



Countywide Transit Corridors Functional Master Plan

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Description

Staff will provide the Board an update on our recent work on the Countywide Transit Corridors Functional Master Plan as well as an opportunity to discuss the potential designation of Bicycle-Pedestrian Priority Areas (BPPAs) in the Functional Plan. Mapping for the proposed BPPAs described below will be presented in a Powerpoint presentation at the Board's meeting.

Countywide Transit Corridors Functional Master Plan update

The Board gave us direction on what BRT network they envisioned on February 2, 2012. Since that time, we have been working on the following:

- Completing the corridor definition and station typology
- Refining roadway cross-sections to include/accommodate BRT
- Pedestrian access at station areas/station footprint refinement
- Constrained rights-of-way assessments
- Additional mapping of development areas of the county
- Research on lane-conversion assessment and refining the methodology used to determine what BRT treatment should be provided
- Review of draft and final Rapid Transit Task Force reports, as well as the report from their consultant, the Traffic Group

Modeling will incorporate three additional corridors recommended by the task force in their report that was released on May 22, 2012 and presented to the Planning Board on June 7, 2012. Additional travel

forecasting will also be done to consider the effects of lane repurposing on BRT ridership and on traffic congestion.

Schedule

Our current schedule is as follows:

- **now-early September 2012:** Additional traffic forecasting on three additional corridors and the impacts on congestion and transit ridership
- **late September-early October 2012:** Publish staff draft of recommended corridors
- **November 2012:** Advertise Public Hearing Draft
- **December 2012:** Public Hearing
- **January-February 2013:** Worksessions
- **late March-early April 2013:** Transmit Planning Board Draft to County Council

Bicycle-Pedestrian Priority Areas

Our Scope of Work includes recommending the designation of Bicycle-Pedestrian Priority Areas (BPPAs) around BRT stations. Many of the stations on the proposed BRT corridors are already existing or Master Planned transit stations or transit centers. While good bicycle and pedestrian access is needed to all BRT stations, we are not recommending that every BRT station be designated as a BPPA.

The White Flint Sector Plan area was designated by the Maryland State Highway Administration (SHA) as Maryland's first BPPA in January 2011, confirming the prior designation in the White Flint Sector Plan. It exemplifies the intent of the legislation, which was to provide the highest level of accommodation for pedestrians and bicyclists in the areas where they are most prevalent. That is certainly true of a transit-oriented development area; it would not be necessarily true of a BRT station that is located at a park-and-ride lot. We will recommend that safe access be provided to all BRT stations, but believe that the BPPA designation should be limited to those areas that are established or developing activity centers.

In addition to White Flint Sector Plan area, the recently adopted Wheaton Sector Plan designates the Sector Plan area as a BPPA. The Planning Board Draft of the Takoma-Langley Crossroads Sector Plan also designates the Sector Plan area as a BPPA.

We recommend that all current Road Code-defined Urban areas be considered for designation as BPPAs as part of this Functional Plan:

- Silver Spring CBD Sector Plan area
- Bethesda CBD Sector Plan area

- Friendship Heights Sector Plan area
- North Bethesda Urban area (White Flint (*already designated*) and Twinbrook Sector Plan areas)
- Glenmont Metro Station Policy area
- Grosvenor Metro Station Policy area
- Shady Grove Metro Station Policy area
- Olney Town Center
- Clarksburg Town Center
- Germantown Town Center
- Damascus Town Center
- Montgomery Hills
- Flower/Piney Branch
- Cloverleaf District
- LSC Central, LSC West, LSC North, and Belward Districts in the Great Seneca Science Corridor

We also recommend that other proposed BRT station areas be considered for designation as BPPAs as part of this Functional Plan. Because no defined boundaries exist for most of these areas, we propose that they include those areas around stations where there is sufficient density to generate a lot of pedestrian and bicyclist activity:

