

# CHAPTER 4

## Implementation

The countywide system of bikeways will be developed and enhanced incrementally in a number of ways, including:

- 1) Through subdivision review/dedication, in which a developer constructs a master planned facility (e.g., shared use path along Observation Drive);
- 2) In conjunction with roadway and sidewalk improvements, in which the County or State builds or provides a bikeway as part of the project scope (e.g., shared use path along Norbeck Road extension);
- 3) As independent “retrofit” bikeway projects programmed and funded through the County’s CIP (e.g., Wayne Avenue Green Trail; bike lanes on Old Columbia Pike); and
- 4) Minor “spot” improvements through DPWT’s Annual Bikeways Program (i.e., filling in gaps in the bikeway network).

The countywide bikeway system is a tool that allows the County to focus and prioritize its implementation efforts and make efficient investments in improving bicycling conditions along the County’s major county roads and state highways. While this plan recognizes and affirms all bikeways recommended in community master plans and sector plans as well as most of those called for in the 1978 MPB, countywide bikeways as identified in this plan should receive priority consideration for implementation.

### Plan Policies Regarding Bicycle Facilities

Chapter 1 of this plan outlines the needs of bicyclists, which include safe, convenient, well-designed bicycle facilities. Since bicyclists are permitted to ride on nearly all roadways, **bicycle facilities should be included as part of all appropriate roadway projects** unless there is a compelling reason not to include them (e.g., would

reduce safety or the cost is excessively disproportionate to projected use). Both the County and the State already currently have similar policies.

**Of particular importance is weighing the needs of bicyclists and the needs of motor vehicles equally as part all future facility planning projects along roads for which a bikeway exists or is planned. And related, an existing bikeway should not be eliminated as part of any future roadway or intersection improvements by the County, by the State or by developers.**

**Finally, all bikeways built or implemented in the County must conform to AASHTO and MUTCD bikeway design standards.**

### Prioritization

**By inclusion in this plan, all countywide bikeways are considered high priority to enhance countywide bicycle connectivity and access to major activity centers and other countywide destinations.** In general, any bikeway providing a direct connection, or serving as part of a vital connection, to a countywide destination or activity center is considered a high priority. Especially high priority is afforded to bikeways for which no viable parallel alternative exists.

Major activity centers and countywide destinations, as defined in Chapter 2, include:

- Transit Stations (Metrorail, MARC and Corridor Cities Transitway)
- Municipalities, Central Business Districts and Town Centers
- Major employment centers located outside municipalities and CBDs
- Hard surface park trail corridors

Also considered high priority are bikeway projects that:

- Can be implemented as part, or a logical extension, of a roadway, intersection or streetscape improvement project
- Correct an existing unsafe bicycling condition (where bicycling conditions along a current or planned bikeway are obviously dangerous or where a bicycle accident record exists)
- Fill in or complete a major gap along a countywide bikeway
- Upgrade an existing substandard bikeway (i.e., MacArthur Boulevard bike path)
- Require only signage improvements (signed shared roadways only)

Following are lists of bikeways categorized by activity center in order to inform the public, decision makers and developers on which bikeways are higher priorities in the context of this plan.

Other bikeways in this plan, that provide important links between other countywide bikeways or are part of larger transportation projects (e.g., ICC bike path) are considered moderate priority, but are still higher priority than local or neighborhood bikeways identified in community master plans and sectors plans that are not included in this plan.

**The County can take advantage of opportunities outside the list of priorities in order to augment the countywide bikeway network.** For example, it may be possible to add a bikeway to the scope of another transportation project if the County has adequate right-of-way to accommodate it. Another example would involve requiring a shared use path along a local/neighborhood road as part of subdivision approval. This plan does not preclude any efforts to augment the countywide bikeway network through such opportunities.

**It is also important for the County to try to implement improvements for bicycle travel outside the purview of existing bikeway funding programs.** For example, the County features a number of funding programs designed to improve pedestrian or motor vehicle safety.

These programs also can enhance the safety of bicyclists. Examples include the County's Annual Sidewalk Program, the Sidewalk and Infrastructure Revitalization Program and the CBD Streetscape Improvements Program.

