
THE BICYCLE MASTER PLAN
Biennial Monitoring Report
2021 - 2022
Montgomery Planning

Abstract

This report meets the 2018 *Bicycle Master Plan* requirement for a biennial monitoring report and provides recommendations to the Planning Board and County Council for implementing the vision of the plan. It evaluates progress made in advancing the goals and objectives of the plan as well as recommendations for bikeways and bicycle parking, and bicycle-supportive programs and policies.

Sources of Copies

The Montgomery County Planning Department
The Maryland-National Capital Park and Planning Commission
2425 Reedie Drive
Wheaton, MD 20902

Online at
https://montgomeryplanning.org/bikeplan

The Bicycle Master Plan sets forth a transformative vision for transportation in Montgomery County, encouraging people of all ages and bicycling abilities to meet their daily needs by bicycle. The Plan envisions a community where bicycling to work, stores, schools, and transit or going for a leisurely ride on the weekend is so embedded in our way of life that bicycling becomes an integral mode of transportation in the daily lives of the county's residents. The *Bicycle Master Plan* creates a framework for this transformation with recommendations to build an extensive network of low-stress bikeways connecting the county's downtowns and town centers, transit stations and public facilities, and a plethora of secure and convenient bicycle parking and bicycle-supportive programs and policies.

To ensure transparency and accountability of implementation, the Plan requires the Montgomery County Planning Department to produce a biennial monitoring report to track how well the vision of the Plan is being fulfilled. The report is reviewed by the Planning Board and County Council.

This document meets the 2018 *Bicycle Master Plan* requirement for a biennial monitoring report and provides recommendations to the Planning Board and County Council for implementing the vision of the plan. It evaluates progress made in advancing the goals and objectives of the Plan as well as recommendations for bikeways and bicycle parking, and bicycle-supportive programs and policies.

THE BICYCLE MASTER PLAN

Bicycle Master Plan Recommendations

The *Bicycle Master Plan* recommends a robust network of bikeways and bicycle parking and identifies numerous policy and programmatic recommendations. Highlights in implementing these recommendations over the past two years include:

BIKEWAYS

During the two-year period ending on December 31, 2022:

- 5.3 miles of master-planned bikeways were built, including 3.9 miles of sidepaths and 0.9 miles of separated bike lanes. An additional 5.6 miles of non-master planned bikeways were built during this time (for example, the separated bike lanes on Old Georgetown Road).
- 8.2 miles of new master-planned bikeways were under construction on December 31, 2022, including 4.9 miles of off-street trails (largely the Capital Crescent Trail), 1.9 miles of sidepaths, 0.7 miles of bikeable shoulders and 0.4 miles of separated bike lanes.
- 15.6 miles of master-planned bikeways were funded in the county's capital budget but not yet constructed, including 7.0 miles of sidepaths, 4.6 miles of neighborhood greenways, 3.2 miles of separated bike lanes and 0.5 miles of off-street trails. An additional 5.9 miles of non-master planned bikeways were funded in the county's capital budget.
- 3.9 miles of master-planned bikeways were conditioned in development projects approved by the Montgomery County Planning Board but not yet constructed, including 2.5 miles of sidepaths and 1.2 miles of separated bike lanes. An additional 3.7 miles of non-master planned bikeways were conditioned in development approvals.

BICYCLE PARKING

Three bicycle parking stations are advancing, including the 460-space station at the Bethesda Purple Line station, which was constructed by the 7272 Wisconsin development project, the 74-space Dixon Lane bicycle parking station in downtown Silver Spring, which was in design at the end of 2020, and the 100+ bicycle parking station at Grosvenor station, which was a condition of approval for a development project.

PROGRAMS

The Planning Department's Bikeway Branding project, an effort to create a recognizable brand for Montgomery County's emerging bicycling system, was nearing completion in December 2022.

POLICIES

The County Council amended the county code to reflect guidance in the Complete Streets Design Guide with the enactment of bills 24-22 and 34-22.

Findings

Metrics help to tell the story of the bicycling network. Salient findings over the past two years include improvements in low-stress connectivity, a reduction in the equitable distribution of low-stress bicycling and slight improvements in the provision of bicycle parking.

LOW-STRESS CONNECTIVITY

Countywide Connectivity is the overall measure of low-stress connectivity and measures the percentage of potential bicycling trips that will be able to be made on a low-stress bicycling network. This metric grew slightly between December 2020 and December 2022 from 15% to 16%. Upon completion of projects that were under construction in December 2022, this will grow to

17% and with the completion of projects in the capital improvements program or development projects approved in 2021 and 2022, countywide connectivity will grow to 20%.

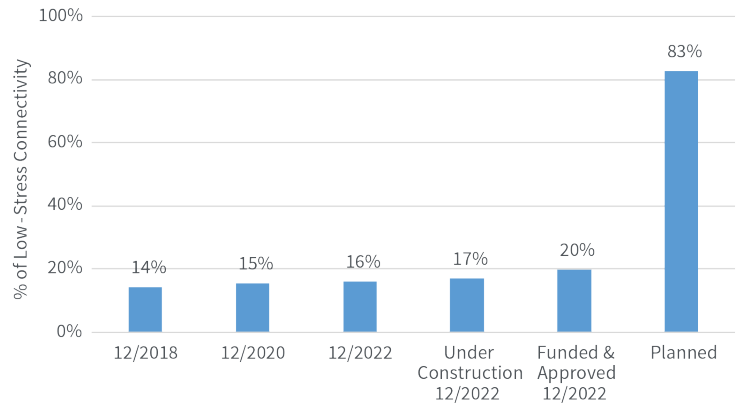

Figure 1: Growth in Countywide Connectivity

EQUITY

Equitable access to low-stress bicycling has decreased in the four years since the *Bicycle Master Plan* was approved. Equity Focus Areas (EFAs) had 84% of the low-stress connectivity that non-EFAs experience in December 2022, down from 87% in December 2020 and from 89% in December 2018. When projects that are under construction, funded in the capital improvement program and conditions of development approvals are completed, the metric will improve to 87%. Still more progress is needed to address inequitable access to low-stress bicycling.

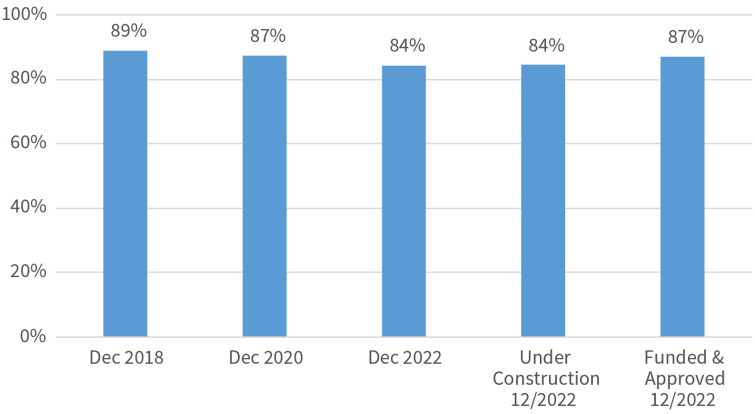

Figure 2: Equitable Access to Low-Stress Bicycling

BICYCLE PARKING AT PUBLIC FACILITIES

In 2022, existing bicycle parking that conforms to industry standards provided 8% of the total needed bicycle parking at public schools. While this is an increase from 5% in 2016, substantial improvements are needed to upgrade existing bicycle parking and provide more bicycle parking at public schools.

Note: Equity Focus Areas are parts of Montgomery County that are characterized by high concentrations of lower-income people of color, who may also speak English “less than very well”.

Recommendations

The monitoring report provides the opportunity to offer recommendations to address some of the challenges that have arisen since the Plan was approved and to provide thoughts on how to proceed over the next few years. While fiscal capacity may limit the county's ability to implement all of the recommendations in the next two years, the following recommendations should be considered as implementation of the *Bicycle Master Plan* proceeds:

1 Bikeways: Prioritize construction of the bikeway projects in Table 1 to improve connectivity to downtowns, upgrade the county's temporary neighborhood greenways to permanent neighborhood greenways, and improve access to low-stress bicycling in Equity Focus Areas. To improve equity, focus on implementing bikeways along the following roads:

- Montgomery Village Avenue, providing synergies with the coming redevelopment of Lakeforest Mall.
- Castle Boulevard, connecting to existing bikeways on Briggs Chaney Road.
- Tech Road/Broadbirch Drive, providing connections to the US 29 FLASH station, Adventist Hospital and the future Viva White Oak development.

2 Bicycle Parking at Public Schools: To improve bicycle parking:

- Over the next two years, prioritize funding to upgrade bicycle parking at the following schools: Dr. Ronald A. McNair ES, Glenallen ES, Bells Mills ES, Poolesville ES, Sligo Creek ES, Olney ES, Thomas W. Pyle MS, Silver Spring International MS, North Bethesda MS, Rosa M. Parks MS, Westland MS, Bethesda-Chevy Chase HS, Quince Orchard HS, Walt Whitman HS, and Walter Johnson HS.
- Over the next six years, prioritize funding to upgrade bicycle parking at the following Title I/ Focus schools and schools with high free- and reduced-price meals (FARMS) rates: Rolling Terrace ES, Stedwick ES, South Lake ES, Arcola ES, Roberto W. Clemente MS, Forest Oak MS, Eastern MS, White Oak MS, Sligo MS, and Gaithersburg HS.
- Provide Montgomery County Public Schools (MCPS) with an annual funding program for installing bicycle parking.
- MCPS should develop bike rack standards that correspond with standards identified in Montgomery County's zoning code.

3 Bicycle Parking Stations: Fund a bicycle parking station at the Glenmont Metrorail station to expand the reach of transit and develop the organizational capacity to operate bicycle parking stations, including those at the Bethesda Purple Line station and the Silver Spring Transit Center, which are already funded.

4 Design Standards: Develop comprehensive design standards for bicycle facilities.

5 Travel Survey: Fund and conduct a biennial travel monitoring survey in support of the *Bicycle Master Plan* and forthcoming Pedestrian Master Plan to measure travel behavior and attitudes about walking and bicycling.

Table 1: High Priority Projects

Policy Area	Street	From	To	Bikeway Type
Bethesda CBD	Arlington Rd	Old Georgetown Rd	Bradley Blvd	Separated Bike Lanes
Bethesda CBD	Edgemoor La	Arlington Rd	Bethesda Metro Station	Separated Bike Lanes
Bethesda CBD	Woodmont Ave	Battery Ln	Old Georgetown Rd	Separated Bike Lanes
Bethesda CBD	Woodmont Ave	Strathmore Ave	Wisconsin Ave	Separated Bike Lanes
Fairland / Colesville	Castle Blvd	Castle Ridge Cir	Briggs Chaney Rd	Separated Bike Lanes
Friendship Heights	Friendship Blvd	Willard Ave	District of Columbia	Separated Bike Lanes
Germantown East	MD 355 (West Side)	Germantown Rd	Shakespeare Blvd	Sidepath
Germantown Town Center, Germantown West	Wisteria Dr	Father Hurley Blvd	Great Seneca Hwy	Sidepath or Separated Bike Lanes
Kensington / Wheaton, Glenmont	Holdridge Rd	Matthew Henson Trail	Georgia Ave	Neighborhood Greenway
Montgomery Village	Lost Knife Rd	City of Gaithersburg	Odenhal Ave	Separated Bike Lanes
Montgomery Village	Montgomery Village Ave (East Side)	Stewartown Rd	City of Gaithersburg	Sidepath
North Bethesda	Old Georgetown Rd (MD 187)	Towne Rd	Tuckerman Ln	Breezeway
Silver Spring	13th St / Burlington Ave	District of Columbia	Fenton St	Separated Bike Lanes
Silver Spring / Takoma Park	Woodland Dr	Columbia Blvd	Spring St	Neighborhood Greenway
Wheaton CBD	Grandview Ave	Blueridge Ave	Reedie Dr	Separated Bike Lanes
White Flint	Marinelli Rd	Executive Blvd	Woodglen Dr	Separated Bike Lanes
White Oak	Broadbirch Dr	Tech Rd	Cherry Hill Rd	Separated Bike Lanes
White Oak	Cherry Hill Rd	Columbia Pike	Prince George's County	Separated Bike Lanes
White Oak	Old Columbia Pike	Tech Rd	White Oak Shopping Ctr	Sidepath
White Oak	Tech Rd	Columbia Pike	Industrial Pkwy	Separated Bike Lanes

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INTRODUCTION

The COVID-19 pandemic fundamentally changed how people travel and recreate. Due to unprecedented challenges resulting from efforts to control the spread of the virus, more and more people took to bicycling and walking for physical activity and travel. In response, Montgomery Parks launched the Open Roadways Initiative, and the Montgomery County Department of Transportation (MCDOT) created its Shared Streets program to promote bicycling and walking. But the county's efforts didn't stop there. In fact, substantial efforts by MCDOT, Montgomery Parks, the Planning Department and developers continued to advance implementation of the *Bicycle Master Plan*. This report summarizes those efforts during 2021 and 2022.

Over the past two years, several of the recommendations in the *Bicycle Master Plan Biennial Monitoring Report, 2019 – 2020*, have advanced, including the following bikeway projects that are funded for design:

- Cherry Hill Road Separated Bike Lanes
- Cedar/Bonifant/Grove/Sligo/Woodbury Neighborhood Greenway
- Grandview/Mason Neighborhood Greenway
- Grandview (Arcola to Blueridge) Neighborhood Greenway
- Greenwood (Piney Branch to Wabash) Neighborhood Greenway
- Greenwood (Wabash to Division) Neighborhood Greenway

2

Background

What is Low-Stress Bicycling?

A low-stress bicycling network is one that is comfortable and safe for people of all ages and bicycling abilities. Low-stress bicycling reflects the context of the road. For example, low-stress bikeways include sidepaths with wide buffers from the street along high-volume and high-speed suburban highways, separated bike lanes on downtown streets, and bicycling in the road on very low-volume and low-speed residential streets.

The *Bicycle Master Plan* sets forth a transformative vision for transportation in Montgomery County, encouraging people of all ages and bicycling abilities to meet their daily needs by bicycle. The Plan envisions a community where bicycling to work, stores, schools and transit or going for a leisurely ride on the weekend is so embedded in our way of life that bicycling becomes an integral mode of transportation in the daily lives of the county's residents. The *Bicycle Master Plan* creates a framework for this transformation, with recommendations to build an extensive network of low-stress bikeways connecting the county's downtowns and town centers, transit stations and public facilities and a plethora of secure and convenient bicycle parking, and bicycle-supportive programs and policies.

The *Bicycle Master Plan* paves the way for safe, comfortable, and accessible bicycling throughout Montgomery County. Appropriate bikeways are recommended in response to the amount of stress people experience bicycling on each street type. On busy streets, bicyclists will have dedicated space separated from traffic. On residential streets, they will be able to comfortably share the road. Between downtowns and town centers, people will be able to travel comfortably and efficiently on a "breezeway network," where faster moving bicyclists are able to travel with fewer delays, and where all users – including slower moving bicyclists and pedestrians – can safely and comfortably coexist. In rural areas of the county, a network of bikeable shoulders is recommended for recreational bicyclists who prefer to ride on the road.

Recognizing that providing a comfortable bicycling network is insufficient if people do not have secure places to store their bicycles at their destinations, the Plan also recommends an extensive supply of bicycle parking. This includes short-term bicycle parking provided with "U" racks at public facilities, such as parks, libraries, recreational centers, and short-term bicycle parking serving commercial areas. It also includes long-term bicycle parking provided in bicycle rooms and bicycle cages for residents, students, employees, and others who store their bicycles for several hours or longer. Long-term bicycle parking in secure bicycle parking stations within or directly adjacent to transit stations, including all Red Line stations and the higher-demand MARC, Purple Line, and U.S. 29 FLASH stations, is also recommended.

The *Bicycle Master Plan* also recommends bicycle-supportive programs and policies. Programmatic recommendations include dedicated funding programs for specific needs, such as neighborhood greenways and a bicycle parking program, teaching children how to bicycle in public school and a BikeMontgomery outreach program to encourage bicycling. It also includes legal and policy recommendations, such as updating the county's road design standards, updating the bicycle parking provisions in the zoning code, and consolidating driveways along bikeways.

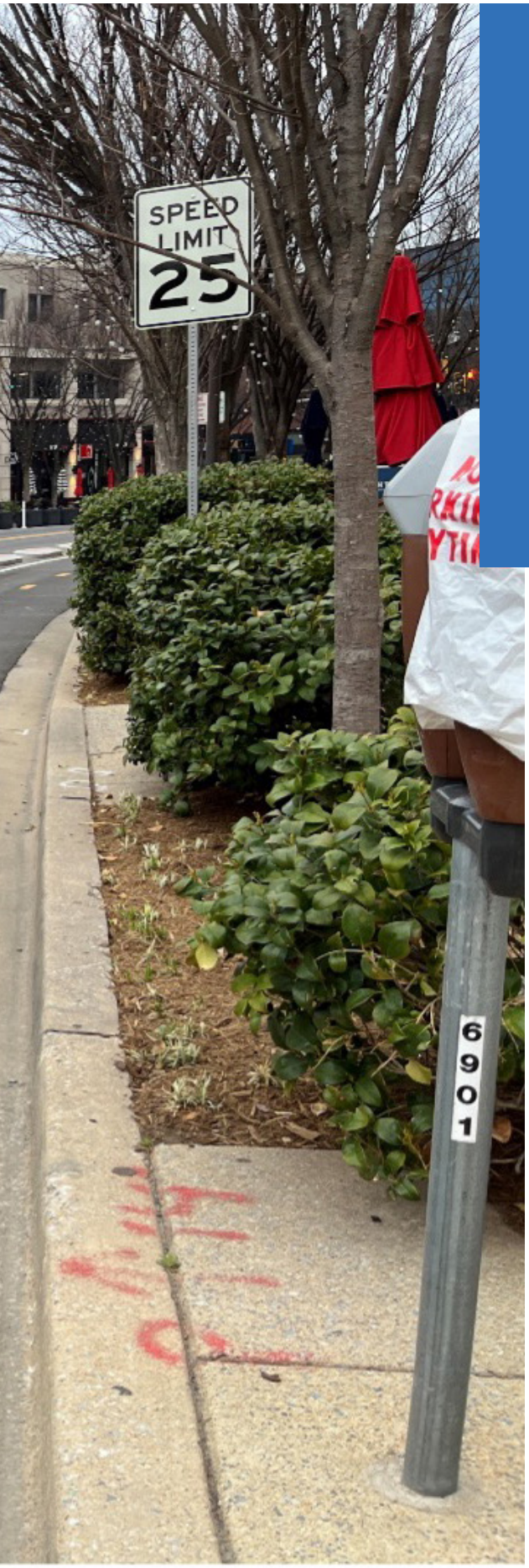
To ensure transparency and accountability of implementation, the Plan requires the Planning Department to produce a biennial monitoring report to track how well the vision of the Plan is being fulfilled. The report is reviewed by the Planning Board and approved by the County Council. This report includes six main sections:

- Goals and Objectives
- Bikeways
- Bicycle Parking
- Bicycle-Supportive Programs
- Bicycle-Supportive Legal and Policy Framework
- Recommendations

The appendix of this document provides a detailed evaluation of metrics and the status of bikeway projects.

3

Goals & Objectives



The *Bicycle Master Plan* envisions a future where Montgomery County is a world-class bicycling community in which everyone will be able to travel by bicycle on a comfortable, safe, and connected bicycling network. This vision is defined by four goals. The first goal measures the results – whether more people are bicycling. The other goals measure the process and represent things that can be done to improve the chance that the first goal is advanced. The four goals are:

- **Goal 1: Increase Bicycling Rates in Montgomery County**
- **Goal 2: Create a Highly Connected, Convenient and Low-Stress Bicycling Network**
- **Goal 3: Provide Equal Access to Low-Stress Bicycling for all Members of the Community**
- **Goal 4: Improve the Safety of Bicycling**

Defining a vision for the *Bicycle Master Plan* does not simply mean stating the goals on paper. It also lays the foundation for a comprehensive monitoring program, which supports the implementation of the Plan by providing an ongoing assessment of how effective Montgomery County is in meeting the Plan's goals and objectives over time. This section of the report discusses the extent to which each of the four goals in the *Bicycle Master Plan* have advanced over the past two years. Table 3 compares the results of each metric every two years with targets that were established in the Plan. A detailed discussion of each of the metrics is included in the *Bicycle Master Plan.*

A note about rounding: The metrics reported in this document are rounded, which means that in some instances the results may appear to be off by 1%.