- Montgomery Mall/Rock Spring
- City of Takoma Park (portion)
- Medical Center Metro Station area, including the NIH and NNMC campuses
- Veirs Mill Road/Randolph Road
- Aspen Hill (Georgia Avenue/Connecticut Avenue)
- Piney Branch/University Boulevard Purple Line Station area
- Kensington Sector Plan area
- Colesville (Randolph/New Hampshire)
- Forest Glen Metro Station area (contiguous with Montgomery Hills)

- Silver Spring CBD West (west of 16th Street to Rosemary Hills Drive, plus Spring Center)

If the Board agrees with staff's recommended areas as noted above, we will work with the State Highway Administration on determining draft boundaries for these areas. Following the adoption of the Master Plan, SHA's concurrence is needed on the designation of the BPPAs is needed in order for the requirement of a plan of improvements to take effect per the Annotated Code of Maryland. See Attachment 1 for citations related to BPPA's. See Attachment 2 for the staff's recommendations to SHA as to what a plan of improvements for a BPPA should include.

LC/TA/MD/kr

ATTACHMENTS

1. Annotated Code of Maryland Citations Related to Bicycle-Pedestrian Priority Areas
2. Staff comments previously transmitted to SHA on the creation of a plan of improvements for a BPPA

ANNOTATED CODE OF MARYLAND CITATIONS RELATED TO BICYCLE-PEDESTRIAN PRIORITY AREAS

TITLE 2 DEPARTMENT OF TRANSPORTATION

Subtitle 6 Bicycle and Pedestrian Access

2-604 Bicycle-Pedestrian Master Plan.

(a) Requirements; goals of Plan. – The Director shall develop and coordinate policies and plans for the provision, preservation, improvement, and expansion of access to transportation facilities in the State for pedestrians and bicycle riders, including the development, before October 1, 2002, of a Statewide 20-Year Bicycle-Pedestrian Master Plan that:

- (1)(i) Identifies short-term and long-term goals that are consistent with the purpose of this subtitle; and
 - (ii) For each identified goal, includes:
- (5) After consultation with political subdivisions in the State, identifies bicycle-pedestrian priority areas to facilitate the targeting of available funds to those areas of the State most in need.

TITLE 8 HIGHWAYS

Subtitle 1 Definitions; General Provisions

8-101 Definitions

(d) Bicycle and pedestrian priority area. – “Bicycle and pedestrian priority area” means a geographical area where the enhancement of bicycle and pedestrian traffic is a priority.

8-204 General powers and duties of Administration

- (a) In general. – In addition to the specific powers granted and duties imposed by this title, the Administration has the powers and duties set forth in this section.
- (b) Rules and regulations. – The Administration may adopt rules and regulations to carry out the provisions of this title.
- (c) Establishment and maintenance of State highway system. –
- (1) The Administration shall:
 - (ii) 1. If the Administration and a local government designate an area as a bicycle and pedestrian priority area, implement a plan developed in cooperation with the local government to increase safety and access for bicycle or pedestrian traffic.
 2. If there is no State highway within the limits of the bicycle and pedestrian priority area, the plan shall be developed by the local government.
 - (2) A plan for traffic management in a bicycle and pedestrian priority area shall provide for:
 - (i) Appropriate changes to the location, construction, geometrics, design, and maintenance of the State highway system to increase safety and access for bicycle and pedestrian traffic in the bicycle and pedestrian priority area; and
 - (ii) The appropriate use of traffic control devices including pedestrian control signals, traffic signals, stop signs, and speed bumps.

Staff comments previously transmitted to SHA on the creation of a plan of improvements for a BPPA

Listed below are a number of issues that we believe should be considered in the creation of a BPPA plan for the White Flint BPPA, but should also be considered for any area where pedestrians and bicyclists comprise a significant proportion of the traveling public. These issues are structured into a baseline condition for all areas where pedestrians and bicyclists are permitted; for Business and Urban Districts as defined by the Maryland Vehicle Law; and for BPPAs.