Note: Some bikeways may appear in multiple categories. A bikeway connection to a Metrorail Station that is located within a CBD, for example.

## Bikeways Connecting to Transit

### Metrorail

The following bikeways provide direct or near direct connections to Metrorail stations.

#### Bethesda

- Woodmont Avenue (BL-6), Elm Street (BL-7), Edgemoor Lane (SR-8), Norfolk Avenue (p/o SR-11), Bethesda Avenue (SR-9)

#### Forest Glen

- Forest Glen Road (SP-13, SR-22, SR-23), Georgia Avenue (SR-19), Georgia Avenue alternative (SR-20), Forest Glen-Silver Spring connector (SR-52)

#### Friendship Heights

- Western Avenue (SP-7), Willard Avenue (BL-8, SR-12), Wisconsin Avenue path (SP-8), River Road (DB-2), other bikeways in the D.C. bicycle master plan that connect or lead to the Metro station.

#### Glenmont

- Georgia Avenue (SP-29), Layhill Road (BL-18), Randolph Road (SP-26), Glenallen Road (SP-24)

#### Grosvenor

- Tuckerman Lane (BL-23, SP-42), Beach Drive (SR-16), Grosvenor Lane (SR-36), Strathmore Avenue (SR-18), Strathmore Avenue - Grosvenor

Metro connector (SP-11), Garrett Park - Grosvenor Metro connector (SR-57)

way (SP-50), Randolph Road (BL-15), Nebel Street extended (SP-47)

Medical Center - NIH

- Wisconsin Avenue/Woodmont Avenue (SP-62), West Cedar Lane (SP-4), Jones Bridge Road (SR-3), Fernwood Road/Greentree Road (BL-4), Cedar Lane/Summit Avenue (SR-54), Beach Drive (SR-16)

Wheaton

- Veirs Mill Road alternative (SR-21), Plyers Mill Road (SR-24), Georgia Avenue (SR-19), Georgia Avenue alternative (SR-20), University Boulevard (DB-5)

Rockville

- Norbeck Road (SP-52, SR-38), Falls Road (DB-19), Gude Drive (SP-51), Darnestown Road - south (SP-59), multiple bikeways in the City of Rockville Bikeway Master Plan

White Flint

- North Bethesda Trail (SP-41), Tilden Lane (BL-24), East Jefferson Street (DB-22), Executive Boulevard (BL-25), Nicholson Lane (SR-37), Marinelli Road (SP-45), Nicholson Lane/Parklawn Drive (BL-27), Nebel Street-south (DB-13), Nebel Street-north (BL-26), Old Georgetown Road (SP-46), Montrose Parkway (SP-50), Randolph Road (BL-15)

Shady Grove

- Redland Road (BL-29), Needwood Road (DB-14), Shady Grove Road-East (BL-30), Shady Grove Road - West (DB-15), Crabbs Branch Way (SP-53), Frederick Road (SP-64), Corridor Cities Transitway bike path (SP-66), Bowie Mill Road (BL-20), Muncaster Mill Road (BL-35), numerous bikeways in the City of Rockville bikeway master plan that pass through or adjacent to the King Farm community

**MARC**

The following bikeways provide direct or near direct connections to MARC stations.

Silver Spring

- Interim Capital Crescent Trail (SR-63), Georgetown Branch Trail (SP-6), Metropolitan Branch Trail (SP-12), Wayne Avenue Green Trail (SP-10), Sligo Creek Parkway (SR-14), Sligo Creek Trail-Silver Spring Metro connector (SR-15), Colesville Road/MD 384 connector to Silver Spring Metro Station (DB-6), East-West Highway (SP-9), Columbia Pike/ US 29 - south (SR-31), Forest Glen-Silver Spring CBD Connector (SR-52)

Silver Spring

- Same as Metro Station

Kensington

- Strathmore Avenue (SR-18), Connecticut Avenue corridor (SR-17), Players Mill Road (SR-24)

Garrett Park

- Strathmore Avenue (SR-18), Beach Drive (SR-16), Beach Drive-Grosvenor Metrorail Connector (SR-57), Strathmore-Grosvenor Metrorail Connector Path (SP-11)

Takoma Park (D.C.)