3.1 GOAL 1 | Increase Bicycling Rates in Montgomery County

One of the most important measures of success for the *Bicycle Master Plan* is the increase in bicycling in Montgomery County. The objectives for Goal 1 evaluate how bicycling increases over time among different groups of people, destinations, and trip types. Success in advancing this goal is largely driven by success in advancing the other three goals of the Plan, as well as the program and policy recommendations in the Plan.

Bicycling rates are likely to have been heavily impacted by the COVID-19 pandemic and may not provide a reliable measure of the bicycling rates in the county. On the one hand, the surge in teleworking and temporary virtual schooling reduced daily trips, especially commute trips and trips to school, which are the most likely type of trips to be made by bicycling. On the other hand, health-related restrictions on gatherings coupled with supportive programs like Montgomery Park's Open Roadways Initiative and MCDOT's Shared Streets program increased recreational bicycling.

The Percentage of Residents who Commute by Bicycle (Objective 1.1) remained constant from 2019 to 2021 at 0.5%.

Bicycling Rates to the Transportation Management Districts (Objective 1.2) were collected during thr fall of 2022, and compared to 2020, show a slight increase in bicycle travel to downtown Bethesda (from 0.8% in 2020 to 1.4% in 2022), Friendship Heights (from 0.4% in 2020 to 0.6% in 2022), Greater Shady Grove (from 0.0% in 2020 to 0.1% in 2022) and North Bethesda (from 0.3% in 2020 to 0.4% in 2022), but a reduction in downtown Silver Spring (from 1.8% in 2020 to 1.6% in 2022). Results were provided in White Oak for the first time and showed a bicycling rate of 0.4%.

Bicycle Rates to Transit (Objective 1.3), collected for the WMATA Metrorail Red Line in the fall of 2022, show that 1.6% of passengers accessed the Red Line by bicycle. While the bicycling rates to Red Line stations remained consistent for many of the stations, the rates grew substantially for the Forest Glen station (1.6% to 4.7%) and dropped at Medical Center (4.5% to 3.4%) and North Bethesda (2.7% to 0.0%).

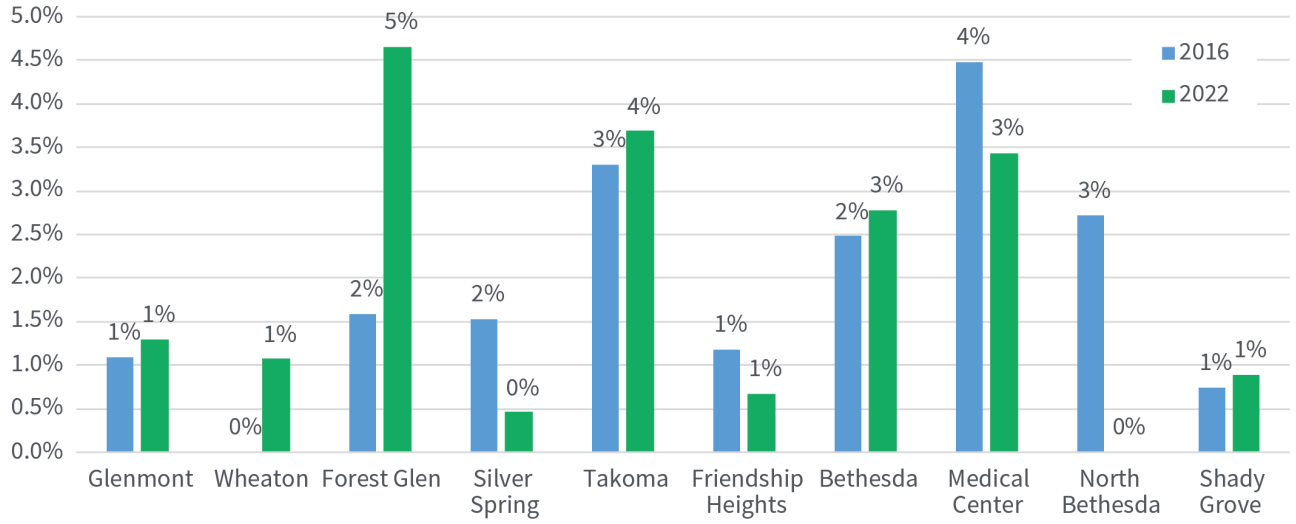


Figure 3: Bicycling Rates to Transit by Station, 2016 and 2022

Source: WMATA Ridership Surveys, 2016 and 2022

No recent surveys were conducted for the MARC Brunswick Line. Bicycling rates to transit by station appear in Appendix A.2.

Bicycle Rates to Schools (Objective 1.4) were last collected in the fall of 2019 and show that bicycling rates were about 2.5% for elementary schools, 1.7% for middle schools and 1.7% for high schools. Plans for a fall 2020 survey were put on hold by the pandemic. Schools with the highest rates of bicycling in fall 2019 include:

- High School: Bethesda-Chevy Chase (11%)
- Middle Schools: Thomas Pyle (8%), Hallie Wells (5%)
- Elementary Schools: Piney Branch (14%), Weller Road (11%), Bradley Hills (9%), Gibbs (9%)

Bicycling rates for each public school can be found in Appendix A.3 (elementary schools), Appendix A.4 (middle schools), and Appendix A.5 (high schools).

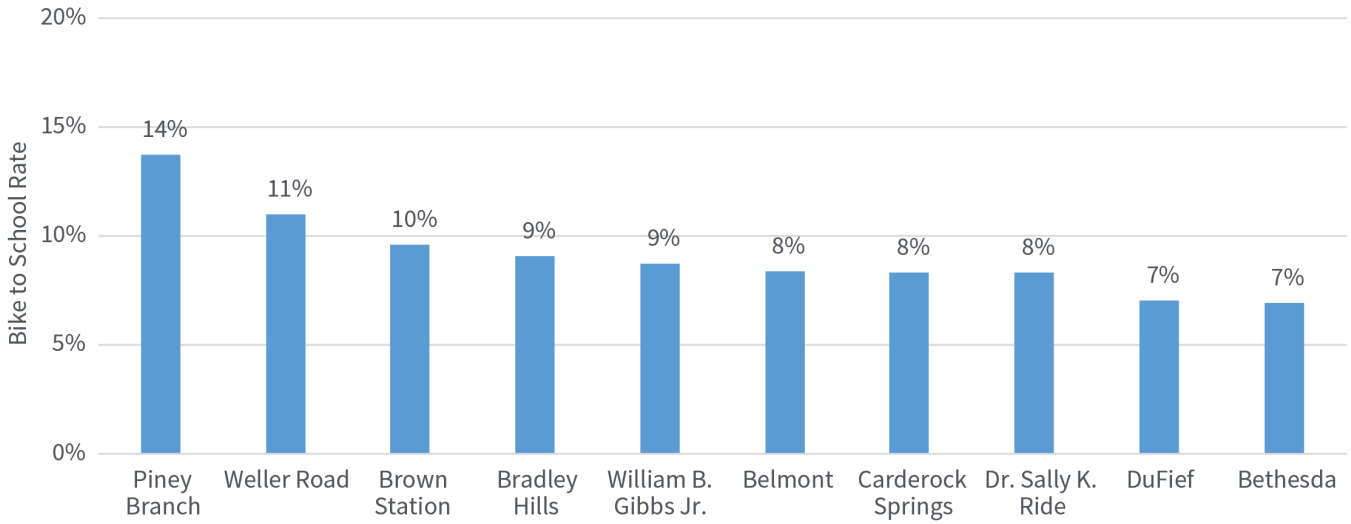


Figure 4: Top 10 Bicycle to Elementary School Rates, 2019

Source: Montgomery County Public Schools, Fall 2019

3.2 Goal 2 | Create a Highly Connected, Convenient, and Low-Stress Bicycling Network

The objectives for Goal 2 capture how well destinations are connected on a low-stress bicycling network. It also evaluates the availability of bicycle parking.

LOW-STRESS BICYCLING METRICS

Bicycling is more likely to become a mainstream mode of transportation in Montgomery County if a low-stress network is developed that enables people to travel by bicycle to the places they want and need to go safely and comfortably. While about 75% of the roads in the county are already low-stress, they are often surrounded by high-speed and high-volume roads or difficult intersections, effectively creating islands of connectivity. Where feasible, reductions in traffic lanes and speeds can link these islands; where infeasible, bicycle infrastructure, such as sidepaths, separated bike lanes and conventional bike lanes, are needed to connect the network. Four metrics evaluate the availability of low-stress bicycling:

- Countywide Connectivity (Objective 2.1)
- Connectivity to Transit Stations (Objective 2.2)
- Connectivity to Public Schools (Objective 2.3)
- Connectivity to Public Facilities (Objective 2.4)

Countywide Connectivity (Objective 2.1) is the overall measure of low-stress connectivity and measures the percentage of potential bicycling trips that will be able to be made on a low-stress bicycling network. This metric grew slightly between December 2020 and December 2022 from 15% to 16%. Upon completion of projects that were under construction in December 2022, this will grow to 17% and with the completion of projects in the capital improvements program or development projects approved in 2021 and 2022, countywide connectivity will grow to 20%.

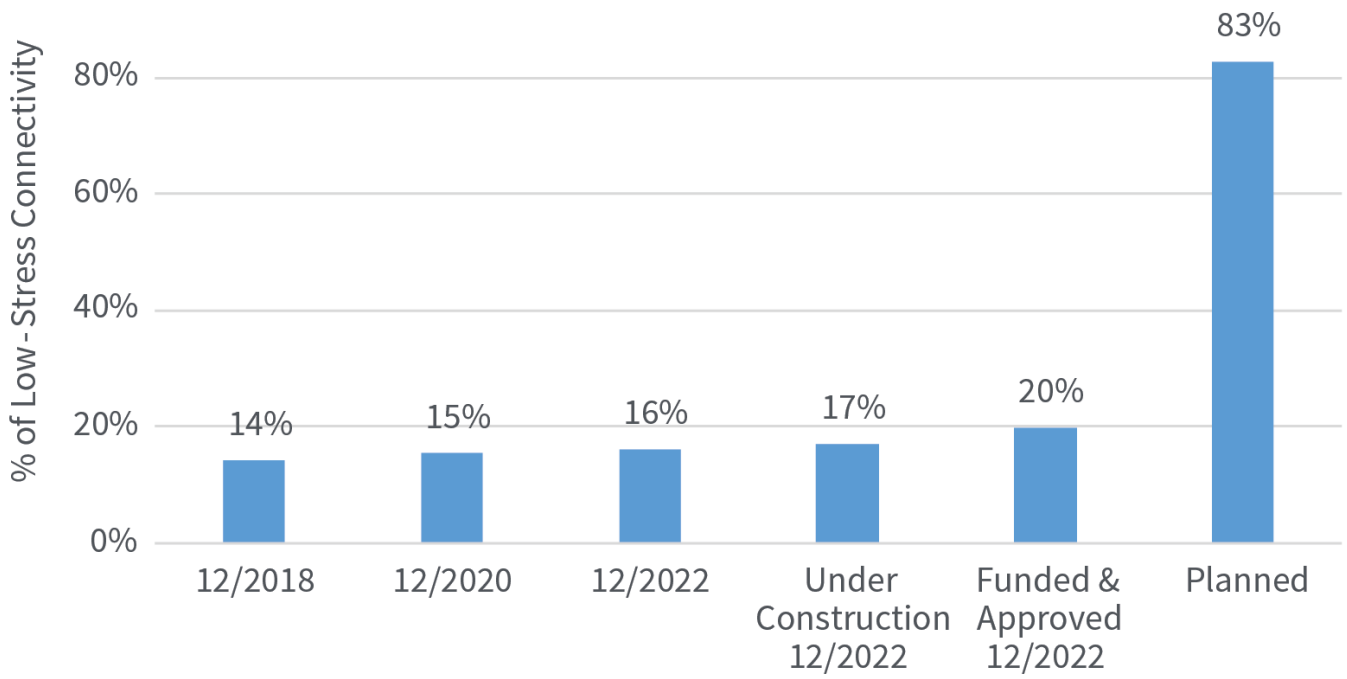


Figure 5: Growth in Countywide Connectivity

The experience of individual policy areas shows greater improvements in some areas of the county. Between December 2020 and December 2022, connectivity to the Clarksburg policy area grew 7%, the Olney policy area grew 4% and the Clarksburg Town Center grew 3%. The following policy areas will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Silver Spring CBD will increase 27%, from 7% to 34%
- Clarksburg Town Center will increase 24%, from 27% to 51%
- Chevy Chase Lake will increase 23%, from 4% to 27%
- Lyttonsville will increase 21%, from 29% to 50%

Policy areas with the highest and lowest bicycle connectivity after all projects under construction, funded in the capital budget and conditions of development approval are constructed are shown in Figure 6. Bicycle connectivity rates for each policy area can be found in Appendix A.6. The methodology for evaluating Objective 2.1 is documented in the *Bicycle Master Plan* Appendix E.

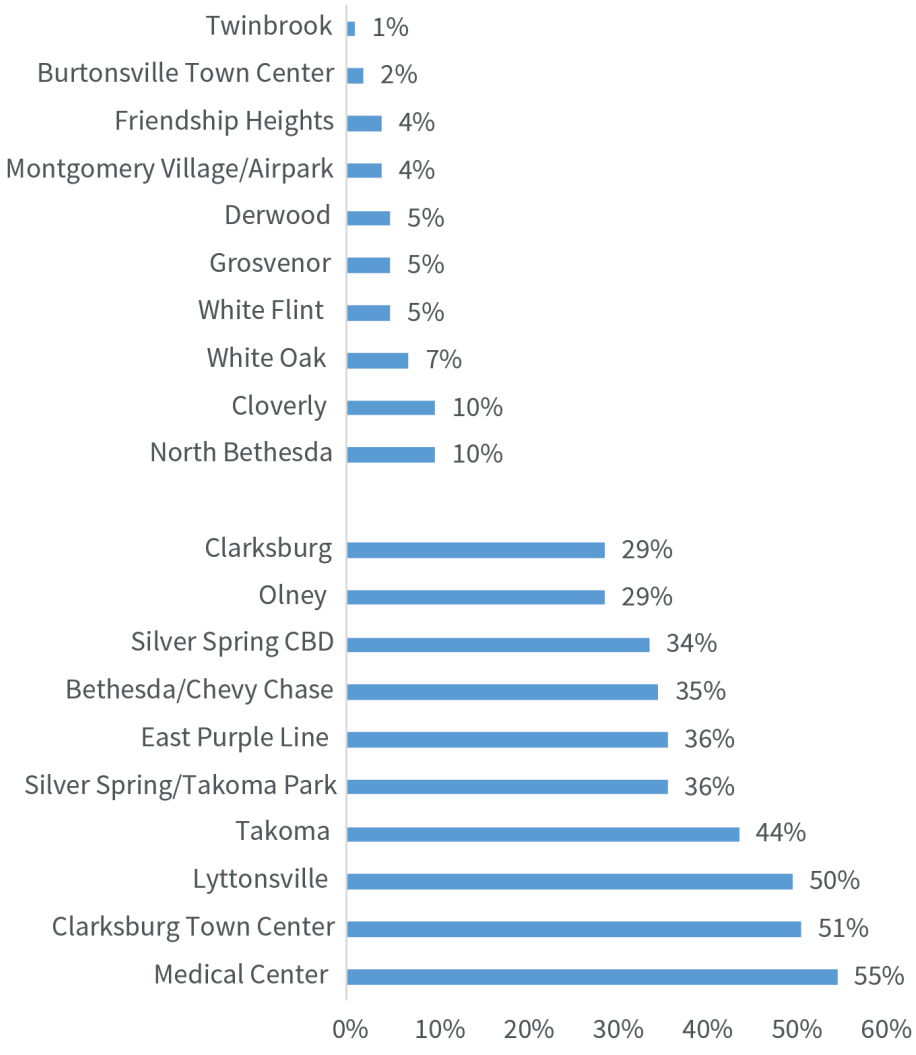


Figure 6: Policy Areas with the Highest and Lowest Bicycle Connectivity including Funded and Approved Projects

Connectivity to Transit Stations (Objective 2.2) evaluates the percentage of dwelling units within two "network distance" miles of each transit station that are connected to the public facility on a low-stress bicycling network. Between December 2020 and December 2022 this metric grew from 3% to 7% for Purple Line stations and remained the same for Red Line stations (10%), MARC stations (14%) and U.S. 29 FLASH stations (6%).

Red Line Stations: Overall, connectivity remained at 10% between December 2020 and December 2022. It will grow to 14% with projects under construction as of December 2022 and to 19% with projects that are funded or conditions of development projects. Between December 2020 and December 2022, connectivity to the Bethesda station grew 2%. These Red Line stations will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Silver Spring station will increase 31%, from 4% to 35%, due to the completion of the Capital Crescent Trail project and the Silver Spring Green Trail project, and with the future construction of the Metropolitan Branch Trail, Fenton Street cycle track and Dixon Lane separated bike lanes.
- Takoma station will increase 17%, from 22% to 39% due to the completion of the Metropolitan Branch Trail.
- Bethesda station will increase 17%, from 2% to 19% due to the completion of the Capital Crescent Trail (Phase 1) and the Montgomery Avenue/Montgomery Lane Separated Bike Lanes (Phase 1 and 2A) and the future construction of the Montgomery Avenue/Montgomery Lane Separated Bike Lanes (Phase 2C), the Capital Crescent Trail Tunnel, the Capital Crescent Surface Trail (Phase 2), the Woodmont Avenue Cycle Track (Phase 2), the Cheltenham Separated Bike Lanes and the Battery Lane Separated Bike Lanes (to be constructed by the Battery District development project).
- Medical Center station will increase 10%, from 23% to 33% due to improvements to the Jones Bridge Road shared use path and future construction of the Battery District development project.

Low-stress bicycle connectivity to Red Line stations after all projects under construction, funded in the capital budget and conditions of development approval are constructed are shown in Figure 7.

Brunswick Line Stations: Overall, connectivity remained unchanged at 14% between December 2020 and December 2022. It will grow to 20% with projects under construction as of December

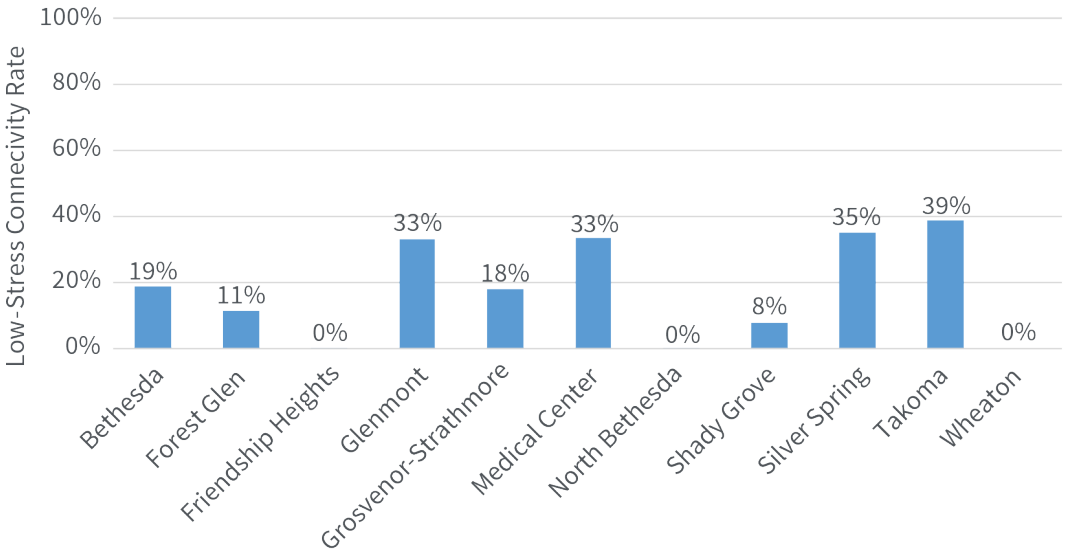


Figure 7: Low-Stress Bicycle Connectivity to Red Line Stations including Funded and Approved Projects

2022 and to 23% with projects that are funded or conditions of development projects. These Silver Spring station will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed, growing 30%, from 0% to 30%.

