-stress bicycling network, and then measuring what percentage of dwelling units are "…connected…through a low-stress bicycle network…." a) Please note that an overall-county percentage may be insufficient to show progress and coverage of a connected network. For example, with objective 2.3, a school system with lots of dwelling units nearby and a well-connected system may obscure poorly-connected system in other school districts with a lower number of units. Some objective and metric for geographic distribution of the well-connected system may also be needed.	a) We agree and for that reason provided both a summary monitoring report (pages 60-61) and a detailed monitoring report (appendix). b) For schools double counting is avoided because for the most part each dwelling unit is assigned to a specific school. For rail lines and public facility avoids we avoid double counting by assigned each dwelling unit assigned to the nearest station or public facility. The analysis of individual stations and public facilities allows overlapping.

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			This might be as simple as a color coded map showing the distribution of the network to complement the percentage metric. Another example for objective 2.4 would be if 100% of north country libraries were connected but 0% of south country libraries were connected. The overall country percentage would look good, but the community would not be well served by such a distribution. b) For objectives 2.2, 2.3, and 2.4, please explain how the objective will address double-counting, when, for example, a dwelling unit is located within 2 miles of more than one metro station or public facility. Clearly it is advantageous if a single dwelling unit can have connected access to more than one metro station, but that may skew the percentages and mask areas for more progress is needed.	
4	David Rodgers	Page 21	The targets for objective 2.5 should be 100% in a short amount of time. The framework should also discuss has authority, responsibility and funding for such bike stations. Clarify should be provided on the capacity of bike racks at a bike station. Are these paid for by Montgomery County or WMATA? It will not be helpful for Montgomery County to endorse this objective if it has no ability to deliver on results.	We will consider this for inclusion in the draft Bicycle Master Plan. WMATA and local jurisdictions have implemented bike stations, so funding, operations, etc can vary.

ATTACHMENT A: Bicycle Master Plan Framework Report
Responses to Comments from Public Testimony

#	Commenter	Location	Comment	Response
5	David Rodgers	Page 21	Objective 2.6 is stated in a confusing way. What does the term "1 short-term bicycle parking space for each 20 students" mean in this context? Perhaps the "space" could be defined as number of racks, or capacity of bikes. On page 57, long-term parking is mentioned for public facilities, including schools, libraries, recreation centers and parks. Therefore, short-term parking space at schools is alone an inadequate objective and metric. The goal should be to have adequate parking so that as many kids as possible can safely park and lock their bikes. Short-term doesn't mean much—the parking space should be available 24/7 so that kids can park and lock their bike throughout the school day, through afternoon activities, for evening activities, and on weekends. Also, the objective includes the word "space"; the metric does not; and the data is about number of "bike racks." Much more clarity is needed to understand how many racks are needed at each school, and which schools will need more racks, and whether the racks will be located in a safe well-lighted place.	We believe that "bicycle parking space" is understood to mean the number of bikes that can will be secured to a bike rack. We will remove the words "short term" from Objective 2.1 in page 21 and 61. The word "space" was inadvertently left out of Objective 2.1 on page 61 and will be changed to: "Percentage of Montgomery County public schools with a least 1 short-term bicycle parking <u>space</u> for each 20 students of planned capacity.)
6	David Rodgers	Page 22	6) Objective 2.7 is unclear and leaves out the words "bicycle parking." It seems unambitious, to say the least. If the goal is to have bicycle parking meet code requirements, then the target should be	On page 22 we will add the words "bicycle parking" to the objective. We will also put the date in the objective.

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			100%. This framework should strive to have commercial partners and landlords go beyond code and pursue bike friendly practices to help encourage bike trips. This could include adding more parking than required by code, but also could include adding bike service equipment; water fountains; sinks; restrooms, etc. Also, the target date should be in the objective, not the metric. Further, there seems to be a disconnect from the "well-connected system." Wouldn't it be wiser to emphasize parking at commercial properties that are "connected" rather than just everywhere?	Reaching a target of 100% bicycle parking for existing developments will be very challenging as at some locations there is insufficient right-of-way to install bicycle parking at this time. We will consider policies and programs for incorporating bike service equipment and requiring more bike parking at existing commercial areas.
7	David Rodgers	Page 22	7) Objective 2.8 needs more clarity. Perhaps "space" could be defined as number of racks, or capacity of bikes, as in objective 2.6.	We believe that "bicycle parking space" is understood to mean the number of bikes that can will be secured to a bike rack.
8	David Rodgers	Page 23	8) Objective 2.9 is expressed differently than 2.6 and 2.8, simply referring to "bike racks". Again, like "space" bike racks is imprecise. It would be helpful to clarify bike rack capacity and have the capacity in the objective or metric.	Objective 2.9 is expressed differently because the visitation data needed to determine how many bicycle parking spaces is needed is not readily available.
9	David Rodgers	Page 25	Goal 3 begins to address the challenges of appropriate country wide distribution of support for bicycling. Some greater precision in the objective statements is needed. For example, 3.1 uses a very imprecise term "in areas where the median	We have revised Objective 3.1 to: "The percentage of potential bicycle trips that can be made on a low-stress bicycling network in Census tracts where the median income is below 60% of the County average median income will be the same as or greater than the County overall."