- Metropolitan Branch Trail (SP-12), Carroll Avenue (BL-10), Piney Branch Road (SR-49), Sligo Creek Parkway (SR-14), Sligo Creek-Takoma Metrorail Connector (SR-51)

Rockville

- Same as Metro Station

Washington Grove

- City of Gaithersburg bike plan

Twinbrook

- North Bethesda Trail (SP-41), Rockville Pike (SP-49), Twinbrook Parkway (BL-28), Nicholson Lane/Parklawn Drive (BL-27), Montrose Park-

Gaithersburg

- City of Gaithersburg bike plan

Metropolitan Grove

- Corridor Cities Transitway bike path (SP-66), Long Draft Road (SP-60), Clopper Road (DB-17), Quince Orchard Road (SP-58), local bikeways in the City of Gaithersburg bike plan

Germantown

- Germantown Road (DB-25), Father Hurley Boulevard (SP-68), Middlebrook Road (SP-71), Observation Drive (SP-69)

Boys

- Clarksburg Road (DB-18), Barnesville Road (SR-40), Clopper Road (DB-17)

Barnesville

- Beallsville Road (SR-47)

Dickerson

- Dickerson Road (SR-42)

**Corridor Cities Transitway**

Actual stops for this new transitway have yet to be determined, therefore this list comprises those bikeways that would intersect with the currently proposed route (south to north)

- Frederick Road (SP-64), Shady Grove Road-west (DB-15), Great Seneca Highway (SP-63), Muddy Branch Road (DB-24), Quince Orchard Road (SP-58), Clopper Road (DB-17), Middlebrook Road (SP-71), Germantown Road (DB-25), Observation Drive (SP-69), Father Hurley Boulevard (SP-68), Old Baltimore Road/Newcut Road (DB-26),

**Bikeways Connecting to Municipalities, Central Business Districts and Town Centers**

District of Columbia

- MacArthur Boulevard (DB-1), Massachusetts Avenue (SR-50), River Road (DB-2), Brookville Road (SR-4), Beach Drive (SR-16), Jones Mill Road (SR-28), Colesville Road (DB-6), Metro-

politan Branch Trail (SP-12) Piney Branch Road (SR-49), Carroll Avenue (BL-10), New Hampshire Avenue (DB-7)

City of Rockville

- Darnestown Road (DB-16), Travilah Road (SP-57), Piney Meetinghouse Road (SP-56), Shady Grove Road-west (DB-15), Shady Grove Road-east (BL-30), Falls Road (SP-1), Gude Drive (SP-51), Darnestown Road-south (SP-59), Seven Locks Road (DB-3), multiple bikeways in the City of Rockville Bikeway Master Plan

City of Gaithersburg

- Great Seneca Highway (SP-63), Longdraft Road (SP-60), Clopper Road (DB-17), Corridor Cities Transitway Bike Path (SP-66), Darnestown Road (DB-16), Quince Orchard Road (SP-58), Dufief Mill Road (BL-32), Riffleford Road (BL-34), Muddy Branch Road (DB-24), Frederick Avenue (SP-72), MidCounty Highway (SP-70), Watkins Mill Road (SP-74), Goshen Road (DB-29), Shady Grove Road-east (BL-30), Shady Grove Road -west (DB-15)

City of Takoma Park

- Metropolitan Branch Trail (SP-12), Carroll Avenue (BL-10), Piney Branch Road (SR-49), New Hampshire Avenue (DB-7), University Boulevard (DB-5), Sligo Creek-Takoma Metrorail Connector (SR-51)

Town of Poolesville

- Whites Ferry -Poolesville connector (SR-46), Whites Ferry Road (SR-45), Beallsville Road (SR-47)

Town of Laytonsville

- Olney-Laytonsville Road (SP-36), Laytonsville Road (SR-43), Sundown/Brink Road (SR-62)