Purple Line Stations: Overall, connectivity to future Purple Line stations grew from 3% to 7% between December 2020 and December 2022. It will grow to 11% with projects under construction as of December 2022 and to 20% with projects that are funded or conditions of development projects. These Purple Line stations will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Silver Spring Library station will increase to 40%, from 0% to 40% due to completion of the Capital Crescent Trail project and Silver Spring Green Trail project, and with the future construction of the Metropolitan Branch Trail, Fenton Street cycle track and Dixon Lane separated bike lanes.
- Silver Spring Transit Center station will increase 28%, from 4% to 32% for the same reasons at the Silver Spring Library station.
- Lyttonsville station will increase 25%, from 0% to 25% upon completion of the Capital Crescent Trail.
- Connecticut Avenue station will increase 22%, from 0% to 22%, upon completion of the Capital Crescent Trail, the Chevy Chase Lake development project, and the Crescent at Chevy Chase Lake development project.
- Bethesda station will increase 16%, from 2% to 18% due to the completion of the Capital Crescent Trail (Phase 1) and the Montgomery Avenue/Montgomery Lane Separated Bike Lanes (Phase 1 and 2A) and the future construction of the Montgomery Avenue/Montgomery Lane Separated Bike Lanes (Phase 2C), the Capital Crescent Trail Tunnel, the Capital Crescent Surface Trail (Phase 2), the Woodmont Avenue Cycle Track (Phase 2), the Cheltenham Separated Bike Lanes and the Battery Lane Separated Bike Lanes (to be constructed by the Battery District development project).

Low-stress bicycle connectivity to future Purple Line stations after all projects under construction, funded in the capital budget and conditions of development approval are constructed are shown in Figure 8.

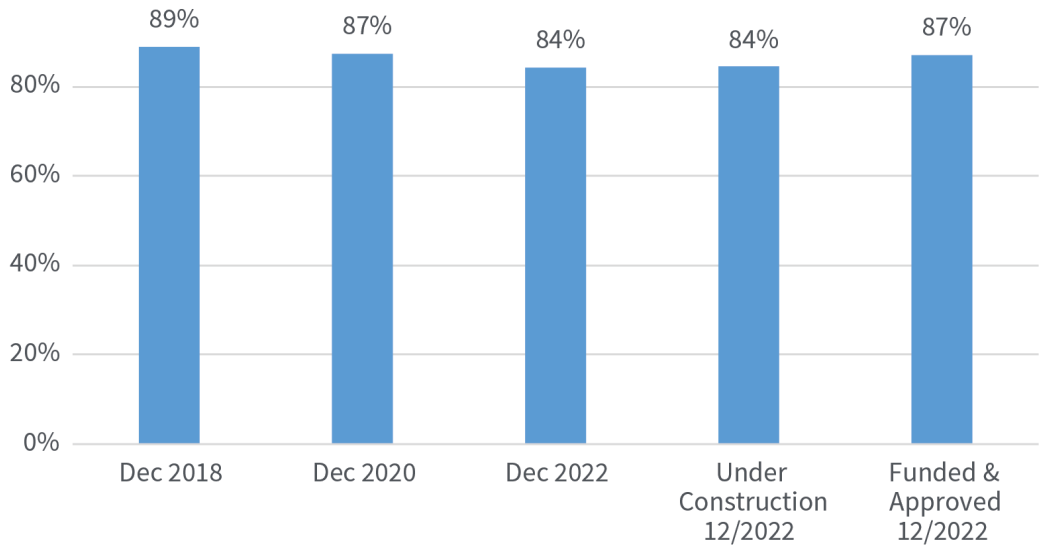


Figure 8: Low-Stress Bicycle Connectivity to Future Purple Line Stations including Funded and Approved Projects

U.S. 29 FLASH: Overall, connectivity to U.S. 29 FLASH bus stations remained unchanged at 6% between December 2020 and December 2022. It will grow to 8% with projects under construction as of December 2022 and to 18% with projects that are funded or conditions of development projects.

Bicycle connectivity rates for each transit station can be found in Appendix A.7 (Red Line), Appendix A.8(Brunswick Line), Appendix A.9 (Purple Line), and Appendix A.10 (U.S. 29 FLASH).

Connectivity to Public Schools (Objective 2.3) evaluates the percentage of dwelling units within one mile of elementary schools, 1.5 miles of middle schools and 2 miles of high schools that are connected to each school on a very low-stress bicycling network[1]. This metric grew slightly between December 2020 and December 2022 from 13% to 14% for high schools, from 21% to 22% for middle schools and remained the same for elementary schools (37%).

Elementary Schools: Overall, connectivity to elementary schools remained at 37% between December 2010 and December 2022. It will grow to 38% with projects that are funded or conditions of development projects. These elementary schools will experience the future largest growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Little Bennett Elementary School will increase 16%, from 48% to 64% with completion of Overlook Park Drive and the future construction of the MD 355/Clarksburg Shared Use Path, Clarksburg Road/MD 355 project and the Clarksburg Road/Snowden Farm Parkway project.
- Woodlin Elementary School will increase 19%, from 7% to 26% when ongoing construction of the Capital Crescent Trail is complete.
- Rolling Terrace Elementary School will increase 12%, from 72% to 84%.

Middle Schools: Overall, connectivity to middle schools remained at 20% between December 2020 and December 2022. The following middle schools will experience the future largest growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Briggs Chaney Middle School will increase 10%, from 38% to 48% with the completion of the Good Hope Road Shared Use Path project.
- Takoma Park Middle School will increase 10%, from 23% to 33%.

High Schools: Overall, connectivity to high schools remained at 10% between December 2020 and December 2022. It will grow to 12% with projects under construction as of December 2022. This high school will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Bethesda Chevy Chase High School will increase 7%, from 4% to 11% when ongoing construction of the Capital Crescent Trail is complete.

Bicycle connectivity rates for each public school can be found in Appendix A.11 (elementary schools), Appendix A.12 (middle schools) and Appendix A.13 (high schools).

Connectivity to Public Facilities (Objective 2.4) evaluates the percentage of dwelling units within two "network distance" miles of public libraries, recreation centers, and regional and recreational parks that are connected to these public facilities

1 This is based on an "as the crow flies" distance from each public school, as that is how Montgomery County Public Schools determines its busing zones.

on a low-stress bicycling network. This metric grew slightly between December 2020 and December 2022: from 8% to 9% for public libraries and remained the same for recreation centers (14%) and regional and recreational parks (27%).

Public Libraries: Overall, connectivity to public libraries grew from 8% to 9% between December 2020 and December 2022. It will grow to 14% with projects that are funded or conditions of development projects. This public library will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Silver Spring Library will grow 40%, from 0% to 40% due to completion of the ongoing Capital Crescent Trail project and the Ripley II development project, and with the future construction of the Metropolitan Branch Trail and the Fenton Street cycle track.

Recreation Centers: Overall, connectivity to recreation centers remained at 14% between December 2020 and December 2022. It will grow to 17% with the completion of projects that were under construction in December 2022. The following recreation centers will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Gwendolyn E. Coffield Recreation Center will grow 15%, from 12% to 28% upon completion of the Capital Crescent Trail.

- Leland Community Recreation Center will grow 15%, from 6% to 21% upon completion of the Capital Crescent Trail.

Recreational and Regional Parks: Overall, connectivity to recreational and regional parks remained at 27% between December 2020 and December 2022. This park will experience the largest future growth in connectivity once all projects under construction at the end of 2022 and projects in the capital improvement program and development approvals are completed:

- Rock Creek Regional Park will grow 3%, from 32% to 35% due to completion of the Capital Crescent Trail.

Bicycle connectivity rates for each public facility can be found in Appendix A.14 (public libraries), Appendix A.15 (recreation center) and Appendix A.16 (regional and recreational parks).

BICYCLE PARKING METRICS

Simply providing a comfortable bicycling network is insufficient if people do not have a secure place to store their bicycles when they get to their destinations. Objectives for this goal examine bicycle parking at major destinations, such as transit stations, commercial areas and public facilities, including schools, libraries and recreation centers. Four metrics evaluate the availability of low-stress bicycling:

- Rail Stations with Bicycle Parking Stations (Objective 2.5)
- Sufficient Bicycle Parking at Public Schools (Objective 2.6)
- Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas (Objective 2.7)
- Sufficient Bicycle Parking at Public Facilities (Objective 2.8)

In this report, only the changes to Objective 2.5 and Objective 2.6 are measured.

Rail Stations with Bicycle Parking Stations (Objective 2.5): Currently, three bicycle parking stations are advancing, including a 460-space station at the Bethesda South station[2], a 74-space station in Downtown Silver Spring and a 100-space bicycle parking station at the Grosvenor Metrorail station provided by the Strathmore Square development project.

Sufficient Bicycle Parking at Public Schools (Objective 2.6): This metric evaluates the adequacy of bicycle parking and is defined as the existing proportion of needed bicycle parking spaces that meet industry standards. In 2022, existing bicycle parking that met industry standards provided 8% of the total needed bicycle parking. This is an increase from 5% in 2016.

2 The Bethesda South station is the location of the new southern entrance to the Bethesda Metrorail station and the Bethesda Purple Line station at 7272 Wisconsin Avenue.

Elementary Schools: In 2022, the proportion of bicycle parking spaces that met industry standards provided 6% of needed parking. This is an increase from 4% in 2016. At Title I/Focus schools, industry-standard bicycle parking met 6% of the total need in 2022, increased from 5% in 2016. At non-Title I/Focus schools, industry-standard parking met 6% of total need in 2022, increased from 3% in 2016.

Middle Schools: In 2022, the proportion of bicycle parking spaces that met industry standards provided 12% of needed parking. This is an increase from 5% in 2016. At schools with above average proportion of students qualifying for FARMS, industry-standard bicycle parking met 0% of the total need in both 2022 and 2016. At non-FARMS schools, industry-standard parking met 25% of total need in 2022, increased from 10% in 2016.

High Schools: In 2022, the proportion of bicycle parking spaces that met industry standards provided 2% of needed parking. This is an increase from just under 2% in 2016. At schools with above average proportion of students qualifying for FARMS, industry-standard bicycle parking met 3% of the total need in both 2022 and 2016. At non-FARMS schools, industry-standard parking met 1% of total need in 2022, increased from 0% in 2016.

3.3 Goal 3 | Provide Equal Access to Low-Stress Bicycling for all Members of the Community

Montgomery County's Racial Equity and Social Justice Act went into effect March 2020 and requires the Planning Board to consider racial equity and social justice impacts when preparing master plans. While completion of the *Bicycle Master Plan* predated this law, one of the Plan's goals is to provide equal access to low-stress bicycling for all members of the community. The Planning Department is committed to incorporating equity into its work efforts and

includes the following metrics focused on equity:

- Connectivity to Equity Focus Areas (Objective 3.1)
- Connectivity to Title I/Focus FARMS Public Schools (Objective 3.2)

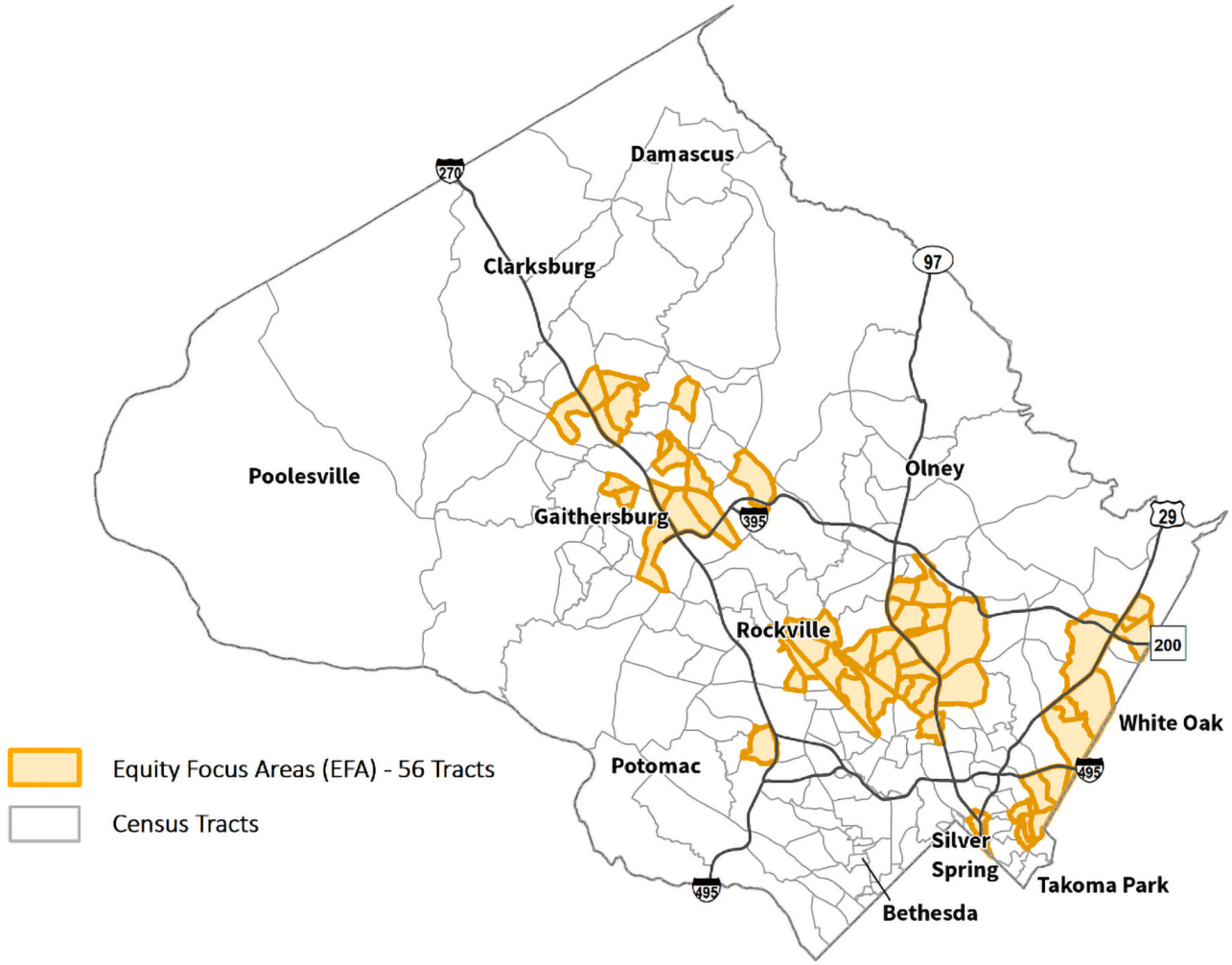


Figure 9: Equity Focus Areas

Connectivity to Equity Focus Areas (Objective 3.1) compares the percentage of potential bicycling trips that could be made on a low-stress bicycling network in all EFAs compared to all non-EFAs. A result of 100% would indicate that there is parity in the low-stress connectivity between EFAs and non-EFAs overall. A result of 50% would indicate that EFAs have half the low-stress connectivity of non-EFAs. The disparity in low-stress connectivity has increased since 2020.

EFAs had 84% of the low-stress connectivity that non-EFAs experience in December 2022, down from 87% in December 2020 and from 89% in December 2018. When projects that are under construction, funded in the capital improvement program or approved for development are completed, the metric will return to 2020 levels (87%).

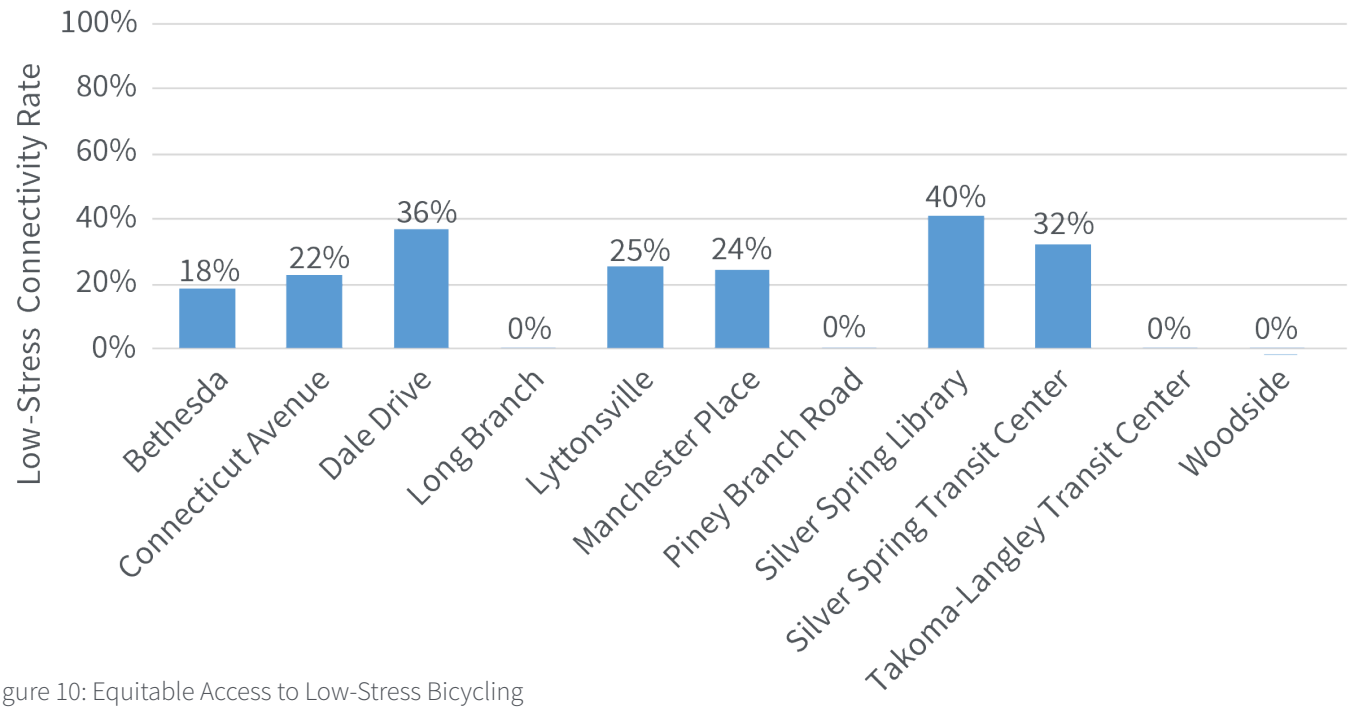


Figure 10: Equitable Access to Low-Stress Bicycling

A map showing the geographic distribution of low-stress bicycling compared with EFAs is included in Figure 11.

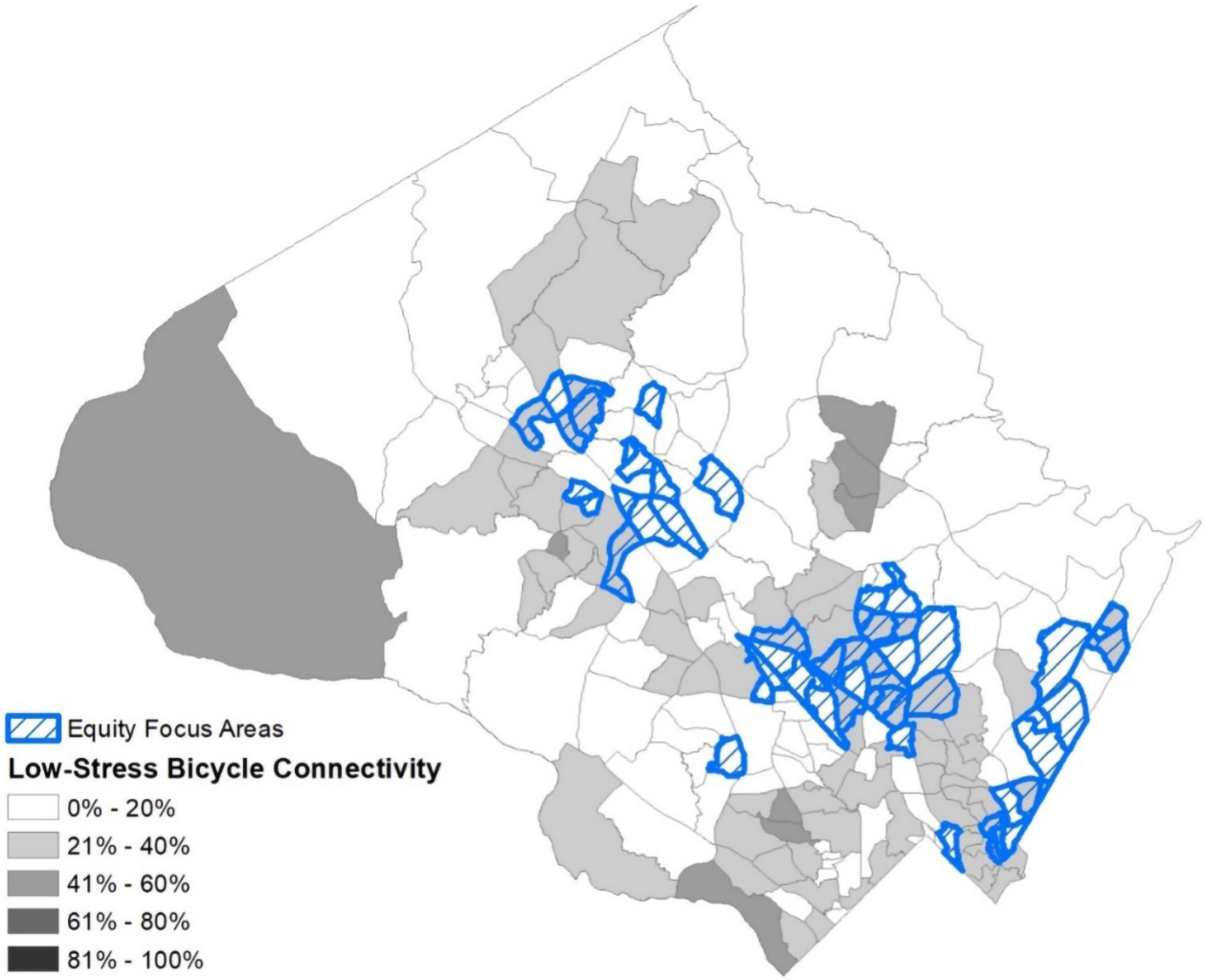


Figure 11: Low-Stress Bicycle Connectivity by Equity Focus Areas

On the other hand, for **Connectivity to Public Schoolswith Title I/Focus or High FARMS Rates (Objective 3.2),** schools that serve high numbers or high percentages of children from low-income families are better connected, on average, by low-stress bicycling than non-Title I and non-Focus schools or schools with low FARMS rates. For instance, in December 2022, the low-stress connectivity to Title I/Focus elementary schools was 41%, compared to 33% for all other elementary schools. Similarly, the low-stress connectivity to middle schools that serve families with low incomes was 22%, compared to 21% for all other middle schools. For high schools the low-stress connectivity to schools that serve families with low incomes was 18%, compared to 10% for all other high schools. This finding does not mean that connectivity to schools is sufficient, it just means that on average, schools that serve equity populations are better connected by low-stress bicycling than non-Title I/Focus schools and schools with smaller shares of FARMS-qualifying students.