#	Commenter	Location	Comment	Response
			income is below ## percent." The way that areas is defined could impact the metric.	
10	David Rodgers	Page 25	Objective 3.2 needs some additional thinking. First, what is the assumed relationship between bus-stop locations, low-income, and bikes? An explanation is needed as to why bus-stops are a good metric. Also, is it the intention of the planners to have bicycle racks for locking of bikes at Metrobus and RideOn bus stops? Or is it the intention that bike riders will use the on-bus bike racks and take their bikes with them on the bus? If 15 people show up with bikes at the bus stop, this will not be functional, even if the "percentage of dwelling units within 0.5 miles of the nearest ……" is the same as in other areas of the country.	We agree this metric needs work and may be revising the metric as part of the draft of the plan. We were specifically asked by CASA de Maryland to include bicycle access to bus stops, as many lower income residents rely on the RideOn and WMATA bus network. All RideOn and WMATA buses operating in Montgomery County have the ability to accommodate two bikes at the front of the vehicle. While it is certainly possible that on occasion both spaces will be taken, this problem will remain uncommon for the foreseeable future. We are not in a position at this time to evaluate what people do with their bicycles when they get to a bus stop.
11	David Rodgers		A broader issues relates to the role of capital bike-share program. Appropriate metrics need to be proposed to measure these trips, as users of shared bikes may not need parking spaces, for example, or stations at the metro.	Metrics for Capital Bikeshare are needed but that is better handled by the Montgomery County Department of Transportation, which manages Capital Bikeshare in Montgomery County. However, the broader point that we do not need bicycle parking spaces for bikeshare users is valid and this data is available.
12	David Rodgers	Page 27	Objective 4.1 needs to be very precise about which bicycle trips are measured compared to the crashes. Will recreational crashes be counted, but recreational trips	We purposefully don't differentiate between transportation or recreation trips by bicycle – they are all bicycle travel and need to be made safe.

#	Commenter	Location	Comment	Response
			not counted? These will be important to ensuring data quality.	
13	David Rodgers	Page 27	Definition of crash is also needed. Is a crash one between a bike and a car? What about a bicycle accident/crash due to a pot-hole or other physical feature not involving a car? These types of bicycle accidents/crashes can be just as intimidating to potential riders who worry about falls, broken bones, scrapes, etc. Kids are very likely to have these types of accidents. The metrics for safety should address this, because it is directly linked to the quality of the bike lanes, paths, trails, etc.	We will include this definition of bicycle crash: "When a bicycle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree or utility pole."
14	David Rodgers	Page 28	The rationale on addressing only 3 of the 8 categories of goals is somewhat weak. Evidence on enhanced environmental quality from bike trips can be developed directly from the data proposed to be collected already for the proposed 4 goals. Inferences about improvements to citizen health can be developed from the same data sets. Even if these two categories, environmental quality and health are not specified as "goals" of the plan, they should be covered in the results and reports on plan effectiveness.	The relationship between increased bicycling and environment quality and health is not fully understood. We would expect environmental quality and health to improve if bicycling increases, but it's unclear by home much, and therefore not very useful as a goal.
15	David Rodgers	Page 29	Page 29 has an interesting list of potential additional objectives. As mentioned above in point 2), the importance of non-work and non-school trips is high. This objective should be included. Furthermore, the	We would like to include more non-work / non-school metrics, but believe that it is appropriate to explore these objectives once we prove we can adequately measure and monitor the recommended objectives. They will require a