Town of Barnesville

- Beallsville Road (SR-47), Barnesville Road (SR-40)

Town of Kensington

- Connecticut Avenue alternative (SR-17), Plyers Mill Road (SR-24), Strathmore Avenue (SR-18), Cedar Lane/Summit Avenue (SR-54)

Bethesda CBD

- Georgetown Branch Trail (SP-6), Bradley Boulevard (DB-4), Bradley Lane (SR-1), Wisconsin Avenue/Woodmont Avenue (SP-62), Wilson Lane (BL-2, SR-2), Goldboro Road (BL-1), Jones Bridge Road (SR-3)

Silver Spring CBD

- Interim Capital Crescent Trail (SR-63), Georgetown Branch Trail/Future Capital Crescent Trail (SP-6), Metropolitan Branch Trail (SP-12), MD 384 connector to Silver Spring Metro Station (DB-6), Sligo Creek Trail - Silver Spring Metro connector (SR-15), US 29/Columbia Pike - south (SR-31), East West Highway (SP-9), Forest Glen-Silver Spring CBD Connector (SR-52), Wayne Avenue Green Trail (SP-10)

Wheaton CBD

- Plyers Mill Road (SR-24), Westfield Shopping Town connector (SR-25), Westfield Shopping Town Mall Ring Road (SR-26), Veirs Mill Road alternative (SR-21), Reddie Drive (SR-27), Amherst Avenue/Sligo Creek Trail connector (SP-77), University Boulevard (DB-5), Georgia Avenue (SR-19), Georgia Road alternative (SR-20)

Germantown Town Center

- Great Seneca Highway (SP-63), Corridor Cities Transitway Bike Path (SP-66), Germantown Road (DB-25), Father Hurley Boulevard/Ridge Road (SP-68), Middlebrook Road (SP-71)

Olney Town Center

- Olney-Laytonsville Road-Olney West (SP-34), Olney-Sandy Spring Road-Olney East (SP-35), Olney-Sandy Spring Road-Ashton (SP-37), Georgia Avenue - North (SP-39), Georgia Avenue-Upcounty (BL-22), Bowie Mill Road (BL-20), Hines Road - North Branch connector (SP-33), Hines Road (BL-19), Norwood Road (SP-38)

Clarksburg Town Center

- Corridor Cities Transitway Bike Path (SP-66), Frederick Road - upcounty (SP-71), Clarksburg Road (DB-18), Old Baltimore Road-New Cut Road (DB-26), MidCounty Highway (SP-70)

Damascus Town Center

- Ridge Road (SR-39), Woodfield Road (DB-19, SR-61), Damascus Road (SR-44), Kemptown Road (SR-48)

**Bikeways Connecting to Other Employment Centers**

US 29 Corridor

- ICC bike path (SP-40), Old Columbia Pike (BL-12), Columbia Pike (DB-9), MD 198 (SP-20, SP-21), Greencastle Road (SP-23), Robey Road (SP-22), Briggs Chaney Road (BL-14), Fairland Road (BL-13), East Randolph Road/Cherry Hill Road (SP-16), New Hampshire Avenue (DB-7), Lockwood Drive (DB-10), Columbia Pike-south (SR-31)

North Bethesda/White Flint

- North Bethesda Trail (SP-41), Tilden Lane (BL-24), Executive Boulevard (BL-25), East Jefferson Street (DB-22), Marinelli Road (SP-45), Old Georgetown Road (SP-46), Nebel Street-south (DB-13), Nebel Street-north (BL-26), Nebel Street extended (SP-47), Nicholson Lane (SR-37), Nicholson Lane/Parklawn Drive (BL-27)

Rock Spring Office Park

- Rock Springs connector (SP-48), Fernwood Road/Greentree Road (BL-4), Tuckerman Lane (SP-42, BL-23), Democracy Boulevard (SP-2), Grosvenor Lane (SR-36), Old Georgetown Road - Wildwood Shopping Center Path (SP-1)