3.4 Goal 4 | Improve the Safety of Bicycling

The intent of this goal is to make bicycling safe by eliminating serious injuries and fatalities. While safety can be improved by taking active measures to reduce travel speeds and providing separation from traffic, this goal will be evaluated by reactive metrics based on crash reports. Two metrics evaluate the safety of bicycling:

- Bicycling Fatalities and Serious Injuries per Year (Objective 4.1)
- Bicycling Fatalities and Serious Injuries per Year in Equity Focus Areas (Objective 4.2)

Bicycling Fatalities and Serious Injuries per Year (Objective 4.1): There were zero fatalities and 12 serious injuries among bicyclists in 2021, and four fatalities and 13 serious injuries among bicyclists in 2022.

Bicycling Fatalities and Serious Injuries per Year in Equity Focus Areas (Objective 4.2): While the goal is to eliminate all serious injuries and fatalities, it is known that serious and fatal transportation crashes are overrepresented among Black and Hispanic populations. Since race and ethnicity are not available in the crash data, this analysis reviews crash locations to see if a disproportionate number occur in EFAs compared to non-EFAs. In 2018, three of 13 serious and fatal bicyclist crashes occurred in EFAs. In 2020, none of the 11 serious and fatal bicyclist crashes occurred in EFAs. In 2022, three of 14 serious and fatal bicyclist crashes occurred in EFAs. Controlling for population size, this means that EFAs were less likely to experience serious injuries and fatalities among bicyclists than non-EFAs. In 2018, there were 0.83 fatalities and serious injuries among bicyclists in EFAs for every serious injury and fatality among bicyclists in non-EFAs, controlling for population size. In 2020 this dropped to zero. In 2022, there were 0.60 fatalities and serious injuries among bicyclists in EFAs for every serious injury and fatality among bicyclists in non-EFAs, controlling for population size.

Table 2: Evaluation of Goals and Objectives

Objective	Metric		12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 2021 / 2022	Target (Tier 4)
Goal 1: Increasing Bicycling Rates in Montgomery County								
1.1	Percentage of Residents who Commute by Bicycle.		0.6% (2018)	0.5% (2019)	0.5% (2021)	--	--	8%
1.2	Bicycling Rates to Transportation Management Districts	Downtown Bethesda	0.7%	0.8%	1.4%	--	--	15%
		Downtown Silver Spring	1.4%	1.8%	1.6%	--	--	12%
		Friendship Heights	1.4%	0.4%	0.6%	--	--	10%
		Greater Shady Grove	1.5%	0.0%	0.1%	--	--	10%
		North Bethesda	1.0%	0.3%	0.4%	--	--	10%
		White Oak	N/A	N/A	0.4%	--	--	10%

Objective	Metric		12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 2021 / 2022	Target (Tier 4)
1.3	Bicycle Rates to Transit	Red Line	1.6% (2016)	N/A	1.6%	--	--	10%
		Brunswick Line	N/A	N/A	N/A	--	--	N/A
		Purple Line	--	--	--	--	--	N/A
		US 29 FLASH	N/A	N/A	N/A	--	--	N/A
1.4	Bicycle Rates to Schools	Elementary Schools	N/A	2.5% (fall 2019)	N/A	--	--	10%
		Middle Schools	N/A	1.7% (fall 2019)	N/A	--	--	10%
		High Schools	N/A	1.7 (fall 2019)	N/A	--	--	10%
Goal 2: Create a Highly Connected, Convenient and Low-Stress Bicycling Network								
2.1	Countywide Connectivity		14%	15%	16%	17%	20%	50%
2.2	Connectivity to Transit Stations	Red Line	8%	10%	10%	14%	19%	65%
		Brunswick Line	14%	14%	14%	20%	23%	65%
		Purple Line	2%	3%	7%	11%	20%	70%
		U.S. 29 FLASH	3%	6%	6%	8%	18%	65%
2.3	Connectivity to Public Schools	Elementary Schools	37%	37%	37%	37%	38%	60%
		Middle Schools	21%	21%	22%	22%	22%	55%
		High Schools	12%	13%	14%	15%	15%	35%
2.4	Connectivity to Public Facilities	Public Libraries	8%	8%	9%	9%	14%	55%
		Recreation Centers	14%	14%	14%	17%	17%	40%
		Recreational and Regional Parks	27%	27%	27%	27%	28%	50%
2.5	Rails Stations with Bicycle Parking Stations	Red Line	0	0	0	1	3	11
		MARC Brunswick Line	0	0	0	0	0	5
		Purple Line	0	0	0	0	2	7
2.6	Sufficient Bicycle Parking at Public Schools	Elementary Schools	4% (2016)	N/A	6%	N/A	N/A	100%
		Middle Schools	5% (2016)	N/A	12%	N/A	N/A	100%
		High Schools	2% (2016)	N/A	2%	N/A	N/A	100%
2.7	Sufficient Bicycle Parking in Bicycle-Pedestrian Priority Areas		15%	N/A	N/A	N/A	N/A	40%

Objective	Metric		12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 2021 / 2022	Target (Tier 4)
2.8	Sufficient Bicycle Parking at Public Facilities	Public Libraries	74% (2016)	N/A	63%[3]	N/A	N/A	100%
		Recreation Centers	67% (2016)	N/A	85%	N/A	N/A	100%
Goal 3: Provide equal access to low-stress bicycling for all members of the community								
	Connectivity to Equity Focus Areas		89%	87%	84%	84%	87%	100%
3.2	Connectivity to Title I/Focus FARMS Public Schools (EFA/non-EFA)	Elementary Schools	41% / 32%	41% / 32%	41% / 33%	41% / 33%	41% / 34%	EFA > non-EFA
		Middle Schools	22% / 21%	22% / 21%	22% / 21%	22% / 21%	22% / 22%	EFA > non-EFA
		High Schools	15% / 10%	17% / 10%	18% / 10%	18% / 12%	18% / 12%	EFA > non-EFA
Goal 4: Improve the safety of bicycling								
4.1	The Number of Bicycling Fatalities and Serious Injuries		13	11	17	--	--	0
4.2	Ratio of EFA to non-EFA Fatalities and Serious Injuries among Bicyclists, Controlling for Population		0.83	0.00	0.60	--	--	<=1.00

-- = Metric cannot be calculated

N/A = Data was not available in 2022

3 Loss of spaces is due to Purple Line construction at Silver Spring library in 2022.

4

Bikeways

Although many trips are short enough to be made by bicycle, most are made by private motor vehicles. One barrier to bicycling is what is known as "traffic stress." The concept of traffic stress is that people have a certain tolerance for bicycling near traffic, and if that tolerance is exceeded even for a short distance, they may be deterred from bicycling. To attract the broadest segment of the population to bicycle, the *Bicycle Master Plan* recommends bikeways that create low-stress networks of bikeways.

4.1 Bikeway Implementation

As shown in Table 3, the *Bicycle Master Plan* recommends about 1,150 miles of bikeways, of which 285 miles, or about one-quarter, existed as of December 31, 2022. The largest category of recommended bikeways comprises sidepaths (603 miles), followed by off-street trails (174 miles), bikeable shoulders (128 miles), separated bike lanes (99 miles) and neighborhood greenways (51 miles).

Table 3: Status of Master-Planned Bikeway Recommendations as of December 31, 2022 (miles)[4]

Facility Type[5]	Bikeway Type	Existing	Unbuilt	Total
Trails	Off-Street Trails	98.4	76.0	174.4
	Stream Valley Park Trails	27.8	0.8	28.7
	Neighborhood Connectors	12.8	2.2	15.0
Separated Bikeway	Separated Bike Lanes	4.1	95.2	99.3
	Sidepaths	118.4	484.8	603.1
Striped Bikeways	Buffered Bike Lanes	0.0	6.5	6.5
	Conventional Bike Lanes	13.5	21.3	34.8
	Contra-Flow Bike Lane	0.0	4.9	4.9
Bikeable Shoulders	Bikeable Shoulders	9.9	118.1	128.0
Shared Roads	Shared Streets	0.0	1.1	1.2
	Neighborhood Greenways	0.4	50.9	51.2
	Priority Shared Lane Markings	0.0	5.2	5.2
Total	**Total**	**285.4**	**867.0**	**1,152.4**

4 Miles of bikeways includes amendments to the Bicycle Master Plan that have occurred since its approval. The existing miles of bikeways includes bikeways that have been completed since the plan's approval.
5 Descriptions of each bikeway type can be found in the Glossary.

During 2021 and 2022, 5.3 miles of new master-planned bikeways were completed (Table 5). This includes 3.3 miles by the public sector and 2.0 miles by developers. Sidepaths (3.9 miles) and separated bike lanes (0.9 miles) represent nearly all the bikeway mileage constructed during this time. See Appendix B.1 and Appendix B.2 for a list of specific bikeways constructed by capital projects and development projects in 2021 and 2022.

Table 4: Master-Planned Bikeways Completed in 2021 & 2022 (miles)

Facility Type	Bikeway Type	Capital Projects	Development Projects	Total
Trails	Off-Street Trails	0.0	0.2	0.2
	Stream Valley Park Trails	0.0	0.0	0.0
	Neighborhood Connectors	0.0	0.0	0.0
Separated Bikeway	Separated Bike Lanes	0.6	0.4	0.9
	Sidepaths	2.4	1.5	3.9
Striped Bikeways	Buffered Bike Lanes	0.0	0.0	0.0
	Conventional Bike Lanes	0.0	0.0	0.0
	Contra-Flow Bike Lane	0.0	0.0	0.0
Bikeable Shoulders	Bikeable Shoulders	0.0	0.0	0.0
Shared Roads	Shared Streets	0.0	0.0	0.0
	Neighborhood Greenways	0.4	0.0	0.4
	Priority Shared Lane Markings	0.0	0.0	0.0
Total	**Total**	**3.3**	**2.0**	**5.3**

The following pages provide information on some of the bikeway projects completed in 2021 and 2022.

PROJECT Woodmont Avenue Cycle Track – Phase 1	**BIKEWAY TYPE** Separated Bike Lanes
LENGTH 0.2 miles	**POLICY AREA** Bethesda CBD
PROJECT LEAD MCDOT	**COMPLETION** October 2022

PROJECT Frederick Road Bike Path	**BIKEWAY TYPE** Sidepath
LENGTH 1.6 miles	**POLICY AREA** Clarksburg, Clarksburg Town Center
PROJECT LEAD MCDOT	**COMPLETION** July 2021

PROJECT
Grove Street Neighborhood Greenway

BIKEWAY TYPE
Neighborhood Greenway

LENGTH
0.4 miles

POLICY AREA
East Purple Line

PROJECT LEAD
MCDOT

COMPLETION
November 2021

PROJECT
Snouffer School Road North

BIKEWAY TYPE
Sidepath & Conventional Bike Lanes

LENGTH
0.5 miles

POLICY AREA
Montgomery Village/Airpark

PROJECT LEAD
MCDOT

COMPLETION
March 2021

PROJECT	BIKEWAY TYPE
Avocet Towers	Separated Bike Lanes
LENGTH	**POLICY AREA**
0.1 miles	Bethesda CBD
PROJECT LEAD	**COMPLETION**
Stonebridge Associates	2022

PROJECT	BIKEWAY TYPE
Brookeville Preserve	Sidepath
LENGTH	**POLICY AREA**
0.3 miles	Olney
PROJECT LEAD	**COMPLETION**
DRB Homes	June 2022

PROJECT
Chevy Chase Lake – Block B

BIKEWAY TYPE
Separated Bike Lanes

LENGTH
0.1 miles

POLICY AREA
Chevy Chase Lake

PROJECT LEAD
Chevy Chase Land Co. and Bozzuto

COMPLETION
September 2022

PROJECT
Ripley II

BIKEWAY TYPE
Off-Street Trail & Separated Bike Lanes

LENGTH
0.2 miles

POLICY AREA
Montgomery Village/Airpark

PROJECT LEAD
Clark Construction Group

COMPLETION
September 2022

Table 5 shows that an additional 8.2 miles of new master-planned bikeways were under construction as of December 31, 2022. This includes 8.0 miles by the public sector and 0.2 miles by developers. There were 4.9 miles of off-street trails (largely the Capital Crescent Trail) and 1.9 miles of sidepaths under construction at this time.

See Appendix B.3 and Appendix B.4 for a list of specific bikeways under construction by capital projects and development projects as December 31, 2022.

Table 5: Master-Planned Bikeways Under Construction as of 12/31/2022 (miles)

Facility Type	Bikeway Type	Capital Projects	Development Projects	Total
Trails	Off-Street Trails	4.9	0.0	4.9
	Stream Valley Park Trails	0.0	0.0	0.0
	Neighborhood Connectors	0.0	0.0	0.0
Separated Bikeway	Separated Bike Lanes	0.4	0.0	0.4
	Sidepaths	1.8	0.2	1.9
Striped Bikeways	Buffered Bike Lanes	0.0	0.0	0.0
	Conventional Bike Lanes	0.3	0.0	0.3
	Contra-Flow Bike Lane	0.0	0.0	0.0
Bikeable Shoulders	Bikeable Shoulders	0.7	0.0	0.7
Shared Roads	Shared Streets	0.0	0.0	0.0
	Neighborhood Greenways	0.0	0.0	0.0
	Priority Shared Lane Markings	0.0	0.0	0.0
Total	**Total**	**8.0**	**0.2**	**8.2**

The following pages provide information on some of the bikeway projects that were under construction at the end of 2020.

PROJECT	BIKEWAY TYPE
Emory Lane Shared Use Path	Sidepath
LENGTH	**POLICY AREA**
0.1 miles	Aspen Hill
PROJECT LEAD	**COMPLETION**
MCDOT	Under Construction as of 12/31/2022

PROJECT	BIKEWAY TYPE
White Flint West Phase 2	Separated Bike Lanes
LENGTH	**POLICY AREA**
0.2 miles	White Flint
PROJECT LEAD	**COMPLETION**
MCDOT	Under Construction as of 12/31/2022 (now complete)

PROJECT
Hillandale Local Park Renovation

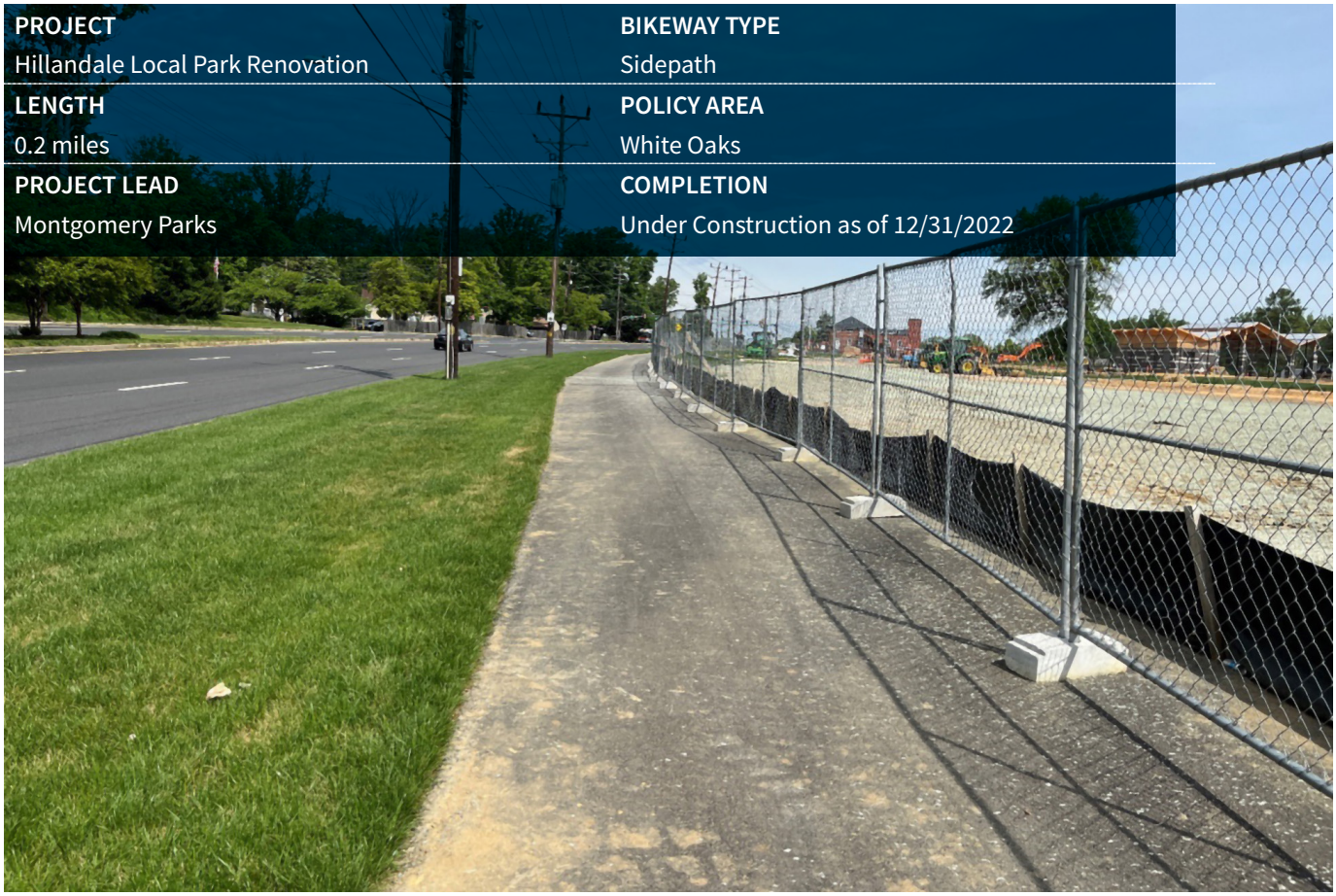
BIKEWAY TYPE
Sidepath

LENGTH
0.2 miles

POLICY AREA
White Oaks

PROJECT LEAD
Montgomery Parks

COMPLETION
Under Construction as of 12/31/2022



PROJECT
Crescent at Chevy Chase Lake

BIKEWAY TYPE
Sidepath

LENGTH
0.1 miles

POLICY AREA
Chevy Chase Lake

PROJECT LEAD
Landmark Realty

COMPLETION
Under Construction as of 12/31/2022

PROJECT
Montgomery Avenue/Lane Cycle Track Phase 1 & 2A

BIKEWAY TYPE
Separated Bike Lanes

LENGTH
0.2 miles

POLICY AREA
Bethesda CBD

PROJECT LEAD
MCDOT

COMPLETION
Under Construction as of 12/31/2022

PROJECT
Capital Crescent Trail

BIKEWAY TYPE
Off-Street Trail

LENGTH
4.9 miles

POLICY AREA
Multiple

PROJECT LEAD
Maryland Transit Administration

COMPLETION
Under Construction as of 12/31/2022

As shown in Table 6, several new master-planned bikeways are on the horizon. This includes 15.6 miles of bikeways funded in the capital budget and 3.9 miles of bikeways conditioned in approved development projects. This includes 9.5 miles of sidepaths, 4.6 miles of neighborhood greenways and 4.4 miles of separated bike lanes. See Appendix B.5 and Appendix B.6 for a list of funded bikeways and bikeways that will be delivered as part of development projects.