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			number of youth in bike safety classes should be a planned implementation activity, measured and monitored, since the plan has an objective to increase school-trips.	substantial investment to conduct new surveys to capture this data.
16	David Rodgers	Page 39 and 41	Page 38 is separated bike-ways. Page 41 is also separated bike-ways, both using a photo of Woodglen Drive. The text are different, so perhaps these can be combined.	Sidepaths and Separated Bike Lanes are subsets of Separated Bikeways. We are aware that the formatting does not help the user make this distinction and will work to improve it. Also, we will provide a different image on page 39.
17	David Rodgers	Page 43	On page 43 a photo of a buffered bike-lane from Chicago is shown. There are several in DC that could be used.	We will work on getting a buffered bike lane photo from DC.
18	David Rodgers	Page 42	Page 42 “striped bikeways” and page 44 conventional bikeways are very close to the same. Hard to tell what distinction the plan is trying to communicate.	Striped Bikeways is the bikeway type, with conventional bike lanes, buffered bike lanes, and advisory bike lanes as subsets. We will improve the format to make this distinction clearer.
19	David Rodgers	Page 48	After page 48, please include a description of “shared street” which will be where the bulk of Montgomery Country bike trips are taken for many years, especially since you have identified 70% of the streets as low-stress.	The top of page 49 labeled “non-master planned roads” is intended to address shared streets that are low stress.
20	David Rodgers	Page 53	The recommendations on page 53 to discontinue the use of “dual” bikeways is a complicated issue made to sound simple. It appears the change in classification would allow Montgomery country to reduce bike lanes in hope that sidepaths could be improved. The argument is not convincing.	The intention of the Framework Plan is to preserve the ability of bicyclists to travel at a high speed (where appropriate) and to improve the safety of bicycling by improving the design quality of sidepaths where pedestrian volumes are low and to provide a network of separated bike lanes where shared use with pedestrians

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			Most regular bike commuters like to ride between 12-15 mph, which cannot be accommodated by most sidepaths. This change requires more study and should only be implemented after suitable side-path improvements are completed, or suitable buffered and separated bikeways can be completed.	would be unsafe. However, there is a legacy of poor design of sidepaths through the United States, which warrants concern. Historically, sidepaths were built to substandard designs that resulted in surface cracking and bumps, a substandard width, obstructions such as utility poles within the path, poor sight distance, no or limited separation from traffic, a meandering path to avoid obstructions, and a lack of consideration of conflicts with turning vehicles. The intent of the Framework Report is to create a standard for sidepath and separated bike lane design that elevates the design to be equivalent to the design of a street with high quality construction, wider paths, straight designs, elimination of vertical hazards, etc. Of course this will take time to implement, and so the focus would be on what the report on page 59 calls "High Priority Bikeways" that will connect the County's major activity centers. While we do recommend from conventional bike lanes to separated bikeways (sidepaths and separated bike lanes) over time, this is only appropriate to do once separated bikeways are designed to the equivalence of a street.
21	David Rodgers	Page 55	The bike station recommendation is a very good one. But the plan is silent on who will pay for these stations, own, and operate them.	This comment will be considered for the draft plan.
22	David Rodgers	Page 58	Page 58 includes several important action items for programs and policies. It is curious why there are no goals, objectives	The programs and policies are an important component of achieving the goals of the plan – increasing bicycling rates, improving low-stress

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			and metrics proposed for the programs and policies. The objectives and metrics are very outcome oriented, which is normally a good thing. But the plan would be improved with objectives and metrics for the process oriented parts of the plan that will be critical to overall success. For example, what is the objective, with a target year, and a metric for measuring "making separated bike lanes the default form of bike lane in urban areas (MCDOT)." Is that a policy directive that can be developed by MCDOT administration, or is action by the executive and/or council needed. The plan needs targets for those things too.	connectivity, implementing the plan equitably, and creating a safe bicycling environment. The will be included in the prioritization section of the plan. We will consider whether specific target dates for the programs and policies are needed.
23	David Rodgers	Page 59	Page 59 is pretty short. For such a comprehensive plan, prioritization needs to cover many more action steps and activities to achieve the objectives than simply to revise the bikeway prioritization system. For example, where does achieving the objectives for parking fit in the priority setting?	Agree – this section will need to be expanded in the draft plan. While we have developed our approach to prioritizing bikeways, we have not yet done so for bike parking, programs and policies.
24	David Rodgers	Page 60 – 61 and Appendix.	Section 4 on monitoring needs to be re-examined in light of the comments on the objectives and metrics made earlier.	Agree – this is a work in progress.
25	David Rodgers	Page 63	Page 63 is rather brief. The use of flexible delineator posts can be a quick and effective way to achieve separated bike lanes. This can be advantageous to helping accelerate accomplishment of the plan's	Agree – our consultants have prepared issue papers on this topic. They were not completed in time for inclusion in this document but will be included in the draft plan.