Medical Center/NIH

- Same as Medical Center/NIH Metro Station

## Bikeways Connecting to Major County Park Trails

### Rock Creek Trail/Beach Drive

- Woodbine Street (SR-5), East West Highway (SP-9), Georgetown Branch Trail (SP-6), Jones Mill Road (SR-28), Jones Bridge Road (SR-3), Kensington Parkway (SR-29), Rock Creek Trail - Forest Glen Metro Station connector (SP-14), West Cedar Lane (DB-21), Cedar Lane/Summit Avenue (SR-54), Grosvenor Lane (SR-36), Tuckerman Lane (SP-42), Strathmore Avenue (SR-18), Randolph Road (BL-15), Montrose Parkway (SP-50), Veirs Mill Road (BL-16), Aspen Hill Road (SR-32) Baltimore Road (Rockville plan), Norbeck Road (SR-38), Southlawn Drive (Rockville plan), Needwood Road (DB-14), ICC bike path (SP-40), Muncaster Mill Road (BL-35), Hines Road-Rock Creek connector (SP-33), Bowie Mill Road (BL-20), Olney-Laytonsville Road (SP-36)

### Sligo Creek Trail/Sligo Creek Parkway

- New Hampshire Avenue (DB-7), Carroll Avenue (BL-10), Piney Branch Road (SR-49), Wayne Avenue Green Trail (SP-10), Franklin Avenue (SR-13), Sligo Creek Trail - Silver Spring Metro Station connector (SR-15), Columbia Pike-south (SR-31), Forest Glen Road (SP-13, SR-23), Plyers Mill Road - Sligo Creek Trail connector (SR-55), University Boulevard (DB-5), Amherst Avenue-Sligo Creek Trail connector (SP-77)

### Capital Crescent Trail/Georgetown Branch Trail

- MacArthur Boulevard (DB-1), Massachusetts Avenue (SR-50) River Road (DB-2), Bradley Boulevard (DB-4), Jones Bridge Road (SR-3), Jones Mill Road (SR-28), NIH-Georgetown Branch Connector (SR-11), NIH-CCT connector alternative (SR-10), East-West Highway (SP-9), Metropolitan Branch Trail (SP-12)

### Matthew Henson Trail

- Montrose Parkway (SP-50), Veirs Mill Road alternative (SR-21), Connecticut Avenue corridor (SR-17), Connecticut Avenue -Aspen Hill (SP-27), Georgia Avenue - North (SP-29), Layhill Road (BL-18), ICC bike path (SP-40)

## Shared Use Paths Providing Significant Pedestrian Benefits

The following shared use paths (or dual bikeways that include a shared use path) currently serve as important direct pedestrian connections to a countywide or local destination or have the potential in the future to serve as an important pedestrian connection. Therefore, these paths should be considered higher priority than other shared use paths.

- MacArthur Boulevard (DB-1); River Road (DB-2); Falls Road (DB-19); Democracy Boulevard (SP-2; DB-20); North Bethesda Trail - NIH connector (SP-3); Cedar Lane (SP-4); Wisconsin Avenue/Woodmont Avenue (SP-62); Georgetown Branch Trail/Future Capital Crescent Trail (SP-6); Western Avenue (SP-7); Wisconsin Avenue (SP-8); East-West Highway (SP-9); Silver Spring Green Trail (SP-10); University Boulevard (DB-5); MD384 connector to Silver Spring Metrorail station (DB-6); Forest Glen Road-central (SP-13); Rock Creek Trail-Forest Glen Metro connector (SP-14); New Hampshire Avenue - Hillendale/Takoma Park (DB-7); New Hampshire Avenue - Ashton (SP-15); Lockwood Drive (DB-10); Fairland Road - east (SP-18); Spencerville Road (SP-20); Randolph Road (SP-25, SP-26); Connecticut Avenue - Aspen Hill (SP-27); Georgia Avenue - north (SP-29); Bel Pre Road - east (SP-30); Olney-Laytonsville Road - Olney West (SP-34); Olney-Sandy Spring Road - Olney East (SP-35); Olney-Sandy Spring Road - Ashton (SP-37); Georgia Avenue - Brookeville (SP-39); North Bethesda Trail (SP-41); Old Georgetown Road - Wildwood Shopping Center Path (SP-1); Tuckerman Lane (SP-42); Grosvenor Connector (SP-43); Strathmore-Grosvenor Metrorail Station connector path (SP-11); East Jefferson Street (DB-22); Marinelli Road (SP-45); Old Georgetown Road (SP-46); Nebel Road (DB-13); Nebel Street Extended (SP-47); Rock Spring Connector (SP-48); Westlake Drive - south (SP-44); Montrose Road/Parkway (SP-50); Gude Drive - east (SP-51); Crabbs Branch Way (SP-53); Needwood Road (DB-14); Redland Road - west (SP-54); Shady Grove Road - west (DB-