Table 6: Master-Planned Bikeways Funded in the Capital Improvements Program or to be Constructed by Developers as of 12/31/2022 (miles)

Facility Type	Bikeway Type	Capital Projects	Development Projects	Total
Trails	Off-Street Trails	0.5	0.0	0.5
	Stream Valley Park Trails	0.0	0.0	0.0
	Neighborhood Connectors	0.0	0.1	0.1
Separated Bikeway	Separated Bike Lanes	3.2	1.2	4.4
	Sidepaths	7.0	2.5	9.5
Striped Bikeways	Buffered Bike Lanes	0.0	0.2	0.2
	Conventional Bike Lanes	0.3	0.0	0.3
	Contra-Flow Bike Lane	0.0	0.0	0.0
Bikeable Shoulders	Bikeable Shoulders	0.0	0.0	0.0
Shared Roads	Shared Streets	0.0	0.0	0.0
	Neighborhood Greenways	4.6	0.0	4.6
	Priority Shared Lane Markings	0.0	0.0	0.0
Total	**Total**	**15.6**	**3.9**	**19.5**

4.2 Fee-in-Lieu

While for the most part it is preferable to require a developer to construct a master-planned bikeway as part of its project, in some instances, the Planning Board determines that it is more appropriate to take a financial contribution from a developer in lieu of having the developer construct the project. The fee-in-lieu contributions in 2021 and 2022 were made by five projects and were valued at over $458,000, or roughly $91,000 per project.

Table 7: Fee-in-Lieu Contributions in 2021 and 2022

Project	Amount
Block F Kilmarock	$6,912
Fawsett Farms	$23,040
The Claiborne	$127,000
Kilmain ETC (Parcel P440)	$128,000
Park Montgomery	$172,595
Total	**$457,547**

4.3 Bikeway Prioritization

Recognizing that the network of bikeways recommended in the *Bicycle Master Plan* is extensive and that funding is limited, the Plan establishes priorities for implementation by the county. The approach to prioritizing construction of the bikeway network is based on reaching the targets established for each metric in the Goals, Objectives, Metrics and Targets section of this Plan. The priorities focus on increasing bicycling in the county as quickly as possible by focusing initial efforts on constructing networks of bikeways in places that the Montgomery County Council has designated as Bicycle and Pedestrian Priority Areas (BiPPAs), and on completing connections between downtowns and ensuring that low-stress bicycling is equitably distributed. Also prioritized are filling gaps in the existing low-stress bicycling network and low-cost bikeways, such as neighborhood greenways, which will funnel bicyclists to the BiPPAs.

The *Bicycle Master Plan* groups bikeways into four groups.

- Tier 1 projects are recommended to be substantially completed in the near-term following approval of the *Bicycle Master Plan*. These projects include:
    - Bikeways located in seven BiPPAs (Bethesda, Friendship Heights, Life Sciences Center, Silver Spring, Wheaton, White Flint, White Oak).
    - Neighborhood greenways feeding into these BiPPA areas.
    - High-demand bikeways that were included in the Capital Improvements Program at the time of approval.
    - Other county priorities.
- Tier 2 projects include bikeways located in the remaining BiPPAs.
- Tier 3 projects include:
    - Remaining neighborhood greenways.
    - Highest-demand bikeways located outside of the BiPPAs.
    - High-demand recreational bicycling routes.
- Tier 4 projects include:
    - All remaining bikeways that are recommended for completion within the life of the plan.
    - Several heavily used recreational bicycling routes.

All other projects are not prioritized for implementation within the life of the Plan but may be implemented as opportunities arise.

The *Bicycle Master Plan* identifies several Tier 1 projects as having the highest priority. Table 8 shows the status of implementing these high priority projects.

However, as the evaluation of Objective 3.1 on page 26 indicates that the disparity in access to low-stress bicycling in EFAs compared to non-EFAs has worsened since 2020, a change in prioritization is warranted. The recommendations section of this report identifies four high-priority bikeway projects in Equity Focus Areas that should be advanced in the near term.

Table 8: Status of Tier 1 Bikeway Projects

Project	From	To	Bikeway	Length (mi)	Status
2nd Avenue / Wayne Avenue	Spring Street	Georgia Avenue	Separated Bike Lanes	0.5	Complete
Arlington Road	Old Georgetown Road	Bradley Boulevard	Separated Bike Lanes	0.7	Not yet started
Bethesda Trolley Trail	Battery Lane	Rugby Avenue	Off-Street Trail	0.1	Complete
Broadbirch Drive	Tech Road	Cherry Hill Road	Separated Bike Lanes	0.7	Not yet started
Capital Crescent Trail Breezeway	Woodmont Avenue	Elm Street Park	Off-Street Trail	0.2	Partially Complete & Funded
Cherry Hill Road	Prosperity Drive	Prince George's County	Separated Bike Lanes	1.3	Not yet started
City of Rockville to Friendship Heights Breezeway (via Bethesda Trolley Trail, Woodmont Avenue and MD 355)	Rockville Pike	Woodglen Drive	Separated Bike Lanes	0.1	Not yet started
	NIH Property Line	Battery Lane	Off-Street Trail	0.1	Development Condition
	Battery Ln	Old Georgetown Rd	Separated Bike Lanes	0.5	Not yet started
	Old Georgetown Road	Strathmore Street	Separated Bike Lanes	0.5	Partially Funded & Under Construction
Dixon Avenue	Wayne Avenue	Georgia Avenue	Separated Bike Lanes	0.3	Funded
Edgemoor Lane	Exeter Road	Arlington Road	Neighborhood Greenway	0.2	Not yet started
Edgemoor Lane	Arlington Road	Bethesda Metrorail Station	Separated Bike Lanes	0.2	Not yet started
Fenton Street	Ellsworth Drive	Wayne Avenue	Separated Bike Lanes	0.1	Funded
Fenton Street	Wayne Avenue	King Street	Separated Bike Lanes	0.6	Funded
Friendship Boulevard	Willard Avenue	District of Columbia	Separated Bike Lanes	0.2	Not yet started
Glenmont to Silver Spring Breezeway (via Amherst Avenue)	Blueridge Avenue	University Boulevard	Separated Bike Lanes	0.2	In Design
	University Boulevard	Windham Lane	Separated Bike Lanes	0.7	In Design
Glenmont to Silver Spring Breezeway (via Fenton Street)	Planning Dept.	Cameron Street	Separated Bike Lanes	0.3	Complete
	Cameron Street	Ellsworth Drive	Separated Bike Lanes	0.5	Funded
Grandview Ave	Blueridge Ave	University Boulevard	Separated Bike Lanes	0.1	In Design
	University Boulevard	Reedie Drive	Separated Bike Lanes	0.2	In Design

Project	From	To	Bikeway	Length (mi)	Status
Life Sciences Center Loop	Key West Avenue	Great Seneca Highway	Separated Bike Lanes	1.1	Development Condition
	Great Seneca Highway	Key West Avenue	Separated Bike Lanes	0.5	Funded
Marinelli Road	Executive Boulevard	Woodglen Drive	Separated Bike Lanes	0.2	Not yet started
	Rockville Pike	Nebel Street	Separated Bike Lanes	0.4	Funded
Medical Center Drive (Outer Side)	Great Seneca Highway	Key West Avenue	Separated Bike Lanes	0.5	Development Condition
Montgomery Ave	Wisconsin Avenue	East West Highway	Separated Bike Lanes	0.4	Partially Funded & Complete
Montgomery Ln	Woodmont Avenue	Wisconsin Avenue	Separated Bike Lanes	0.1	Under Construction
Veirs Mill Road to White Oak Breezeway (via Cherry Hill Road)	Columbia Pike	Prosperity Drive	Separated Bike Lanes	0.1	Not yet started
Woodmont Avenue	Strathmore Street	Wisconsin Avenue	Separated Bike Lanes	0.1	Not yet started

5

Bicycle Parking

The availability of secure and convenient bicycle parking is an important factor when considering a trip by bicycle. No matter how well connected the bikeway network is, many people will forgo bicycling if their destinations lack safe places to secure their bicycles. An adequate supply of bicycle parking encourages bicycling while reducing theft and improper use of trees and street furniture for bicycle parking.

Whether traveling to work, school, shopping, or home, people must feel confident that their bicycles will not be stolen or vandalized when stored. The length of time that a bicycle will be parked largely determines the level of security that is needed. The longer the time period, the more secure the bicycle parking needs to be.

The following sections review bicycle parking at public facilities, such as schools, libraries, recreation centers, and transit stations.

INDUSTRY STANDARDS FOR ADEQUATE BICYCLE PARKING

Industry-standard, short-term bicycle parking provides at least two points of contact to support a bicycle in an upright position and allows locking the frame and one or both wheels with a U-lock—which is more difficult to cut through than cable locks or chains. The image below, from Silver Creek Middle School, shows an example of an adequate form of short-term bicycle parking—an "inverted-U" rack.

Other bicycle racks, such as the undulating (or "wave") racks and the schoolyard (or "wheel bender") racks shown in the image below, provide only one point of contact with a bicycle, and, thus, do not meet industry standards. Most bicycle parking at public facilities in the county are one of these two types of inadequate racks.

Long-term bicycle parking, usually for over two hours, similarly requires at least two points of contact, but are usually provided in a sheltered or enclosed space that provides additional security. These also include bicycle lockers or secured, shared spaces—such as a bicycle room or cage.

Silver Creek Middle School Bicycle Racks

Garrett Park Middle School (left) and Walter Johnson High School (right) Bicycle Racks

5.1 Bicycle Parking at Public Facilities

Schools, Libraries, and Recreation Centers

A study conducted in 2016 for the *Bicycle Master Plan*, and now updated in 2022 for this report, compared the availability of bicycle parking spaces at each school, public library, and recreation center with the estimated need for bicycle parking.

As shown in Table 9, the 2022 update found that only 652 of 4,432 bicycle spaces at these public facilities adhere to industry standards, such as "inverted-U" racks. While there are more bicycle parking spaces today than in 2016, most racks still do not provide industry-standard safety or ease of use. However, some progress has been made. Today, of all existing bicycle parking spaces, almost 15% meet industry standards; this is improved from about 11% of spaces in 2016.

Table 9: Existing Bicycle Parking Spaces at Public Facilities in 2022[6]

Public Facility Type	Existing Spaces	Adequate Spaces	Inadequate Spaces
Elementary Schools	2,031	235	1,796
Middle Schools	1,075	242	833
High Schools	837	50	787
Public Libraries	190	54	136
Recreation Centers	299	71	228
Totals	**4,432**	**652**	**3,780**

To meet existing needs, 8,085 spaces need to be added or upgraded to meet industry standards, as shown in Table 10. The second column provides a breakdown of industry-based estimates[7] for parking required at each type of facility, and the last column shows the total adequate bicycle spaces needed for each type of facility.

Table 10: Shortage of Bicycle Parking Spaces at Public Facilities in 2022

Public Facility Type	Industry Estimate of Need	Existing Adequate Spaces	Total Shortage of Adequate Spaces[8]
Elementary Schools	3,928	235	3,699
Middle Schools	1,994	242	1,776
High Schools	2,540	50	2,490
Public Libraries	86	54	58
Recreation Centers	84	71	62
Total	**8,632**	**652**	**8,085**

6 Data is from a 2022 inventory of bicycle parking at public facilities.
7 The industry-based estimate of need is from the Association of Pedestrian and Bicycle Professionals Bicycle Parking Guidelines, 2nd Edition. It is based on 1 space per 20 student capacity and 1 space per 8,000 square feet of gross floor area for libraries and recreation centers.
8 Some schools have provided more existing adequate spaces than are required by industry standards, so the Total Shortage of Adequate Spaces is greater than simply the difference between Industry Estimate of Need and the number of Existing Adequate Spaces.

BICYCLE PARKING STATIONS

The *Bicycle Master Plan* recommends bicycle parking stations at all WMATA Metrorail Red Line stations, higher-demand MARC stations, and future Purple Line stations to increase the numbers of bicyclists traveling to these transit hubs. The Plan groups these recommendations into four tiers of implementation. Table 11 summarizes the status of the planned Tier 1 bicycle parking stations. Currently, two of the Tier 1 bicycle parking stations are advancing, including a 460-space station at the Bethesda South station and a 74-space station in downtown Silver Spring. Additionally, the Strathmore Square development project is constructing a 100-space bicycle parking station at the Grosvenor Metrorail station, a Tier 2 recommendation.

Table 11: Status of Planned Tier 1 Bicycle Parking Stations at Transit Hubs

Station	Long-Term Spaces	Short-Term Spaces	Status
Bethesda South Station	330	130	Funded, 460 spaces
Forest Glen Station	300	100	
Glenmont Station	400	150	
Shady Grove Station	330	110	
Silver Spring Station	600	170	In Design, 74 spaces
Wheaton Station	400	100	
White Flint Station	250	50	

5.2 Bicycle Parking Provided Through Development and Capital Projects

As shown in Table 12, progress was also made toward implementing short-term and long-term bicycle parking in the county. In particular, between 2021 and 2022 over 300 short-term bicycle parking spaces were conditioned with development approvals and two spaces were installed by MCDOT. Additionally, nearly 1,500 long-term bicycle parking spaces were conditioned with development approvals.

Table 12: Bicycle Support Facilities in 2021 and 2022

Bicycle Parking and Repair Stations	Conditioned with Development Approvals	Installed by MCDOT
Short-Term Bike Parking Spaces	313	2
Long-Term Bike Parking Spaces	1,475	
Bicycle Repair Stations	6	

Grosvenor – Strathmore Metrorail Station

The Strathmore Square development project is required to provide at least 110 long-term and 50 short-term bicycle parking spaces at the Grosvenor – Strathmore Metrorail station and bus loop. The facility was nearing completion in December 2022.

6

Bicycle-Support Programs

The *Bicycle Master Plan* recommends 12 bicycle-supportive programs. Progress has been made in all of them (see Table 13).

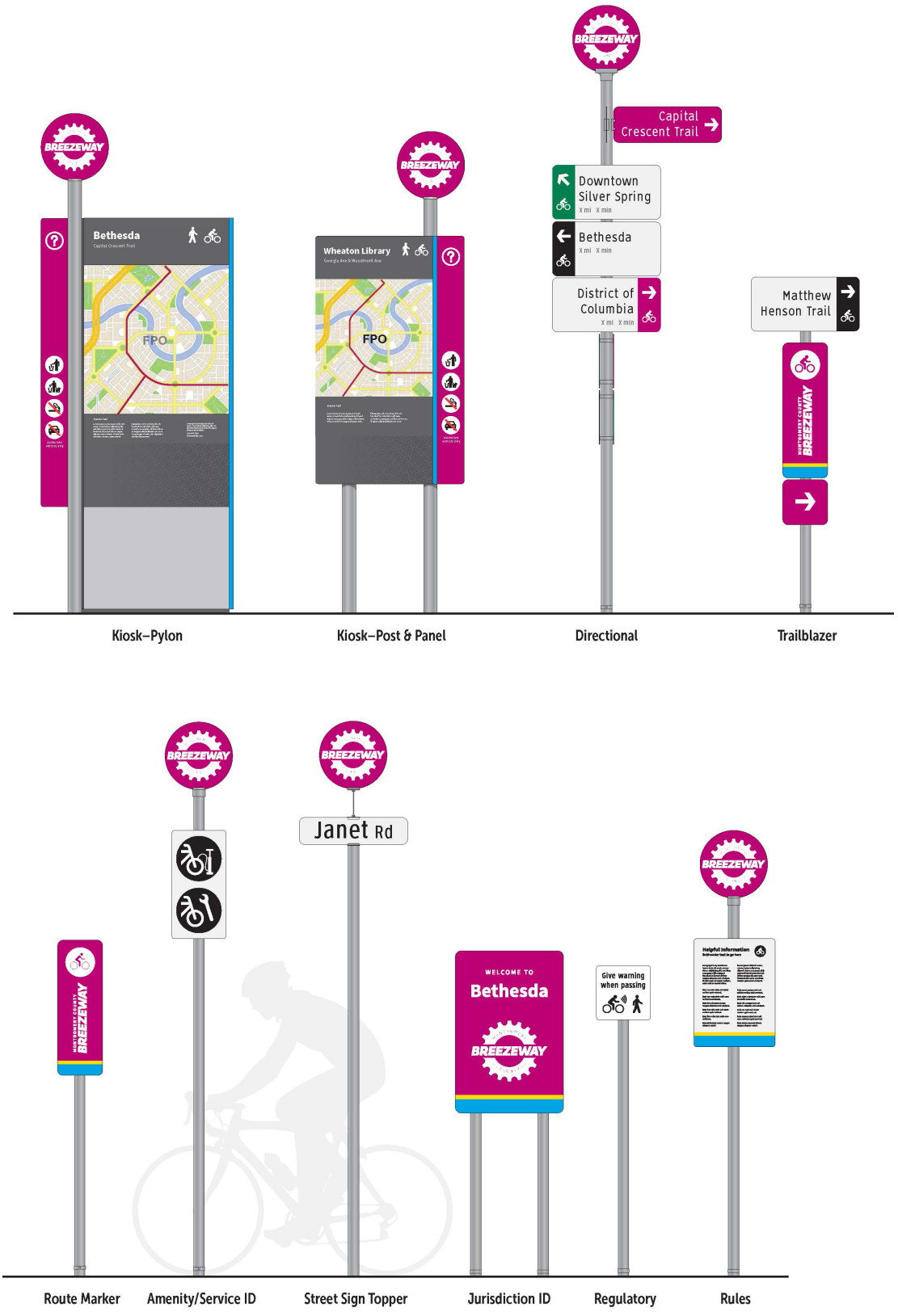
Table 13: Status of Program Recommendations

Program Recommendation		Lead Agency	Progress	Status	Recommended Timeframe
2.1	Bikeways Program – Minor Projects: Fund Neighborhood Connectors	MCDOT	No change. The Bikeways Program - Minor Projects (507596) project includes funds that can be used to implement Neighborhood Connector projects, but this funding source has not been used to upgrade Neighborhood Connectors since the approval of the Bicycle Master Plan.	Ongoing	Short Term
2.2	Roadway- and Bikeway-Related Maintenance	MCDOT	On-road and shared use path maintenance and clearance is performed by the Division of Highway Services and by the Urban Districts. Residents can also report maintenance and clearance issues through MC311.	Ongoing	Medium Term
2.3	Snow Removal/Wind/ Rain Storms	MCDOT	The MCDOT Division of Highway Services has equipment to clear on-road, separated bike lanes. MCDOT also clears 100 miles of sidewalk.	Ongoing	Medium Term
2.4	Resurfacing: Primary/ Arterial and Sidewalk & Curb Replacement	MCDOT	As roadways and curbs are replaced, bikeways in the right-of-way are also refreshed.	Ongoing	Medium Term
3.1	BikeMontgomery Outreach Program	MCDOT	MCDOT partners with public schools and public libraries for a variety of events that encourage bicycling. MCDOT partners with the Washington Area Bicyclist Association (WABA) for adult learn-to-ride classes, MCDOT Safe Routes to School program hosts bike rodeos teaching elementary school aged students safe biking skills.	Ongoing	Medium Term
3.2	Bicycle Master Plan Monitoring Report	Planning	The second biennial monitoring report will be published in June 2023.	Ongoing	Ongoing
3.3	Neighborhood Greenway Program	MCDOT	Six Neighborhood Greenway projects are funded in the capital budget through the BiPPA-General, BiPPA-Wheaton and BiPPA-Purple Line programs: Cedar/Bonifant/Grove/ Sligo/Woodbury, Grandview/Mason (Arcola to Georgia), Grandview (Arcola to Blueridge), Greenwood (Piney Branch to Wabash), Greenwood (Wabash to Division), and Domer/ Barron/Gilbert.	Ongoing	Short Term
3.4	Bicycle Parking Program	MCDOT	Installed a bike rack at Kings Local Park.	Ongoing	Short Term
3.5	Public School Bicycle Education	MCPS	MCDOT partners with public schools for bicycle safety events including bicycle rodeos, Walking (and biking) Wednesdays, and Bike to School Day. Over time, the hope is MCPS will add a more comprehensive bicycle training program to their PE curriculum.	Ongoing	Medium Term
3.6	Bicycle Facility Education	MCDOT	MCDOT continues its Lookout campaign to educate residents on new bicycle facilities.	Ongoing	Short Term
3.7	Bicycle Count Program	MCDOT	Completed manual bike counts at 50 locations in 2021 and 79 locations in 2022. Installed 11 new automated bike counters in 2022.	Ongoing	Short Term
3.8	Countywide Wayfinding Plan	MCDOT	The Planning Department's Bikeway Branding project was 90% complete in December 2022.	Partially Complete	Medium Term

Program 3.2: *Bicycle Master Plan* Biennial Monitoring Report

The first *Bicycle Master Plan* Biennial Monitoring Report, 2019 – 2020, was published in November 2021.