#	Commenter	Location	Comment	Response
			objectives. Achieve more bike trips more quickly helps create momentum and enthusiasm, which can provide support for future enhancements. So please give full credit of the pros of flexible posts even as the cons are also considered.	
26	David Rodgers	Page 63	Page 63 also covers development review, but very briefly. It is hard to tell how important bike planning will be in the development review process. The plan would be stronger if a strong policy statement for development review and approval made clear that development applications with strong on-road facilities, such as separated bike lanes, would be given priority for approval.	Agree – our consultants have prepared issue papers on this topic. They were not completed in time for inclusion in this document but will be included in the draft plan.
27	Paul Daisey	Page 5	**Vision Statement, Goals, Objectives, Metrics and Data Requirements** Footnote 1 on page 13 ends with "Issue 13 is best addressed by the Montgomery County Department of Transportation". Issue 13 from the Scope of Work is "Are there any hard surface park trails that should be designated as bikeways and, if so, what does that designation mean for the design, operation and maintenance of the trails?" I agree that the operation and maintenance of bikeway trails is best addressed by MC DOT, but assert that both the selection and design of hard surface park trails designated as bikeways should be addressed by the Bicycle Master Plan (and Framework). I think that the same	Agree. The footnote on page 5 is incorrect and will be removed.

#	Commenter	Location	Comment	Response
			connectivity and safety criteria discussed below under Bikeway Prioritization for selecting and prioritizing investment in non-parks bicycle infrastructure should also be applied to selecting hard surface park trails for designation as bikeways, within the "Bikeways" prioritization classification.	
28	Paul Daisey	Page 26	**Goal 4: Improve the Safety of Bicycling** The first sentence of this goal is "The intent of this goal is to make bicycling safe by reducing the rate of crashes at dangerous intersections and eliminating fatalities." Most bicycle crashes happen at intersections, but the plan should not ignore crashes that occur elsewhere. Reducing injuries as well as eliminating fatalities should also be part of this goal. Recommended first sentence: "The intent of this goal is to make bicycling safe by reducing the rate of crashes at dangerous locations, thereby reducing injuries and eliminating fatalities." I think Objective 4.1 and its metric adequately address reducing injuries, and that a separate additional objective is not needed.	Agree.
29	Paul Daisey	Page 29	**Aspirational Objectives** "# percent of jobs located within 1.0 miles of each rail station will be able to access	Agree. We are hoping to include this as a recommended objective but are still working to

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			the rail station on a low-stress bicycling network by 20##." Objectives 2.2 and 2.4 use a 2.0 mile criterion. I this this aspirational objective should as well. Recommend: "# percent of jobs located within 2.0 miles of each rail station will be able to access the rail station on a low-stress bicycling network by 20##."	determine whether the jobs data is adequate and how to conduct the analysis.
30	Paul Daisey	Page 46	**Bikeable Shoulders** Examples in Montgomery County: Please add the following: • New Hampshire Ave from MD 198 to MD 108 • Norwood Rd from MD 182 to MD 650	Agree.
31	Paul Daisey	Page 58	**Policies** Please add the following example: • Publishing level of traffic stress map data as "open data" so that way-finding applications can use it to present bike route alternatives to cyclists.	The policies section of the Framework Report is intended to demonstrate the types of policies that will be considered, not to be a comprehensive list. We do plan to make the level of traffic stress data publicly available. We will include this as a policy if the data is not available by the time the plan is drafted.
32	Paul Daisey	Page 59	**Bikeway Prioritization Objectives and Metrics** New safety and connectivity bikeway prioritization objectives and metrics are proposed for project selection within each bikeway prioritization classification. The safety objective is to prioritize investment that reduces the risk of bicycle crashes. The	Disagree. The proposed bike hazard metric suffers from two issues: 1) there is insufficient crash history to conduct a statistically significant analysis, and 2) there is proposed constant would be subjective. We believe that crash rates are an appropriate approach to understanding safety.