Baseline Improvements for Bicyclists and Pedestrians

Accommodation during Construction: We believe that strict adherence to the Manual on Uniform Traffic Control Devices' recommendations in regard to minimizing inconvenience for pedestrians and bicyclists during construction should be made an explicit part of the plan. Sidewalks and bike facilities should be closed only as a last resort. Several years ago, we changed the County's Road Code to reduce the problem on County roads; inclusion of some provision toward this goal in BPPA plans would serve a similar purpose on State roads.

In addition to the normal maintenance of traffic issues, the construction sequencing of work should be addressed in the plan. For example, handicap ramp relocations should only be done when the adjacent crosswalks can be striped in the new location within the next week.

Lane Striping: Lane striping should reflect the guidance of the Maryland MUTCD rather than repeating the existing lane striping pattern. Often the normal lane striping on State highways is extended through unsignalized intersections in Montgomery County, but this practice is not in conformance with MD-MUTCD Section 3B.08:

Where highway design or reduced visibility conditions make it desirable to provide control or to guide vehicles through an intersection or interchange, such as at offset, skewed, complex, or multilegged intersections, or where multiple turn lanes are used, dotted lane markings should be used to extend longitudinal line markings through an intersection or interchange area.

Currently, the extension of normal lane striping occurs even on straight, flat roads that are not complex in any way that would warrant lane extensions per the guidance in the MD-MUTCD. In locations where extensions are needed, the different pattern presented by dotted lane markings would more clearly alert drivers to the presence of an intersection.

Using normal lane striping for this purpose obscures the presence of intersections, making drivers entering the roadway from a side street an unexpected occurrence. Pedestrians crossing from these

streets also may appear to the driver as a surprise, or even that they're not supposed to be crossing at that location even though pedestrians have the right-of-way at unsignalized intersections. Having a break in the normal striping pattern at intersections alerts drivers on the main road and improves safety. Transit patrons and other pedestrians in areas along State highways would benefit from closer adherence to MD-MUTCD guidance in this regard.

Bus stops: The majority of our transit routes are on State roads. Every project should show bus stops within the project limits in the contract documents. Safe ADA-accessible crossings of MD355 should be provided to all bus stops and wherever possible, median refuges should be provided at intersections and at mid-block bus stop locations that are to be retained.

Sidewalks: Require sidewalks to be constructed or reconstructed to standard where appropriate as part of all access permits.

Additional Improvements for Bicyclists and Pedestrians in Business and Urban Districts

SHA's Bicycle Pedestrian Design Guidelines: SHA should adopt its guidelines as Policy - rather than just guidelines – in these areas where pedestrians and bicyclists comprise a significant proportion of the traveling public. These guidelines were created in 2006 as a very progressive document intended to promote bicycle and pedestrian access and safety. Because of their status as guidelines however, their use has appeared to be limited, missing the opportunity to create roadway designs that better accommodate pedestrians and bicyclists at little or no additional cost. This Best Practice document should become part of the engineer's standard toolbox, more generally promoting SHA's goal of safely and efficiently accommodating all users of the public right-of-way.

ADA accommodation: All intersections, including unsignalized and tee intersections, and intersections on divided roadways where the median is not broken for vehicular movement, should be ADA-accessible since crosswalks, whether marked or unmarked, exist at the intersection of all public streets per Maryland Vehicle Law. Where an ADA-accessible crossing cannot be provided, the crossing should be posted to prohibit the crossing to everyone. We recommend that this guidance be made SHA policy.

ADA Best Practices should be used to provide the best accommodation for all users. Where this cannot be achieved, the reasons should be documented.

Accommodation during construction: Signs should be posted at worksites with contact information for the inspector who can then be quickly and easily notified of any problems. Special attention should be paid to winter closures where work may be left unfinished for perhaps months at a time. A month in advance of the normal winter closure period, a shutdown plan should be created for all work in progress and open worksites minimized.

Resurfacing projects: Resurfacing projects should include a safety evaluation of the locations of all handicap ramps and crosswalks, which should be relocated and reconstructed as necessary to conform to SHA’s Bicycle Pedestrian Design Guidelines and ADA Best Practices.