The 2019 – 2020 Bicycle Master Plan Biennial Monitoring Report



Program 3.8: Countywide Wayfinding Plan

The Bikeway Branding Project created a “sign family” for bicycling routes designated as Breezeways.

7

Bicycle-Supportive Legal and Policy Framework

The *Bicycle Master Plan* recommends 22 bicycle-supportive legal and policy recommendations. Substantial progress has been made in all of them (see Table 14).

Table 14: Status of Policy Recommendations

Policy Recommendation		Lead Agency	Progress	Status	Recommended Timeframe
2.1	Authorize Lower Posted Speed Limits	MCG	Lower default Target Speeds per Complete Streets were signed into law on November 7, 2022.	Complete	Ongoing
2.2	Repeal the Mandatory Use Law (requires bicyclists to ride in marked bike lanes)	MCG	Not currently a legislative priority.	Not yet started	Ongoing
2.3	Conduct a "Rules of the Road" Assessment	Multiple	The Complete Streets Design Guide bills 24-22 and 34-22 were signed into law on November 7, 2022 and December 27, 2022, respectively, with accompanying regulations still in development as of March 2023; Safe Streets Act had a County Council Committee worksession on March 30, 2023. Neither of these explicitly addresses this action item in detail but are all related to it.	Partially Complete	Short Term
2.4	Replace the State's Marked Bike Lane Policy	MCG	While the state's marked bike lane policy remains in effect, MDOT/SHA's Context Driven 1.0 guide permits protected bicycle lanes to be evaluated in areas defined as urban contexts (Bethesda, Rockville, Silver Spring and Wheaton).	Partially Complete	Ongoing
2.5	Develop a County Policy on E-Bikes	MCG	No change - County policy and law are that e-bikes (and e-scooters and other motorized vehicles except ADA-related ones) are not permitted on sidewalks. To promote use and increase safety for riders of e-bikes and e-scooters, MCDOT is considering amending the law to allow these motorized vehicles on sidewalks where the adjoining roadway has posted speed limits exceeding 35 mph and consists of more than two lanes. An analysis has been done to identify locations where these criteria are met. In many such areas there are very low numbers of pedestrians. Bicycling on the sidewalk would not be permitted in denser activity centers. MCDOT plans to examine practice and policy/legislation in other similar jurisdictions prior to proposing this change.	Partially Complete	Short Term
2.6	Establish Level of Traffic Stress Targets	Planning / MCDOT	Established in Growth and Infrastructure Policy for development projects on November 16, 2020. Not yet established for capital projects.	Partially Complete	Short Term
2.7	Update Context Sensitive Road Design Standards	MCDOT	The Complete Streets Design Guide bills 24-22 and 34-22 were signed into law on November 7, 2022 and December 27, 2022, respectively, fully authorizing the guide.	Partially Complete	11/2019

Policy Recommendation		Lead Agency	Progress	Status	Recommended Timeframe
2.8	Compare all Designed Projects Against Best Practices	MCDOT	MCDOT is refreshing the Falls Road Bikeway and Pedestrian Facility project (500905), the Seven Locks Bikeway and Safety Improvements project (501303) and the Bradley Boulevard Improvements project (501733) to reflect best practices.	Partially Complete	Short Term
2.9	Make Separated Bikeways the Preferred Bikeway Facility Type	MCDOT	The Complete Streets Design Guide was completed in 2021. It includes recommendations to make separated bike lanes and sidepaths the default bikeway type on all street types except neighborhood streets (Neighborhood Connectors, Neighborhood Streets and Neighborhood Yield Streets).	Complete	Short Term
2.10	Extending Separated Bike Lanes Through Intersections	MCDOT	The Complete Streets Design Guide was completed in 2021. Protected intersections are required at all intersections with existing or planned separated bike lanes, sidepaths, buffered bike lanes, or conventional bike lanes. The Planning Department completed the Protected Intersection Checklist and conducted a training on the checklist with county staff and members of the development community.	Complete	Short Term
2.11	Consolidate Driveways along Master-Planned Bikeways	MCG	The Planning Department completed the Access Management Study in 2022 and will be initiating implementation of the study in 2023 and 2024.	Partially Complete	Short Term
2.12	Develop a Shared Lane Marking Policy	MCDOT / SHA	The Complete Streets Design Guide will need to explicitly state that shared lane markings are not appropriate on specific street types. “Shared Lane Markings reinforce bicyclists’ right to bicycle in the center of the lane and can serve a wayfinding function. They are appropriate where the Bicycle Master Plan recommends a Neighborhood Greenways or Priority Shared Lane Markings. They may be appropriate on Neighborhood Streets and Neighborhood Yield Streets. Shared lane markings are not appropriate on Downtown Boulevards, Downtown Streets, Boulevards, Town Center Boulevards, Town Center Streets, Neighborhood Connectors, Industrial Streets, Country Connectors, Country Roads or Major Highways.”	Not yet started	Short Term
2.13	Develop Bicycle Parking Standards for County Facilities	MCDGS	The Montgomery County, Maryland Building Design Standards: Planning, Design & Construction of Public Facilities, Version 2020-7, requires the use of “U” racks on county properties.	Complete	Short Term
2.14	Reassess Road Code Urban Area Boundaries	Planning	The Draft Pedestrian Master Plan proposes changes to the Complete Streets Design Guide area types, the successor to the Road Code Urban Areas.	Complete	Short Term

Policy Recommendation		Lead Agency	Progress	Status	Recommended Timeframe
2.15	Establish Standards for Trail Crossings at Major Roads	MCDOT / Parks / SHA	Montgomery Parks has continued to upgrade between eight and 12 park trail crossings and implementing traffic calming measures on park roads each year as part of its Vision Zero efforts. Upgrades have targeted the highest priority crossings, based on speed limit, number of lanes of traffic, lack of existing traffic control devices, trail usage, and Park Police and resident input.	Ongoing	Short Term
2.16	Develop Protocols for Bicycle Facility Closures and Detours	MCDOT	Bill 38-19, signed into law on March 27, 2020, requires the County Executive to adopt regulations regarding permits to close shared use paths in the public rights-of-way, among other things.	Complete	Short Term
2.17	School Site Selection	MCPS		Not yet started	Short Term
2.18	Enable Traffic Calming and Access Restrictions on Neighborhood Greenways	MCDOT	MCDOT staff has determined that this policy change is not needed. Design efforts are underway as part of Aspen Hill and Grove Street neighborhood greenway projects that will pilot traffic calming and access restrictions for assessment.	Complete	Short Term
2.19	Update the Zoning Code (Bicycle Parking Requirements)	Planning	ZTA 19-08 was adopted by the Council on July 21, 2020.	Complete	Short Term
2.20	Revise the Bicycle to School Policy	MCPS	MCPS principals retain the authority to determine when students can bicycle to school.	Not yet started	Short Term
2.21	Abandonments	MCDOT	No action needed.	Complete	Short Term
2.22	Loading Zones	Planning	The proposed Curbside Management Project was not funded in FY 24.	Partially Complete	Short Term

8

Recommendations

Implementation of the *Bicycle Master Plan* continues to ramp up as more and more bikeways are funded for design and construction, bicycle parking is installed, and programmatic and policy changes are implemented to support bicycling. Looking to the coming years, the monitoring report provides the opportunity to offer recommendations to address some of the challenges that have arisen since the Plan was approved and to provide recommendations on how to proceed over the coming years. This section presents six recommendations that are related to bicycle facilities, bicycle standards and toolkits, and monitoring. While fiscal capacity may limit the county's ability to implement all of the recommendations in the next two years, the following recommendations should be considered as implementation of the *Bicycle Master Plan* proceeds.

8.1 High Priority Bikeways

Substantial progress has been made on funding and constructing bikeway projects since the *Bicycle Master Plan* was approved in December 2018, many of which were identified by the Plan (page 154) as high priorities. Every few years the Plan supports reevaluating these priorities, stating that "the bikeway and bicycle parking station prioritization in this Plan are guidelines based on the best available information at the time the Plan was approved by the Montgomery County Council. This prioritization should be reassessed every few years based on available resources, lessons learned and to ensure consistency with the goals of the Plan and to ensure continuity of the bicycling network."

The bikeways shown in Table 15 should be considered as part of the next round of bikeway projects, upon completion of the projects currently included in the Capital Improvements Program. These include projects that are:

- In the Capital Improvements Program but that do not have construction funding.
- On the *Bicycle Master Plan's* (page 15) high-priority list that have not yet been funded.
- Temporary neighborhood greenways initiated as part of the Shared Streets program that should be upgraded to permanent neighborhood greenways.
- Projects located in Equity Focus Areas, which, as Table 2 (Objective 3.1) showed, have only about 84% of the low-stress connectivity that non-EFAs experience.

RECOMMENDATION:

Prioritize construction of the bikeway projects in Table 15 to improve connectivity to downtowns, upgrade the county's temporary neighborhood greenways to permanent neighborhood greenways, and improve access to low-stress bicycling in Equity Focus Areas. The projects with the greatest benefit for EFAs, and therefore the highest priority, include:

- **Montgomery Village Avenue Sidepath from Stewartown Road to City of Gaithersburg**
- **Tech Road Separated Bike Lanes from Columbia Boulevard to Industrial Parkway**
- **Broadbirch Drive Separated Bike Lanes from Tech Road to Cherry Hill Road**
- **Castle Boulevard Separated Bike Lanes from Castle Ridge Circle to Briggs Chaney Road**

Table 15: High Priority Projects for Next Few Years

Policy Area	Street	From	To	Bikeway Type
Bethesda CBD	Arlington Road	Old Georgetown Road	Bradley Boulevard	Separated Bike Lanes
Bethesda CBD	Edgemoor Lane	Arlington Road	Bethesda Metro Station	Separated Bike Lanes
Bethesda CBD	Woodmont Avenue	Battery Lane	Old Georgetown Road	Separated Bike Lanes
Bethesda CBD	Woodmont Avenue	Strathmore Avenue	Wisconsin Avenue	Separated Bike Lanes
Fairland/Colesville	Castle Boulevard	Castle Ridge Circle	Briggs Chaney Road	Separated Bike Lanes
Friendship Heights	Friendship Boulevard	Willard Avenue	District of Columbia	Separated Bike Lanes
Germantown East	MD 355 (West Side)	Germantown Road	Shakespeare Boulevard	Sidepath
Germantown Town Center, Germantown West	Wisteria Drive	Father Hurley Boulevard	Great Seneca Highway	Sidepath or Separated Bike Lanes
Kensington/Wheaton, Glenmont	Holdridge Road	Matthew Henson Trail	Georgia Avenue	Neighborhood Greenway
Montgomery Village	Lost Knife Road	City of Gaithersburg	Odenhal Avenue	Separated Bike Lanes
Montgomery Village	Montgomery Village Avenue (East Side)	Stewartown Road	City of Gaithersburg	Sidepath
North Bethesda	Old Georgetown Road (MD 187)	Towne Road	Tuckerman Lane	Breezeway
Silver Spring	13th Street/Burlington Avenue	District of Columbia	Fenton Street	Separated Bike Lanes
Silver Spring / Takoma Park	Woodland Drive	Columbia Boulevard	Spring Street	Neighborhood Greenway
Wheaton CBD	Grandview Avenue	Blueridge Avenue	Reedie Drive	Separated Bike Lanes
White Flint	Marinelli Road	Executive Boulevard	Woodglen Drive	Separated Bike Lanes
White Oak	Broadbirch Drive	Tech Road	Cherry Hill Road	Separated Bike Lanes
White Oak	Cherry Hill Road	Columbia Pike	Prince George's County	Separated Bike Lanes
White Oak	Old Columbia Pike	Tech Road	White Oak Shopping Center	Sidepath
White Oak	Tech Road	Columbia Pike	Industrial Parkway	Separated Bike Lanes

8.2 Bicycle Parking at Public Facilities

Based on a 2022 survey, over 8,000 bicycle parking spaces are needed at public schools, libraries, and recreation centers; the vast majority are needed at schools. As shown in Table 16, the estimated cost to upgrade and expand bicycle parking at these public facilities is under $3.3 million. While the cost of installing bicycle racks is high, another challenge will be identifying appropriate places to install them.

Table 16: Estimated Cost to Address Bicycle Parking Needs at Public Facilities

Facility Type	Bicycle Racks Needed	Estimated Cost[9]
Elementary Schools	3,699	$ 1,450,000
Middle Schools	1,776	$ 686,000
High Schools	2,490	$ 1,142,000
Public Libraries	58	$ 7,000
Recreation Centers	62	$ 8,000
Total	**8,085**	**$ 3,294,000**

9 Cost includes the "replacement" of inadequate existing racks and the installation of "new" racks to meet calculated need. Cost calculation estimates that "replacement" racks do not need new concrete pads; only "new" racks would require installation of concrete pads.

To prioritize investments in bicycle parking, Planning Department Staff conducted additional analysis to determine schools with the greatest need. Priority criteria are included in the following list, and all data are from 2022 unless otherwise noted.

- Above average bicycle-to-school rates (determined by a Planning Department survey administered to all schools in fall 2019).
- Above average shortage of industry-standard bicycle parking spaces.
- No existing industry-standard bicycle parking spaces.
- No bicycle parking installed since 2016.

The 15 schools meeting all the criteria are listed in the table below—first by school type, then by highest "Bike-to-School" rate. Estimated costs to install the bicycle parking are included in the table.

Table 17: Highest Priority Schools for Bicycle Parking Upgrades with Estimated Costs

School Type	School Name	Title I/Focus or High FARMS Rate	Bike-to-School Rate (2018)	Shortage of Adequate Bicycle Parking Spaces	Estimated Cost
Elementary School	Dr. Ronald A. McNair	N	6.2%	32	$3,000
Elementary School	Glenallen	Y	5.8%	38	$18,000
Elementary School	Bells Mills	N	5.4%	32	$11,000
Elementary School	Poolesville	N	4.6%	28	$12,000
Elementary School	Sligo Creek	N	3.9%	34	$20,000
Elementary School	Olney	N	3.1%	32	$8,000
Middle School	Thomas W. Pyle	N	8.3%	76	$24,000
Middle School	Silver Spring International	Y	4.4%	54	$28,000
Middle School	North Bethesda	N	3.8%	62	$23,000
Middle School	Rosa M. Parks	N	2.6%	48	$17,000
Middle School	Westland	N	2.0%	54	$13,000
High School	Bethesda-Chevy Chase	N	11.3%	124	$54,000
High School	Quince Orchard	N	3.2%	90	$49,000
High School	Walt Whitman	N	3.0%	112	$26,000
High School	Walter Johnson	N	2.0%	114	$40,000
Total	**N/A**	**N/A**	**N/A**	**930**	**$346,000**

RECOMMENDATION: Over the next two years, prioritize funding to upgrade bicycle parking at the following schools: Dr. Ronald A. McNair ES, Glenallen ES, Bells Mills ES, Poolesville ES, Sligo Creek ES, Olney ES, Thomas W. Pyle MS, Silver Spring International MS, North Bethesda MS, Rosa M. Parks MS, Westland MS, Bethesda-Chevy Chase HS, Quince Orchard HS, Walt Whitman HS, and Walter Johnson HS.

Importantly, many Title I/Focus or schools with high FARMS rates did not respond to the Planning Department's survey about bicycling to school. Therefore, there are no recorded bicycling-to-school rates for these schools. However, ten of these schools met all other priority criteria and should be considered for priority funding. The schools are listed in the table below, by school type, along with estimated costs.

Table 18: Priority Title I/Focus or Schools with High FARMS Rate and No Bike-to-School Rates Available

School Type	School Name	Title I/Focus or High FARMS Rate	Shortage of Adequate Bicycle Parking Spaces	Estimated Cost
Elementary School	Rolling Terrace	Y	36	$16,000
Elementary School	Stedwick	Y	36	$22,000
Elementary School	South Lake	Y	34	$20,000
Elementary School	Arcola	Y	32	$17,000
Middle School	Roberto W. Clemente	Y	60	$26,000
Middle School	Forest Oak	Y	48	$23,000
Middle School	Eastern	Y	50	$21,000
Middle School	White Oak	Y	50	$21,000
Middle School	Sligo	Y	48	$5,000
High School	Gaithersburg	Y	124	$60,000
Total	**N/A**	**N/A**	**518**	**$231,000**

RECOMMENDATION: Over the next six years, prioritize funding to upgrade bicycle parking at the following Title I/Focus schools and schools with high FARMS rates: Rolling Terrace ES, Stedwick ES, South Lake ES, Arcola ES, Roberto W. Clemente MS, Forest Oak MS, Eastern MS, White Oak MS, Sligo MS, and Gaithersburg HS.

Furthermore, while MCDOT may be the most qualified agency to install bicycle parking, it is firmly the role of MCPS to install these facilities. Currently, MCPS does not have a separate funding source for bicycle parking. Therefore, upgrades to bicycle parking usually occur either when a school is newly constructed, renovated or expanded and not necessarily where the greatest need exists.

RECOMMENDATION: Provide MCPS with an annual funding program for installing bicycle parking.

When MCPS installs bicycle parking, it sometimes installs out-of-date "wave" style racks.

RECOMMENDATION: MCPS should develop bike rack standards that correspond with standards identified in Montgomery County's zoning code.

8.3 High Priority Bicycle Parking Stations

The *Bicycle Master Plan* recommends bicycle parking stations at all WMATA Metrorail Red Line stations, higher-demand MARC stations, and future Purple Line stations to increase the numbers of bicyclists traveling to these transit hubs. Currently, bicycle parking stations are funded at the Bethesda Metrorail and Purple Line station and Silver Spring Transit Center. A developer is also constructing a station at the Grosvenor Metrorail station. An additional bicycle parking station should be pursued at the Glenmont Metrorail station, as this station is in an Equity Focus Area, has a large catchment area as an end-of-the-line station and is already connected to much of the surrounding community by low-stress bicycling.

RECOMMENDATION: Fund a bicycle parking station at the Glenmont Metrorail station to expand the reach of transit and develop the organizational capacity to operate bicycle parking stations, including those at the Bethesda Purple Line station and the Silver Spring Transit Center, which are already funded.

8.4 Bikeway Standards

A challenge for successfully implementing the *Bicycle Master Plan*'s vision is a lack of design standards for bicycle facilities. While the Plan includes a bikeways toolkit and the Complete Streets Design Guide also provides guidance, specific design standards are still needed for certain components of the bicycling network. Therefore, MCDOT, in partnership with the Planning Department, should develop comprehensive design standards for bicycle facilities included in Montgomery Planning's Bicycle Facility Design Toolkit and the Complete Streets Design Guide. Among other things, this includes:

- Protected intersections
- Pavement standards for breezeways and sidepaths
- Standards for creating a world-class network of separated bike lanes
- Dimensions for sidepaths on bridges
- Treatments for separated bike lanes crossing driveways

RECOMMENDATION: Develop comprehensive design standards for bicycle facilities.

8.5 Monitoring

Data sources that were available during the development of the *Bicycle Master Plan* generally focused on bicycling as part of the commute to work. However, travel to work represents only about 20% of all trips, so a more nuanced understanding of travel by bicycle is needed to track changes in travel behavior and attitudes. To capture this information, a biennial travel survey is proposed to monitor implementation of both the *Bicycle Master Plan* and the forthcoming Pedestrian Master Plan. This survey will require biennial funding from County Council.

RECOMMENDATION: Fund and conduct a biennial travel monitoring survey to measure travel behavior and attitudes toward walking and bicycling.