#	Commenter	Location	Comment	Response
			connectivity objective is to prioritize investment that reduces the perceived risk of bicycling by connecting the maximum length of low stress bicycle networks with Level of Traffic Stress (LTS) <= 2 that are currently "islands" of connectivity separated by high-stress, high speed and high volume roads, weighted by the expected number of users. The safety objective metric "Bike Hazard" (BH) is: BH = # of non-fatal bike crashes + (100 * # of fatal bike crashes) for bike crashes along the bikeway project route in the last 10 years. The 100 constant is arbitrary and to be discussed and adjusted in the Working Draft Bicycle Master Plan.	
33	Paul Daisey	Page 59	**Bikeway Prioritization Objectives and Metrics** The connectivity objective metric "Low Stress Bicycle Miles Travelled" (LSBMT) has the following components: Arbitrary constants to be discussed and adjusted in the Working Draft Bicycle Master Plan: "Stress Priority" (SP) = 5 "Network Miles Priority (NMP) = 2 Formulas: "Project LTS Factor" (PLTSF) to reward lower LTS projects is:	Disagree. While a metric along these lines is desirable, we do not believe it is feasible at this time because the state of the practice does not predict the number of users.

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			PLTSF = (SP – bikeway project LTS) "Project Bicycle Miles Travelled" (PBMT) is: PBMT = PLTSF * bikeway project length in miles * # of expected users "Low Stress Bike Network Connected" (LSBNC) is the number of miles of low stress (LTS <=2) bikeway networks connected by the bikeway project within 2 miles of its network connections. (This can be calculated by software using Geographic Information System (GIS) network routing algorithms.) "Network Bicycle Miles Travelled" (NBMT) is: NBMT = NMP * LSBNC * # of expected users Finally, the project and connected network bicycle low stress miles travelled are added together. "Low Stress Bicycle Miles Travelled" (LSBMT) is: LSBMT = PBMT + NBMT The formula for weighting and combining the "BH" safety and "LSBMT" connectivity metric results is to be determined during development of the Working Draft Bicycle Master Plan.	
34	Jack Cochrane	Pages 18 – 20	The focus on low-stress bicycling marginalizes moderate-stress bicyclists. There is value in reducing stress even if it doesn't achieve a low stress level. Add an objective that recognizes moderate-stress	Disagree. The Planning Board could direct staff in one of at least three ways: 1) maintain focus on low-stress bicycling (staff's recommendation), 2) add a metric for moderate-stress bicycling, but that provides greater weight to low-stress bicycling, or 3) add

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			bicycling who make up much of the bicycling population today.	a metric for moderate-stress bicycling that is weighted equally with low-stress bicycling. Staff recommends focusing on achieving a low-stress bicycling network. While many (if not most) existing cyclists tolerate higher levels of traffic stress, that is largely because Montgomery County has built a higher stress bicycling network. The intent of this plan is to attract the 50 percent of the adult population and many children who would bicycle more if they felt comfortable doing so. Our concern with Mr. Cochrane's comment is that if the Bicycle Master Plan prioritizes all user groups, we will end up prioritizing no one. A high-quality, well-designed, fully connected low-stress bike network will serve bicyclists of all abilities and interests.
35	Jack Cochrane	Pages 53 – 54	If dual bikeways are eliminated and broken into two separated bikeways than its less likely both facilities will be implemented because the objectives only prioritize low-stress bicycling.	Disagree. This recommendation simply represents a change in the name of the bicycle facility type to more clearly articulate the bikeway recommendation to the public. A weakness of the 2005 Countywide Bikeways Functional Master Plan is that the legend in the bikeway map is difficult to follow. Our approach would simplify the bikeway map legend without changing the actually bikeway recommendation by showing it as two separate lines. This is the approach taken in most recent plans, including Montgomery Village (2016), White Oak Science Gateway (2015), Long Branch (2013), Chevy Chase Lake (2013),

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				Glenmont (2013), Burtonsville Crossroads (2012).
36	Jack Cochrane	Page 54 & 64	Moderate Stress bicyclists group benefits from faster travel, simpler intersections and fewer conflict points with turning vehicles, which are often provided better with conventional bike lanes than protected bikeways. Sidepaths are a safety risk for faster bicyclists at intersections. No intersection treatment is going to fix that. Sidepaths are require bicyclists to slow down due to the number of street and driveway crossings, as well as other, slower users.	Many bicyclists rely on the ability to bicycle at a higher speed for travel efficiency. The suburban pattern of development in the County creates a greater distance between destinations and therefore bicycling is only a feasible option for many bicyclists who travel longer distances when they can travel at a higher speed. (Note: a typical bicyclist travels at a speed of 8 to 12 mph while faster bicyclists typically travel at a speed of 15 to 20 mph – both are below the posted speed limit of most roads in the County). If the plan takes away the ability of cyclists to travel at faster speeds bicycling will become a less desirable option for longer distance bicyclists. We believe there is a misunderstanding between Mr. Cochrane and staff. The intention of the Framework Report is to preserve the ability of bicyclists to travel at a high speed (where appropriate) and to improve the safety of bicycling by improving the design quality of sidepaths where pedestrian volumes are low and to provide a network of separated bike lanes where shared use with pedestrians would be unsafe. However, there is a legacy of poor design of sidepaths through the United States, which warrants concern. Historically, sidepaths were built to substandard designs that resulted in surface cracking and bumps, a substandard width, obstructions such as utility poles within