Re-evaluation of speed limits: While Montgomery County continues to urbanize, the posted speeds of adjacent roadways are often not reassessed unless the roadway is being rebuilt. Posted speed limits in BPPAs and other Business and Urban Districts should be re-evaluated and waivers documented for limits in excess of the statutory speed limits. Design speeds for projects in these areas should not exceed the approved posted speed.

Further Improvements in Bicycle-Pedestrian Priority Areas

Minimizing disruption to pedestrian travel: SHA should ensure that construction affecting pedestrian and bike accessibility in BPPAs be expedited to the extent practicable. For example, utility work in BPPAs, such as pole relocations and valve adjustments, should be prioritized so that the utility companies know that these work items are more important than those outside BPPAs.

Access for Handicapped and Other Pedestrians during Snow Emergencies: A definite timeline should be set for handicap ramps at intersections to be cleared of snow after a snowstorm. Our observation is that when the roadways get plowed on intersecting streets the area in front of the circular curb – where most handicapped ramps are – are often blocked with snow, reducing access for handicapped persons since they are the least likely to be able to climb over the resulting snow mounds.

An extra pass by a snowplow around the corner in priority areas would greatly improve pedestrian accessibility and safety in the winter in general, as well as providing basic accommodation for handicapped persons. While property owners in Montgomery County are required to clear the snow from sidewalks within 24 hours after a snow storm, there is no requirement for them to shovel snow in the street, particularly the large mounds of snow that end up in front of the circular curb. While this is a problem with both County and State roads, the majority of our transit routes are on State roads, increasing the need to correct this problem.

Signing and Striping: Crosswalk striping in BPPAs should be inspected quarterly to ensure that they are in good condition. Where these crosswalks are impacted by utility work, they should be inspected upon completion of the work to ensure that they remain in good condition.

Intersections: Where an intersection in a BPPA meets any traffic signal warrant, we believe that the default should be that the signal should be provided to facilitate safe pedestrian and bicyclist movement. Signalized intersections should have marked crosswalks on each leg of the intersection, per SHA’s bicycle-pedestrian guidelines.

Handicap ramp designs in BPPAs should be coordinated with pedestrian access points to adjacent properties to facilitate travel to, through, and around the ramps.

All projects in BPPAs should be reviewed by SHA's Office of Environmental Design to address the higher level of urban design that is required in these areas. One example is a coordinated and consolidated design of traffic signal poles, signs, lights, and other equipment at intersections near handicap ramps. These facilities should be combined where possible and use the fewest number of poles to minimize obstructions where the greatest number of pedestrians congregate. Also, the bases of the poles, including Audible Pedestrian Signal poles, should be countersunk where possible to minimize the footprint of these obstructions, thereby maximizing the pedestrian circulation area.

Lighting: Lighting in BPPAs should meet AASHTO standards; this is particular true for intersections. Care should be taken in the location of lighting fixtures in relation to crosswalks so that the light source is between the vehicle and the pedestrian wherever possible, maximizing contrast. Increasing the contrast between pedestrians and the road ahead has been shown to provide a general benefit to drivers but most particularly to elderly drivers, whose percentage of the population is increasing. Requiring developers to bring adjacent intersections to current lighting standards should be a requirement of their access permit.

Optimize traffic signal timing for pedestrians: There are many places where pedestrians are unnecessarily prevented from crossing the roadway because the "DON'T WALK" light is on when it doesn't need to be. The traffic signal timing and phasing in BPPAs should be reviewed and revised as necessary to maximize pedestrian mobility.

Curb height: Curb height in BPPAs should be 6" rather than the normal SHA standard 8" to reduce the required handicap ramp length. In addition to making it easier for handicapped people to get around in these more urban areas, the shorter ramp length would ensure that there is a greater level area behind the ramp so that all pedestrians who are not crossing are not unnecessarily required to traverse the ramp and negotiate that grade.

Area-specific BPPA plans: BPPA plans should include all Master or Sector Plan-recommended pedestrian and bike improvements within the BPPA, e.g. the White Flint Sector Plan area.