15); Clopper Road/Diamond Avenue (DB-17); Muddy Branch Road (DB-24); Great Seneca Highway (SP-63); Frederick Road (SP-64; SP-72); Corridor Cities Transitway bike path (SP-66); Germantown Road (DB-25); Father Hurley Boulevard (SP-68); Observation Drive (SP-69); MidCounty Highway (SP-70); Middlebrook Road (SP-71); Clarksburg Road (DB-18); Old Baltimore Road/Newcut Road (DB-26); Watkins Mill Road (DB-27); Woodfield Road - north (DB-30); Woodfield Road - south (DB-28).

## On-going Implementation - Local/Neighborhood Bike Routes

The plan acknowledges all approved and adopted local and neighborhood shared roadway bikeways in community master plans and sector plans. When combined, these plans identify hundreds of miles of shared roadways along neighborhood streets and residential primaries. For those shared roadways not specified under this plan, an on-going program to install bike route and/or Share the Road signs is recommended. The County should continue to sign local/neighborhood shared roadways as part of the County's Annual Bikeways Program.

### About Facility Planning

Facility planning for projects, including bikeways, is divided into three phases. Funding for these phases often is separate. Facility planning serves as the transition stage for a project between the master plan or conceptual stage and its inclusion as a stand-alone project in the CIP.

During Phase I of facility planning, DPWT performs a rigorous planning level investigation of the following critical project elements: purpose and need, usage forecasts, traffic impacts, community impacts, public participation, investigation of non-County sources of funding, and cost estimates.

At the end of Phase I, DPWT determines if the project has the merits to advance to Phase II, which involves preliminary (35 percent level of completion) engineering design. During this phase, construction plans are developed showing the specific alignment and detailed features of the project, from which its impacts, including environmental, and costs can be more accurately assessed.

At the completion of the preliminary engineering design, the County Council and County Executive hold project-specific public hearings to determine whether the candidate project has the merits to advance into the CIP as a fully funded stand alone project and enter into Phase III which involves final design and construction. It is important to note that this process changes every now and then, but this basic process is typically followed.

In 2002, DPWT hired a consultant to study and develop a bike route signing program. The final report, produced in April 2003, found 123 bike route signs currently posted throughout the entire County. The report suggests guidelines from which all Montgomery County bike route signage plans should be based. It identified 34 priority routes for improved signage. The majority of these routes are identified in this plan as Countywide Bikeways. The report does not address local or neighborhood bikeway signing needs, however.

A major outcome of the report is a GIS database that provides DPWT with an interactive medium through which sign installations, orientation, location and condition may be monitored and enhanced over time. This is important because the origin, or date of installation, for the majority of the 123 signs is unknown. This database will allow the County to better track bike route signing efforts in the future.

## Funding for Bikeways

Implementing the nearly 600 miles of bikeways identified under this plan--some existing, some planned, some newly proposed--will require considerable financial investment by the County, State and others. The County will not only need to increase the amount of funding for planning, engineering and design, it also will need to increase funding for routine and systematic bikeway maintenance as well as basic roadway maintenance. Additionally, this plan urges the County to consider developing a bicycle safety education program and enhancing bicycle promotional efforts (described in Chapter 5), each of which would have ramifications for the County's operating budget as well. These costs could be offset by reducing the need or urgency for roadway projects.