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				the path, poor sight distance, no or limited separation from traffic, a meandering path to avoid obstructions, and a lack of consideration of conflicts with turning vehicles. The intent of the Framework Report is to create a standard for sidepath and separated bike lane design that elevates the design to be equivalent to the design of a street with high quality construction, wider paths, straight designs, elimination of vertical hazards, etc. Of course this will take time to implement, and so the focus would be on what the report on page 59 calls "High Priority Bikeways" that will connect the County's major activity centers. While we do recommend from conventional bike lanes to separated bikeways (sidepaths and separated bike lanes) over time, this is only appropriate to do once separated bikeways are designed to the equivalence of a street.
37	Garrett Hennigan	Page 15 – 16	Need an objective focused on non-commute / non-school trips.	As discussed above, we agree that a more comprehensive analysis of Goal 1 would include more types of bicycle trips, however, we are purposefully limiting the number of objectives, new data collection, and complexity of the analysis. We believe that the process will become unwieldy if we take on too much analysis in this first monitoring report. Page 29 includes a list of "aspirational objectives" that should be considered once we prove that the initial set of objectives can be adequately analyzed.

ATTACHMENT A: Bicycle Master Plan Framework Report
Responses to Comments from Public Testimony

#	Commenter	Location	Comment	Response
	Garrett Hennigan	Pages 17 – 20	Need an objective that measures residential proximity to low stress bicycling, such as "the percentage of County residents that can access a low-stress bicycle network." What is the geographic spread of low-stress bicycling?	Agree – the metrics in the Framework Report include this analysis.
38	Garrett Hennigan	Page 21 – 23	The bike parking requirements lack ambition. Are rates too low?	The Association of Pedestrian and Bicycle Professionals' *Bicycle Parking Guidelines 2nd Edition* is the national standard for bicycle parking rates and bike rack types. While most recreation centers and libraries meet the bicycle parking rate standard, they do not meet the bike rack type standard. We will modify this objective to: "Percentage of Montgomery County public facilities with 1 short-term bicycle parking space per 8,000 square feet of floor area (public libraries and recreation centers) that are "acceptable" bike rack styles according to standards set out in the Association of Pedestrian and Bicycle Professionals' *Bicycle Parking Guidelines 2nd Edition*."
39	Garrett Hennigan	Page 27	Objective 4.1 can give a false sense of progress since it does not take a more dispersed look at crashes. An objective is needed to quantify countywide crash rates.	While we agree with the comment, it is not feasible to create countywide bicycle crash rates at this time. We have therefore focused on developing crash rates in areas with a history of crashes.
40	Garrett Hennigan	Page 27	The plan needs to consider a preventive approach to reducing crashes.	We believe a high-quality separated bikeway network will prevent crashes.

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41	Stacy Cook		Maintain the LTS tool over time because it is needed to track progress.	Agree.
42	Stacy Cook	Pages 53 – 54	Do not remove existing bike facilities from the roadways.	See response to Comment # 20 and 36.
43	Stacy Cook	Pages 21 – 23	The bike parking objectives need to be stronger, especially for existing buildings.	While we agree that a lack of bicycle parking in existing buildings is a major impediment to bicycling in Montgomery County, it will take a considerable amount of time to identify the extent of the problem, as there are over 1,600 multifamily dwelling units and hundreds of commercial buildings. We have therefore included this metric in the "aspirational objectives" on page 29 of the Framework Report.
44	Stacy Cook	Pages 21 – 23	The plan needs policies that push for showers.	The changes to the zoning code in 2014 made showers a requirement in new commercial buildings. The programs section of the plan will include recommendations on retrofitting existing buildings to include both showers and long-term bike parking.
45	Stacy Cook		Recommend a section that communicates the benefits of bicycling to all of Montgomery County. This will help push for funding.	We will include this in the draft plan.