9

Appendix

Appendix A: Metrics

A.1 BICYCLING RATES TO TRANSPORTATION MANAGEMENT DISTRICTS

Objective 1.2: Percentage of people who commute by bicycle to a Transportation Management District

Transportation Management District	2018	2020	2022
Downtown Bethesda	0.7%	0.8%	1.4%
Downtown Silver Spring	1.4%	1.8%	1.6%
Friendship Heights	1.4%	0.4%	0.6%
Greater Shady Grove	1.5%	0.0%	0.1%
North Bethesda	1.0%	0.3%	0.4%
White Oak	N/A	N/A	0.4%

A.2 BICYCLING RATES TO TRANSIT STATIONS

Objective 1.3: Percentage of passengers who access a Red Line station by bicycle

Red Line Stations	2016	2022
Glenmont	1.1%	1.3%
Wheaton	0.0%	1.1%
Forest Glen	1.6%	4.7%
Silver Spring	1.5%	0.5%
Takoma	3.3%	3.7%
Friendship Heights	1.2%	0.7%
Bethesda	2.5%	2.8%
Medical Center	4.5%	3.4%
North Bethesda	2.7%	0.0%
Shady Grove	0.7%	0.9%
Average	**1.6%**	**1.6%**

A.3 BICYCLING RATES TO ELEMENTARY SCHOOLS

Objective 1.4: Percentage of elementary school students who bicycle to school (fall 2019)

School	# of Bike Riders	# of Responses	Bike-to-School Rate
Arcola	n/a	n/a	--
Ashburton	2	663	0%
Bannockburn	13	361	4%
Bayard Rustin	7	289	2%
Bel Pre	3	415	1%
Bells Mill	30	555	5%
Belmont	27	323	8%
Bethesda	11	159	7%
Beverly Farms	2	268	1%
Bradley Hills	30	330	9%
Brooke Grove	n/a	n/a	--
Brookhaven	5	244	2%
Burning Tree	8	261	3%
Burnt Mills	n/a	n/a	--
Burtonsville	11	229	5%
Candlewood	5	318	2%
Cannon Road	5	199	3%
Captain James E. Daly	7	495	1%
Carderock Springs	12	144	8%
Cashell	4	146	3%
Cedar Grove	1	311	0%
Chevy Chase	22	444	5%
Clarksburg	2	560	0%
Clearspring	n/a	n/a	--
Clopper Mill	7	262	3%
Cloverly	n/a	n/a	--
Cold Spring	n/a	n/a	--
Cresthaven	n/a	n/a	--
Damascus	1	237	0%
Darnestown	n/a	n/a	--
Dr. Charles R. Drew	n/a	n/a	--
Dr. Sally K. Ride	10	120	8%
DuFief	10	142	7%
East Silver Spring	n/a	n/a	--
Fairland	10	276	4%
Farmland	8	368	2%
Fields Road	3	321	1%
Flora M. Singer	n/a	n/a	--
Flower Hill	7	384	2%
Flower Valley	n/a	n/a	--
Forest Knolls	9	576	2%
Fox Chapel	5	497	1%
Galway	2	122	2%
Garrett Park	21	658	3%
Georgian Forest	3	331	1%
Germantown	3	63	5%
Glen Haven	11	402	3%
Glenallan	13	226	6%
Goshen	5	200	3%
Great Seneca Creek	n/a	n/a	--
Greencastle	7	312	2%

School	# of Bike Riders	# of Responses	Bike-to-School Rate
Greenwood	3	90	3%
Harmony Hills	4	409	1%
Highland	9	359	3%
Highland View	n/a	n/a	--
Jackson Road	8	567	1%
JoAnn Leleck at Broad Acres	n/a	n/a	--
Jones Lane	n/a	n/a	--
Judith A. Resnik	7	268	3%
Kemp Mill	1	257	0%
Kensington Parkwood	n/a	n/a	--
Lake Seneca	11	327	3%
Laytonsville	5	303	2%
Little Bennett	8	457	2%
Lois P. Rockwell	2	286	1%
Lucy V. Barnsley	6	689	1%
Luxmanor	8	197	4%
Mill Creek Towne	5	357	1%
Monocacy	1	139	1%
Montgomery Knolls	4	323	1%
New Hampshire Estates	7	217	3%
North Chevy Chase	8	229	3%
Oak View	5	344	1%
Oakland Terrace	n/a	n/a	--
Olney	12	382	3%
Pine Crest	3	257	1%
Piney Branch	36	262	14%
Poolesville	10	216	5%
Potomac	3	315	1%
Rock Creek Forest	8	517	2%
Rock Creek Valley	6	154	4%
Rock View	10	563	2%
Rolling Terrace	n/a	n/a	--
Ronald McNair	28	454	6%
Roscoe R. Nix	6	214	3%
Rosemary Hills	3	404	1%
S. Christa McAuliffe	7	472	1%
Sargent Shriver	7	623	1%
Sequoyah	5	335	1%
Seven Locks	1	126	1%
Sherwood	1	216	0%
Sligo Creek	18	463	4%
Snowden Farm	11	355	3%
Somerset	29	489	6%
South Lake	n/a	n/a	--
Spark M. Matsunaga	n/a	n/a	--
Stedwick	n/a	n/a	--
Stone Mill	n/a	n/a	--
Stonegate	4	350	1%
Strathmore	4	396	1%
Strawberry Knoll	2	166	1%
Takoma Park	5	482	1%
Thurgood Marshall	4	502	1%
Travilah	1	93	1%
Viers Mill	n/a	n/a	--
Washington Grove	3	168	2%
Waters Landing	n/a	n/a	--
Watkins Mill	n/a	n/a	--
Wayside	3	435	1%
Weller Road	17	155	11%
Westbrook	n/a	n/a	--
Westover	10	219	5%
Wheaton Woods	6	221	3%
Whetstone	n/a	n/a	--
William B. Gibbs Jr.	9	103	9%
William Tyler Page	8	422	2%
Wilson Wims	15	663	2%
Wood Acres	9	476	2%
Woodfield	n/a	n/a	--
Woodlin	n/a	n/a	--
Wyngate	n/a	n/a	--
Total	**748**	**29,697**	**3%**

A.4 BICYCLING RATES TO MIDDLE SCHOOLS

Objective 1.4: Percentage of middle school students who bicycle to school (fall 2019)

School	# of Bike Riders	# of Responses	Bike-to-School Rate
A. Mario Loiederman	5	782	1%
Argyle	2	671	0%
Benjamin Banneker	6	635	1%
Briggs Chaney	5	531	1%
Cabin John	6	898	1%
Col. E. Brooke Lee	6	394	2%
Dr. Martin Luther King Jr.	2	614	0%
Earle B. Wood	1	779	0%
Eastern	n/a	n/a	--
Francis Scott Key	0	632	0%
Hallie Wells	40	789	5%
Herbert Hoover	9	856	1%
John Poole	12	358	3%
John T. Baker	n/a	n/a	--
Kingsview	17	808	2%
Montgomery Village	11	575	2%
Neelsville	0	142	0%
Newport Mill	n/a	n/a	--
North Bethesda	41	1,083	4%
Parkland	3	1,054	0%
Redland	1	495	0%
Ridgeview	4	574	1%
Roberto W Clemente	n/a	n/a	--
Rocky Hill	1	747	0%
Rosa Parks	20	756	3%
Shady Grove	1	492	0%
Silver Creek	15	739	2%
Silver Spring International	36	814	4%
Sligo	n/a	n/a	--
Takoma Park	18	467	4%
Thomas W. Pyle	43	516	8%
Tilden	n/a	n/a	--
Westland	12	599	2%
White Oak	n/a	n/a	--
William H. Farquhar	2	576	0%
Total	**319**	**18,376**	**2%**

A.5 BICYCLING RATES TO HIGH SCHOOLS

Objective 1.4: Percentage of high school students who bicycle to school (fall 2019)

School	# of Bike Riders	# of Responses	Bike-to-School Rate
Albert Einstein	4	995	0%
Bethesda-Chevy Chase	103	911	11%
Blake	0	571	0%
Clarksburg	7	1,460	0%
Damascus	1	1,041	0%
Kennedy	2	1,090	0%
Magruder	6	984	1%
Montgomery Blair	n/a	n/a	--
Northwest	n/a	n/a	--
Northwood	13	946	1%
Paint Branch	2	984	0%
Poolesville	15	612	2%
Quince Orchard	30	934	3%
Seneca Valley	n/a	n/a	--
Sherwood	5	1,495	0%
Springbrook	10	547	2%
Walter Johnson	32	1,582	2%
Watkins Mill	n/a	n/a	--
Wheaton	8	749	1%
Whitman	48	1,587	3%
Winston Churchill	n/a	n/a	--
Total	**286**	**16,488**	**2%**

A.6 COUNTYWIDE CONNECTIVITY

Objective 2.1: Percentage of potential bicycle trips that will be able to be made on a low-stress bicycling network by policy area

Policy Area	12/2018	12/2020	12/2021	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Aspen Hill	20%	21%	22%	22%	22%	77%
Bethesda CBD	5%	9%	11%	13%	22%	86%
Bethesda/Chevy Chase	25%	28%	30%	32%	35%	89%
Burtonsville Town Center	1%	2%	2%	2%	2%	96%
Chevy Chase Lake	1%	4%	4%	23%	27%	85%
Clarksburg	18%	18%	25%	26%	29%	72%
Clarksburg Town Center	22%	24%	27%	30%	51%	64%
Cloverly	9%	9%	9%	9%	10%	89%
Damascus	19%	19%	19%	19%	19%	76%
Derwood	4%	5%	5%	5%	5%	64%
East Purple Line	23%	24%	25%	30%	36%	87%
Fairland/Colesville	15%	15%	15%	15%	15%	92%
Forest Glen	14%	14%	14%	14%	24%	88%
Friendship Heights	4%	4%	4%	4%	4%	72%
Germantown East	19%	18%	19%	19%	20%	79%
Germantown Town Center	11%	15%	16%	16%	16%	85%
Germantown West	16%	18%	18%	18%	18%	82%
Glenmont	14%	14%	15%	15%	15%	94%
Grosvenor	3%	3%	3%	3%	5%	86%
Kensington/Wheaton	21%	22%	22%	23%	26%	93%
Lyttonsville	29%	29%	29%	44%	50%	87%
Medical Center	37%	48%	49%	53%	55%	96%
Montgomery Village/Airpark	4%	4%	4%	4%	4%	70%
North Bethesda	6%	7%	7%	7%	10%	89%
North Potomac	21%	22%	22%	22%	22%	73%
Olney	21%	21%	25%	25%	29%	88%
Potomac	11%	11%	12%	12%	15%	85%
R&D Village	21%	21%	21%	21%	24%	77%
Rural East	5%	7%	8%	8%	11%	59%
Rural West	22%	22%	22%	22%	22%	51%
Shady Grove Metro Station	12%	12%	12%	12%	13%	70%
Silver Spring CBD	4%	7%	7%	16%	34%	73%
Silver Spring/Takoma Park	25%	25%	25%	29%	36%	83%
Takoma	33%	33%	33%	34%	44%	83%
Twinbrook	1%	1%	1%	1%	1%	72%
Wheaton CBD	11%	11%	12%	12%	17%	95%
White Flint	3%	4%	4%	4%	5%	91%
White Oak	7%	7%	7%	7%	7%	88%
Woodside	8%	10%	10%	16%	22%	74%
Total	**14%**	**15%**	**16%**	**17%**	**20%**	**83%**

A.7 CONNECTIVITY TO RED LINE STATIONS

Objective 2.2: Percentage of dwelling units within two miles of each Red Line station that are connected to the transit station on a low-stress bicycling network

Red Line Station	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Bethesda	0%	0%	2%	6%	19%	55%
Forest Glen	11%	11%	11%	11%	11%	74%
Friendship Heights	0%	0%	0%	0%	0%	52%
Glenmont	32%	32%	33%	33%	33%	86%
Grosvenor-Strathmore	18%	18%	18%	18%	18%	63%
Medical Center	8%	22%	23%	26%	33%	63%
Shady Grove	7%	8%	8%	8%	8%	78%
Silver Spring	1%	4%	4%	25%	35%	69%
Takoma	22%	22%	22%	22%	39%	69%
Wheaton	0%	0%	0%	0%	0%	84%
White Flint	0%	0%	0%	0%	0%	58%
Total	**8%**	**10%**	**10%**	**14%**	**19%**	**67%**

A.8 CONNECTIVITY TO BRUNSWICK LINE STATIONS

Objective 2.2: Percentage of dwelling units within two miles of each Brunswick Line station that are connected to the transit station on a low-stress bicycling network

Brunswick Line Station	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Barnesville	0%	0%	0%	0%	0%	0%
Boyds	2%	2%	2%	2%	2%	16%
Dickerson	4%	4%	4%	4%	4%	4%
Garrett Park	33%	33%	34%	34%	34%	75%
Germantown	14%	14%	14%	14%	14%	76%
Kensington	22%	22%	22%	22%	22%	68%
Silver Spring	0%	0%	0%	22%	30%	58%
Washington Grove	6%	6%	6%	6%	6%	10%
Total	**14%**	**14%**	**14%**	**20%**	**23%**	**59%**

A.9 CONNECTIVITY TO PURPLE LINE STATIONS

Objective 2.2: Percentage of dwelling units within two miles of each Purple Line station that are connected to the transit station on a low-stress bicycling network

Purple Line Station	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Bethesda	0%	0%	2%	2%	18%	48%
Connecticut Avenue	0%	0%	0%	15%	22%	61%
Dale Drive	0%	0%	27%	31%	36%	77%
Long Branch	0%	0%	0%	0%	0%	73%
Lyttonsville	0%	0%	0%	23%	25%	68%
Manchester Place	20%	20%	22%	22%	24%	77%
Piney Branch Road	0%	0%	0%	0%	0%	77%
Silver Spring Library	0%	0%	0%	0%	40%	75%
Silver Spring Transit Center	0%	4%	4%	22%	32%	64%
Takoma-Langley Transit Center	0%	0%	0%	0%	0%	75%
Woodside	0%	0%	0%	0%	0%	70%
Total	**2%**	**3%**	**7%**	**11%**	**20%**	**70%**

A.10 CONNECTIVITY TO U.S. 29 FLASH STATIONS

Objective 2.2: Percentage of dwelling units within two miles of each U.S. 29 FLASH station that are connected to the transit station on a low-stress bicycling network

Purple Line Station	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Burtonsville Park & Ride	0%	0%	0%	0%	0%	83%
Briggs Chaney Park & Ride	31%	31%	31%	31%	31%	84%
Castle Blvd	4%	4%	4%	4%	4%	83%
Tech Road (NB)	0%	0%	0%	0%	0%	70%
Tech Road (SB)	0%	0%	0%	0%	0%	74%
April Lane (NB)	25%	25%	25%	25%	25%	80%
April Lane (SB)	0%	25%	25%	25%	25%	79%
White Oak (NB)	0%	0%	0%	0%	0%	65%
White Oak (SB)	0%	0%	0%	0%	0%	65%
Oak Leaf (NB)	7%	7%	7%	7%	7%	72%
Oak Leaf (SB)	7%	7%	7%	7%	8%	73%
Burnt Mills (NB)	0%	0%	0%	0%	0%	75%
Burnt Mills (SB)	0%	0%	0%	0%	0%	74%
Four Corners (NB)	3%	21%	21%	21%	22%	63%
Four Corners (SB)	0%	0%	0%	0%	0%	0%
Fenton St (NB)	0%	0%	0%	0%	34%	63%
Fenton St (SB)	0%	0%	0%	0%	33%	67%
Silver Spring Transit Center	0%	4%	4%	22%	32%	64%
Total	**3%**	**6%**	**6%**	**8%**	**13%**	**47%**

A.11 CONNECTIVITY TO ELEMENTARY SCHOOLS

Objective 2.3: Percentage of dwelling units within one mile of elementary schools that are connected to the schools on a very low-stress bicycling network

Elementary School	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Arcola	46%	46%	46%	46%	47%	79%
Ashburton	35%	35%	35%	35%	35%	66%
Bannockburn	16%	16%	16%	16%	17%	16%
Barnsley	73%	73%	73%	73%	73%	77%
Bayard Rustin	21%	21%	21%	21%	21%	23%
Bel Pre	60%	60%	60%	60%	60%	65%
Bells Mill	57%	57%	57%	57%	57%	71%
Belmont	100%	100%	100%	100%	100%	100%
Bethesda	5%	5%	5%	5%	5%	8%
Beverly Farms	57%	57%	57%	57%	57%	90%
Bradley Hills	66%	66%	66%	66%	66%	75%
Brooke Grove	17%	17%	17%	17%	17%	76%
Brookhaven	0%	0%	0%	0%	0%	96%
Burning Tree	39%	39%	39%	39%	39%	40%
Burnt Mills	12%	12%	12%	12%	12%	11%
Burtonsville	0%	0%	0%	0%	0%	9%
Candlewood	17%	17%	17%	17%	17%	17%
Cannon Road	78%	78%	78%	78%	78%	77%
Carderock Springs	56%	56%	56%	56%	56%	72%
Cashell	26%	26%	26%	26%	26%	60%
Cedar Grove	0%	0%	0%	0%	0%	0%
Chevy Chase	31%	31%	31%	31%	31%	31%
Clarksburg	37%	37%	35%	35%	35%	98%
Clearspring	34%	34%	34%	34%	34%	34%
Clopper Mill	0%	0%	0%	0%	0%	54%
Cloverly	34%	34%	34%	34%	36%	59%
Cold Spring	86%	86%	86%	86%	86%	89%
Cresthaven	32%	32%	32%	32%	33%	45%
Daly	1%	1%	1%	1%	1%	2%
Damascus	0%	0%	0%	0%	0%	0%
Darnestown	1%	1%	1%	1%	1%	1%
Drew	74%	74%	74%	74%	74%	72%
DuFief	75%	75%	75%	75%	75%	75%
East Silver Spring	35%	35%	35%	35%	38%	39%
Fairland	13%	13%	13%	13%	13%	55%
Farmland	59%	59%	62%	62%	62%	72%
Fields Road	0%	0%	0%	0%	0%	0%
Flower Hill	80%	80%	80%	80%	80%	86%
Flower Valley	52%	52%	52%	52%	52%	50%
Forest Knolls	85%	85%	85%	85%	85%	93%

Elementary School	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Fox Chapel	40%	40%	40%	40%	40%	41%
Galway	40%	40%	40%	40%	40%	42%
Garrett Park	27%	27%	27%	27%	27%	76%
Georgian Forest	39%	39%	39%	39%	39%	66%
Germantown	53%	53%	53%	53%	53%	68%
Glen Haven	91%	91%	91%	91%	91%	94%
Glenallan	9%	9%	9%	9%	9%	40%
Goshen	6%	6%	6%	6%	6%	35%
Great Seneca Creek	16%	16%	16%	16%	16%	22%
Greencastle	55%	55%	55%	55%	55%	60%
Greenwood	57%	57%	57%	57%	57%	71%
Harmony Hills	26%	26%	26%	26%	26%	87%
Harriet Tubman	14%	14%	14%	14%	14%	14%
Highland	82%	82%	82%	82%	82%	85%
Highland View	91%	91%	91%	91%	90%	95%
Jackson Road	45%	45%	45%	45%	45%	70%
JoAnn Leleck	37%	37%	37%	37%	37%	37%
Jones Lane	4%	4%	4%	4%	4%	16%
Kemp Mill	85%	85%	85%	85%	85%	87%
Kensington-Parkwood	84%	84%	84%	84%	84%	88%
Lake Seneca	80%	80%	80%	80%	80%	96%
Laytonsville	0%	0%	0%	0%	0%	0%
Little Bennett	41%	48%	48%	48%	64%	58%
Luxmanor	0%	0%	13%	13%	13%	15%
Marshall	72%	72%	72%	72%	75%	72%
Matsunaga	11%	11%	11%	11%	11%	58%
McAuliffe	25%	25%	25%	25%	25%	21%
McNair	8%	8%	8%	8%	8%	32%
Mill Creek Towne	44%	44%	44%	44%	44%	54%
Monocacy	0%	0%	0%	0%	0%	0%
Montgomery Knolls	48%	48%	48%	48%	48%	67%
New Hampshire Estates	16%	16%	16%	16%	16%	58%
North Chevy Chase	0%	0%	0%	0%	0%	49%
Oak View	51%	51%	51%	51%	50%	81%
Oakland Terrace	68%	68%	68%	68%	68%	84%
Olney	63%	63%	63%	63%	63%	87%
Page	51%	51%	51%	51%	51%	70%
Pine Crest	39%	39%	39%	39%	39%	39%
Piney Branch	41%	41%	41%	41%	41%	65%
Poolesville	32%	32%	32%	32%	32%	32%
Potomac	9%	9%	9%	9%	9%	10%
Resnik	52%	52%	52%	52%	52%	52%
Ride	91%	91%	91%	91%	91%	90%
Rock Creek Forest	14%	14%	14%	14%	14%	14%