Putting a price tag on this plan is difficult if not impossible. First, a critical element in estimating bikeway costs is right-of-way: how much is owned by the County or state and does additional ROW need to be acquired? These questions can only be answered during initial project planning. Second, bikeways are implemented in numerous ways. Short segments will be built by developers as part of land development projects, segments will be built by the State Highway Administration as part of planned improvements for state highways or interchanges, segments will be built or provided by the county as part

of county road improvements, and segments or entire bikeways will be built as part of independent projects. Furthermore, the County's Annual Bikeways Program will be continuously implementing local bikeways and developing small projects along Countywide Bikeways to fill in gaps, provide needed connections and correct small problem areas to improve bicycle safety.

### ***Estimating Bikeway Costs***

Nevertheless, it is useful to have a basic understanding of current costs related to straightforward bikeway construction and implementation. The following calculations are estimated average cost per mile for engineering, design and construction for bikeways implemented by the DPWT as of September 2003. The calculations do not include costs associated with unforeseen land acquisition, utility relocation or other major issues. These issues can increase the overall project costs by a significant factor.

#### **Shared Use Paths**

- Major projects = \$2.1M per mile (includes Phase I & II Facility Planning, Final Design, Construction and Construction Management.
- Minor projects = \$50-\$150 per linear foot

#### **Bike Lane**

- \$3,500 per mile (signing only; includes signs, posts and labor). Bike lanes are often part of the scope for larger roadway improvement projects, therefore comprehensive estimates are not available.

#### **Signed Shared Roadway**

- \$3,500 per mile (signing only; includes signs, posts and labor)

## **Understanding Bikeway Implementation**

With the exception of dedication of bikeways by developers as part of subdivision and land development, the County and the State are both responsible for implementation. The County primarily implements bikeways through its Capital Improvements Program (CIP), while the state primarily implements bikeways through its Consolidated Transportation Plan (CTP).

### ***Montgomery County***

The County implements and provides funding for bikeway improvements through its CIP. County code requires that every two years the County Executive submit a comprehensive six-year program for capital improvements to the County Council. The CIP includes a statement of the objectives of capital programs and the relationship of capital programs to the County's long-range development and master plans. It also recommends capital projects and a construction schedule, and provides an estimate of costs, a statement of anticipated revenue sources, and an estimate of the impact of the program on County revenues and the operating budget. County code requires the County Council to annually review, amend as necessary, and approve the CIP.

Many projects in the CIP are generated from recommendations or proposals contained in community master plans, sector plans and functional master plans. This is particularly true for independent bikeway projects. Bikeway or bikeway-related projects can generally be found in at least two CIP funding categories: 1) Transportation; and 2) M-NCPPC.

Projects under the transportation category that might involve or affect bikeways include: road improvement projects; intersection improvement projects; independent bikeway projects; the annual bikeway program; the annual sidewalk program; independent sidewalk projects; and streetscape projects. Projects under the M-NCPPC category that may involve or affect bikeways include: on-road bikeways (park trail connectors); on-road bikeways (Beach Drive and Sligo Parkway), independent park trail projects (Montrose Trail), Hard Surface [Trails] Design and Construction and Hard Surface [Trails] Renovation.

Independent bikeway projects are specified in the CIP by individual project-by-project descriptions. Montgomery County DPWT and M-NCPPC annually select projects for implementation. The planning and funding of individual bikeway projects has been and will continue to be primarily a local responsibility. A substantial amount of new planning and design funding has been accomplished over the years as bicycle transportation continues to play an ever-increasing, and highly visible role in the county's transportation system.

Many projects in the CIP may appear unrelated to bikeways, when in fact, they affect or may involve bikeways in the project scope. This is often true for many road and intersection improvement projects for which bikeway improvements may only be a minor consideration in the overall design and engineering for the project.

### *State of Maryland*

The State primarily funds and implements bikeways through Maryland Department of Transportation's (MDOT) Consolidated Transportation Program (CTP). The CTP is a compilation of all transportation projects currently funded for construction or development and engineering as recommended by the Governor. These projects are funded utilizing the financial resources of the state's Transportation Trust Fund. The Transportation Trust Fund is used to pay for capital transportation projects throughout Maryland. Revenues from State vehicle titling and registration fees, gas taxes, a portion of the corporate income taxes and federal funds fuel it.

Each fall, at the direction of the Governor, MDOT staff meets with planners, elected officials and citizens of the County. These meetings are opportunities for the community to comment and provide input on transportation enhancements planned over the six-year period covered by the CTP. With this input, a final CTP is developed and submitted to the General Assembly each year for its approval.

Many of the countywide bikeways identified in this plan will be implemented as part of State highway improvement projects. Constructing shared use paths or adding a bike lane or shoulder as part of a road improvement project, as opposed to doing it as an independent project, is more cost effective for both the County and the State.

### *Federal Government*

The State of Maryland administers federal funds and distributes the monies to counties on a competitive basis through programs such as Neighborhood Conservation and Access 2000. Counties annually submit to the State a list of priority projects they want to be eligible for federal funding. The State selects a certain number of projects for funding each year.

As an example of these sources, funding for bikeways and trails is typically made through a category called TEA-21 Transportation Enhancements. Several projects in the County were completed using TEA-21 enhancement funds, including the North Bethesda Trail bridges over I-495 and I-270 as well as the Capital Crescent Trail.

## **Funding for bicycle parking**

Getting bicyclists to and from destinations is the primary focus of this plan. However, providing adequate parking facilities at destinations is equally important. Bicyclists should not have to lock bicycles to lamp posts and railings. In fact, the Maryland Vehicle Law prohibits it in certain situations. Therefore, adequate bicycle parking must be provided at all countywide bicycling and local destinations, including transit stations, employment centers and office buildings, retail and dining establishments (especially those located in municipalities and CBDs), and locally oriented destinations like schools, libraries, community centers and playgrounds.

While bicycle parking is often required as part of new developments or are included as part of new County buildings and facilities, older buildings and older developments typically do not feature any bicycle parking accommodations. Finding space for bicycle parking at these older buildings often is often not an issue. Many building owners or developers simply are not familiar with bicycle parking needs, designs and costs. Therefore, the county should consider creating a dedicated funding source for retrofit bicycle parking. Additionally, the Planning Board should continue to enforce bicycle parking subdivision regulations and ensure that community plan recommendations for bicycle parking are fully implemented.

## **Funding for Bikeway Maintenance**

This plan recognizes that maintaining and preserving existing bikeways plays an important role in sustaining and increasing the levels of bicycling in Montgomery County and the region.

There are two general types of maintenance. Routine maintenance involves clearing debris and snow from the roadway surface that tends to accumulate in the curb lanes and in bike lanes. It also involves removing debris and trimming trees along shared use paths adjacent to roads.

Systematic maintenance involves making physical improvements to a bikeway facility over time to keep it safe, including ensuring consistently smooth, unobstructed pavement condition. These improvements may include re-stripping a bike lane, replacing signs, or repaving a portion of a shared use path damaged by tree roots.

The County DPWT is responsible for routine and systematic maintenance along all County roads, including bikeways and sidewalks, while M-NCPPC is responsible for routine and systematic maintenance along hard surface trails located in County parkland.

In order to ensure safe bikeways in the future, the County should consider developing a new program for routine maintenance of bikeways, or include bikeway maintenance as part of other maintenance programs. Under this new initiative, shared use paths, bike lanes and signed shared roadways (wide curb lanes and shoulders) in the County would be periodically swept of debris, sand and gravel and overhanging branches and brush along shared use paths would be trimmed. The County also should consider including both routine and systematic bikeway maintenance in the County DPWT's annual roadway maintenance program as well as include adequate funding for minor safety improvements along countywide bikeways as part of the Annual Bikeway Program. Lastly, the Planning Board should encourage routine maintenance for countywide hiker-biker trails in parkland. Debris, sand and gravel should be swept and overhanging branches and brush trimmed along all hard surface hiker-biker trails at least twice a year (spring and fall).