Elementary School	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Rock Creek Valley	87%	87%	87%	87%	87%	89%
Rock View	83%	83%	83%	83%	83%	83%
Rockwell	18%	18%	18%	18%	18%	50%
Rolling Terrace	72%	72%	72%	72%	84%	87%
Roscoe R. Nix	24%	24%	24%	24%	25%	29%
Rosemary Hills	46%	46%	46%	46%	46%	100%
Sargent Shriver	50%	50%	50%	50%	50%	57%
Sequoyah	38%	38%	38%	38%	38%	38%
Seven Locks	5%	5%	5%	5%	5%	46%
Sherwood	10%	10%	10%	10%	10%	23%
Singer	37%	37%	37%	37%	37%	55%
Sligo Creek	12%	12%	20%	20%	26%	36%
Snowden Farm	55%	55%	55%	55%	55%	55%
Somerset	16%	16%	18%	18%	16%	19%
South Lake	7%	7%	7%	7%	7%	74%
Stedwick	26%	26%	26%	26%	26%	89%
Stone Mill	55%	55%	55%	55%	55%	66%
Stonegate	85%	85%	85%	85%	85%	84%
Strathmore	33%	33%	33%	33%	33%	33%
Strawberry Knoll	39%	38%	38%	38%	38%	69%
Takoma Park	44%	44%	44%	44%	44%	60%
Travilah	0%	0%	0%	0%	0%	22%
Viers Mill	87%	90%	90%	90%	90%	91%
Washington Grove	13%	13%	13%	13%	13%	13%
Waters Landing	17%	17%	17%	17%	17%	60%
Watkins Mill	27%	27%	27%	27%	27%	36%
Wayside	52%	52%	52%	52%	52%	55%
Weller Road	61%	61%	61%	61%	61%	65%
Westbrook	25%	25%	25%	25%	25%	26%
Westover	70%	70%	70%	70%	70%	66%
Wheaton Woods	82%	82%	82%	82%	81%	53%
Whetstone	10%	10%	10%	10%	10%	59%
William B. Gibbs Jr.	26%	26%	26%	26%	26%	98%
Wilson Wims	52%	52%	52%	52%	52%	56%
Wood Acres	19%	19%	19%	19%	19%	25%
Woodfield	50%	50%	50%	50%	50%	64%
Woodlin	7%	7%	7%	7%	26%	64%
Wyngate	71%	71%	71%	71%	71%	73%
Total	**37%**	**37%**	**37%**	**37%**	**38%**	**53%**

A.12 CONNECTIVITY TO MIDDLE SCHOOLS

Objective 2.3: Percentage of dwelling units within 1.5 miles of middle schools that are connected to the schools on a very low-stress bicycling network

Middle School	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Argyle	5%	5%	5%	5%	5%	39%
Baker	0%	0%	0%	0%	0%	3%
Banneker	2%	2%	2%	2%	2%	42%
Briggs Chaney	38%	38%	38%	38%	48%	74%
Cabin John	40%	40%	40%	40%	40%	58%
Clemente	7%	7%	7%	7%	7%	54%
Eastern	7%	7%	7%	7%	7%	57%
Farquhar	11%	12%	12%	12%	12%	12%
Hallie Wells	55%	55%	55%	55%	55%	54%
Hoover	38%	38%	38%	38%	38%	71%
Key	12%	12%	12%	12%	12%	17%
King	40%	40%	40%	40%	40%	73%
Kingsview	0%	0%	0%	0%	0%	11%
Loiederman	26%	26%	26%	26%	26%	38%
Montgomery Village	6%	6%	6%	6%	6%	43%
Neelsville	0%	0%	0%	0%	0%	0%
Newport Mill	62%	62%	64%	64%	64%	80%
North Bethesda	22%	22%	22%	22%	22%	48%
Parkland	52%	52%	52%	52%	52%	65%
Poole	53%	53%	53%	53%	53%	53%
Pyle	14%	14%	14%	14%	14%	52%
Redland	0%	0%	0%	0%	0%	0%
Ridgeview	46%	46%	46%	48%	48%	69%
Rocky Hill	20%	20%	20%	20%	20%	66%
Rosa Parks	57%	57%	57%	57%	57%	86%
Shady Grove	0%	0%	0%	0%	0%	0%
Shannon	14%	14%	14%	14%	14%	28%
Silver Creek	23%	23%	23%	25%	25%	54%
Silver Spring International	18%	18%	19%	21%	21%	54%
Sligo	29%	29%	29%	29%	29%	81%
Takoma Park	23%	23%	23%	23%	33%	54%
Tilden	12%	12%	13%	13%	13%	19%
Westland	0%	0%	0%	0%	0%	22%
White Oak	28%	28%	28%	28%	28%	60%
Wood	61%	61%	61%	61%	61%	75%
Total	**21%**	**21%**	**22%**	**22%**	**22%**	**46%**

A.13 CONNECTIVITY TO HIGH SCHOOLS

Objective 2.3: Percentage of dwelling units within two miles of high schools that are connected to the schools on a very low-stress bicycling network

High School	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Bethesda-Chevy Chase	4%	4%	4%	11%	11%	11%
Blair	0%	0%	0%	0%	0%	0%
Blake	46%	46%	46%	46%	46%	46%
Churchill	36%	36%	36%	36%	36%	36%
Clarksburg	31%	29%	35%	35%	35%	35%
Damascus	0%	0%	0%	0%	0%	0%
Einstein	58%	58%	65%	65%	65%	65%
Kennedy	18%	18%	18%	18%	18%	18%
Magruder	4%	4%	4%	4%	4%	4%
Northwest	11%	11%	11%	11%	11%	11%
Northwood	31%	31%	31%	31%	31%	31%
Paint Branch	0%	0%	0%	0%	0%	0%
Poolesville	40%	40%	40%	40%	40%	40%
Quince Orchard	0%	0%	0%	0%	0%	0%
Seneca Valley	0%	14%	14%	14%	14%	14%
Sherwood	8%	8%	8%	8%	8%	8%
Springbrook	1%	1%	1%	1%	1%	1%
Walter Johnson	0%	0%	0%	0%	0%	0%
Watkins Mill	1%	1%	1%	1%	1%	1%
Wheaton	25%	25%	25%	25%	25%	25%
Whitman	17%	17%	19%	19%	20%	20%
Total	**12%**	**13%**	**14%**	**15%**	**15%**	**15%**

A.14 Connectivity to Public Libraries

Objective 2.4: Percentage of dwelling units within two miles of public libraries that are connected to the public library on a low-stress bicycling network

Public Library	12/2018	12/2020	12/2022	Under	Funded & Approved 12/2022	Planned
Aspen Hill	0%	0%	0%	0%	0%	86%
Bethesda	12%	14%	14%	14%	15%	57%
Chevy Chase	1%	1%	1%	1%	1%	48%
Damascus	1%	1%	1%	1%	1%	49%
Davis/Special Needs	8%	8%	8%	8%	8%	93%
Fairland	0%	0%	0%	0%	0%	71%
Germantown	3%	3%	3%	3%	3%	45%
Kensington Park	0%	0%	0%	0%	0%	62%
Little Falls	0%	0%	0%	0%	0%	56%
Long Branch	22%	22%	26%	26%	26%	75%
Noyes Library for Young Children	19%	19%	19%	19%	19%	45%
Olney	41%	41%	49%	49%	50%	91%
Poolesville	10%	10%	10%	10%	10%	10%
Potomac	19%	19%	19%	19%	19%	65%
Quince Orchard	0%	0%	0%	0%	0%	0%
Silver Spring	0%	0%	0%	0%	40%	74%
Wheaton	10%	11%	11%	11%	11%	86%
White Oak	11%	11%	11%	11%	11%	81%
Total	**8%**	**8%**	**9%**	**9%**	**14%**	**66%**

A.15 Connectivity to Recreation Centers

Objective 2.4: Percentage of dwelling units within two miles of recreation centers that are connected to the recreation centers on a low-stress bicycling network

Recreation Center	12/2018	12/2020	12/2022	Under	Funded & Approved 12/2022	Planned
Bauer Drive	0%	0%	0%	0%	0%	82%
Charles W Gilchrist	0%	0%	0%	0%	0%	0%
Clara Barton	32%	32%	34%	38%	38%	93%
Damascus Community	0%	0%	0%	0%	0%	24%
East County Community	31%	31%	31%	31%	31%	83%
Fairland Community	0%	0%	0%	0%	0%	77%
Friendship Heights Village	0%	0%	0%	0%	0%	0%
Germantown	0%	0%	0%	0%	0%	79%
Good Hope Neighborhood	0%	0%	0%	0%	0%	77%
Gwendolyn E. Coffield	12%	12%	12%	28%	28%	68%
Heffner Park	27%	27%	27%	35%	35%	68%
Kensington	14%	14%	14%	14%	14%	22%
Lake Marion	0%	0%	0%	0%	0%	24%
Leland	6%	6%	6%	21%	21%	53%
Long Branch	21%	21%	22%	22%	22%	78%
Longwood	39%	39%	39%	38%	38%	76%
Mid County	13%	13%	13%	13%	13%	79%
North Creek	14%	14%	14%	17%	17%	64%
North Potomac	19%	19%	19%	19%	19%	39%
Plum Gar	23%	23%	23%	23%	23%	82%
Potomac	6%	6%	6%	6%	6%	68%
Ross Boddy	0%	0%	0%	0%	0%	0%
Sam Abbott	37%	37%	37%	38%	38%	72%
Scotland	2%	2%	2%	2%	2%	2%
Stedwick	7%	7%	7%	7%	7%	67%
Takoma Park	51%	51%	51%	51%	51%	84%
Upper County	0%	0%	0%	0%	0%	31%
Wheaton	12%	11%	11%	11%	11%	83%
Whetstone	3%	3%	3%	3%	3%	41%
Total	**14%**	**14%**	**14%**	**17%**	**17%**	**56%**

A.16 CONNECTIVITY TO REGIONAL / RECREATIONAL PARKS

Objective 2.4: Percentage of dwelling units within two miles of regional/recreational parks that are connected to the parks on a low-stress bicycling network

Recreation Center	12/2018	12/2020	12/2022	Under Construction 12/2022	Funded & Approved 12/2022	Planned
Black Hill Regional Park	27%	24%	24%	24%	24%	85%
Cabin John Regional Park	0%	0%	0%	0%	0%	49%
Damascus Recreational Park	64%	64%	64%	64%	64%	73%
Fairland Recreational Park	29%	29%	29%	29%	29%	73%
Laytonia Recreational Park	0%	0%	0%	0%	0%	0%
Little Bennett Regional Park	0%	0%	0%	0%	0%	0%
MLK Jr. Recreational Park	25%	25%	25%	25%	25%	79%
Northwest Branch Recreational Park	19%	19%	19%	19%	19%	82%
Olney Manor Recreational Park	11%	11%	11%	11%	11%	72%
Ovid Hazen Wells Recreational Park	51%	51%	52%	52%	52%	54%
Ridge Road Recreational Park	31%	31%	31%	31%	31%	83%
Rock Creek Regional Park	27%	32%	32%	32%	35%	50%
South Germantown Recreational Park	40%	40%	40%	40%	40%	72%
Wheaton Regional Park	35%	35%	35%	35%	36%	83%
Total	**27%**	**27%**	**27%**	**27%**	**28%**	**68%**

A.17 SUMMARY STATISTICS FOR BICYCLE PARKING AT PUBLIC FACILITIES

Objective 2.6: Number of Existing Bicycle Parking Spaces in 2022 by Rack Type

Public Facility Type	Inverted-U (adequate)	Locker (adequate)	Other (adequate)	Wave (inadequate)	Wheel Bender (inadequate)	Other (inadequate)
Elementary Schools	233	0	2	873	919	4
Middle Schools	230	0	12	315	518	0
High Schools	48	2	0	509	254	24
Public Libraries	32	0	22	74	46	16
Recreation Centers	56	0	15	214	14	0
Total	**599**	**2**	**51**	**1,985**	**1,751**	**44**

Objective 2.6: Bicycle Parking Space Change, 2016-2022

Public Facility Type	Bicycle Space Additions	Bicycle Space Loss[10]	Increase in Adequate Spaces	Loss of Adequate Spaces [11]	Inadequate Bicycle Spaces Added[12]
Elementary Schools	543	-177	74	0	471
Middle Schools	311	-42	149	0	194
High Schools	112	-16	10	0	106
Public Libraries	32	-32	30	-32	2
Recreation Centers	25	0	15	0	14
Total	**1,023**	**-267**	**278**	**-32**	**787**

A.18 BICYCLE PARKING AT ELEMENTARY SCHOOLS

Objective 2.6: Summary of Bicycle Parking at Elementary Schools

Elementary School Name	Student Capacity 2022-2023	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Arcola	656	32	0	4	4	32	$17,000
Ashburton	789	40	0	10	10	40	$19,000
Bannockburn	389	20	0	10	10	20	$7,000
Bayard Rustin	790	40	24	0	24	16	$10,000
Beall	663	34	0	52	52	34	$4,000
Bel Pre	634	32	0	20	20	32	$9,000
Bells Mill	626	32	0	16	16	32	$11,000
Belmont	401	20	0	60	60	20	$2,000
Bethesda	561	28	0	28	28	28	$3,000
Beverly Farms	722	36	26	0	26	10	$6,000
Bradley Hills	687	34	0	30	30	34	$6,000
Brooke Grove	515	26	0	40	40	26	$3,000
Brookhaven	508	26	0	10	10	26	$11,000
Brown Station	754	38	0	14	14	38	$16,000
Burning Tree	388	20	0	20	20	20	$2,000
Burnt Mills	387	20	0	0	0	20	$12,000
Burtonsville	498	24	0	0	0	24	$14,000
Candlewood	521	26	0	38	38	26	$3,000
Cannon Road	507	26	20	0	20	6	$4,000
Captain James Daly	586	30	0	0	0	30	$18,000
Carderock Springs	430	22	0	39	39	22	$2,000
Cashell	341	18	0	16	16	18	$3,000
Cedar Grove	425	22	0	0	0	22	$13,000
Chevy Chase	473	24	0	40	40	24	$3,000
Clarksburg	352	18	0	0	0	18	$11,000
Clearspring	618	30	0	14	14	30	$11,000
Clopper Mill	511	26	0	10	10	26	$11,000

10 Losses were generally wheel bender-type bicycle racks, which do not meet industry standards
11 Due to Purple Line construction which is underway at Silver Spring Library during the writing of this report
12 Most inadequate spaces added were wave-type racks—which often replaced older wheel bender racks

Elementary School Name	Student Capacity 2022-2023	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Cloverly	484	24	0	8	8	24	$11,000
Cold Spring	481	24	0	33	33	24	$3,000
College Gardens	718	36	0	58	58	36	$4,000
Cresthaven	467	24	20	0	20	4	$2,000
Damascus	324	16	0	0	0	16	$10,000
Darnestown	403	20	0	0	0	20	$12,000
Diamond	680	34	0	10	10	34	$16,000
Dr. Charles R. Drew	512	26	0	20	20	26	$6,000
Dr. Ronald A. McNair	650	32	0	40	40	32	$3,000
Dr. Sally K. Ride	505	26	0	6	6	26	$13,000
Dufief	437	22	0	0	0	22	$13,000
East Silver Spring	602	30	0	4	4	30	$16,000
Fairland	648	32	0	20	20	32	$9,000
Fallsmead	561	28	0	8	8	28	$13,000
Farmland	737	36	16	0	16	20	$12,000
Fields Road	457	22	3	0	3	19	$11,000
Flora M. Singer	598	30	0	17	17	30	$10,000
Flower Hill	511	26	0	10	10	26	$11,000
Flower Valley	463	24	0	8	8	24	$11,000
Forest Knolls	581	30	0	10	10	30	$13,000
Fox Chapel	665	34	0	0	0	34	$20,000
Gaithersburg	783	40	0	0	0	40	$24,000
Galway	759	38	0	4	4	38	$21,000
Garrett Park	777	38	0	32	32	38	$7,000
Georgian Forest	675	34	12	0	12	22	$13,000
Germantown	292	14	0	10	10	14	$4,000
Glen Haven	569	28	0	10	10	28	$12,000
Glenallan	762	38	0	10	10	38	$18,000
Goshen	594	30	0	20	20	30	$8,000
Great Seneca Creek	556	28	0	38	38	28	$3,000
Greencastle	582	30	0	0	0	30	$18,000
Greenwood	562	28	0	10	10	28	$12,000
Harmony Hills	775	38	0	0	0	38	$23,000
Harriet R. Tubman	674	34	24	0	24	10	$6,000
Highland	601	30	0	13	13	30	$12,000
Highland View	326	16	0	0	0	16	$10,000
Jackson Road	712	36	0	8	8	36	$18,000
JoAnn Leleck	723	36	6	0	6	30	$18,000
Jones Lane	513	26	0	16	16	26	$8,000
Judith A. Resnik	526	26	0	36	36	26	$3,000
Kemp Mill	470	24	0	20	20	24	$5,000
Kensington Parkwood	786	40	0	25	25	40	$12,000
Lake Seneca	425	22	0	40	40	22	$2,000
Lakewood	566	28	0	20	20	28	$7,000

Elementary School Name	Student Capacity 2022-2023	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Laytonsville	487	24	0	10	10	24	$10,000
Little Bennett	620	32	0	10	10	32	$14,000
Lois P. Rockwell	548	28	0	12	12	28	$11,000
Lucy V. Barnsley	685	34	0	20	20	34	$11,000
Luxmanor	746	38	0	20	20	38	$13,000
Maryvale	655	32	0	32	32	32	$3,000
Meadow Hall	356	18	24	0	24	0	$0
Mill Creek Towne	354	18	0	10	10	18	$6,000
Monocacy	218	10	0	0	0	10	$6,000
Montgomery Knolls	703	36	0	20	20	36	$12,000
New Hampshire Estates	511	26	0	0	0	26	$16,000
North Chevy Chase	381	20	0	10	10	20	$7,000
Oak View	335	16	0	10	10	16	$5,000
Oakland Terrace	511	26	0	20	20	26	$6,000
Olney	607	30	0	20	20	30	$8,000
Pine Crest	667	34	0	10	10	34	$16,000
Piney Branch	611	30	24	0	24	6	$4,000
Poolesville	562	28	0	10	10	28	$12,000
Potomac	479	24	16	0	16	8	$5,000
Rachel Carson	716	36	0	0	0	36	$22,000
Ritchie Park	411	20	10	0	10	10	$6,000
Rock Creek Forest	676	34	0	18	18	34	$12,000
Rock Creek Valley	451	22	0	15	15	22	$6,000
Rock View	675	34	0	16	16	34	$13,000
Rolling Terrace	729	36	0	12	12	36	$16,000
Roscoe R. Nix	491	24	0	0	0	24	$14,000
Rosemary Hills	641	32	0	0	0	32	$19,000
Rosemont	602	30	0	10	10	30	$13,000
S. Christa McAuliffe	732	36	0	14	14	36	$15,000
Sargent Shriver	663	34	0	0	0	34	$20,000
Sequoyah	450	22	0	16	16	22	$5,000
Seven Locks	447	22	0	10	10	22	$8,000
Sherwood	519	26	0	10	10	26	$11,000
Sligo Creek	687	34	0	0	0	34	$20,000
Snowden Farm	762	38	0	20	20	38	$13,000
Somerset	540	28	0	24	24	28	$5,000
South Lake	694	34	0	0	0	34	$20,000
Spark M. Matsunaga	591	30	0	20	20	30	$8,000
Stedwick	713	36	0	0	0	36	$22,000
Stone Mill	713	36	0	15	15	36	$14,000
Stonegate	385	20	0	0	0	20	$12,000
Strathmore	462	24	0	8	8	24	$11,000
Strawberry Knoll	501	26	0	15	15	26	$8,000
Summit Hall	497	24	0	6	6	24	$12,000

Elementary School Name	Student Capacity 2022-2023	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Takoma Park	611	30	0	20	20	30	$8,000
Thurgood Marshall	552	28	0	20	20	28	$7,000
Travilah	526	26	0	0	0	26	$16,000
Twinbrook	629	32	0	10	10	32	$14,000
Viers Mill	752	38	0	20	20	38	$13,000
Washington Grove	629	32	0	6	6	32	$16,000
Waters Landing	768	38	0	20	20	38	$13,000
Watkins Mill	732	36	0	20	20	36	$12,000
Wayside	631	32	0	16	16	32	$11,000
Weller Road	792	40	0	50	50	40	$4,000
Westbrook	638	32	0	20	20	32	$9,000
Westover	266	14	0	10	10	14	$4,000
Wheaton Woods	724	36	0	50	50	36	$4,000
Whetstone	788	40	8	0	8	32	$19,000
William B. Gibbs Jr.	748	38	0	16	16	38	$15,000
William T. Page	377	18	0	10	10	18	$6,000
Wilson Wims	739	36	0	20	20	36	$12,000
Wood Acres	752	38	0	10	10	38	$18,000
Woodfield	365	18	0	0	0	18	$11,000
Woodlin	463	24	0	0	0	24	$14,000
Wyngate	778	38	2	0	2	36	$22,000
Total	**78268**	**3928**	**235**	**1796**	**2031**	**3699**	**$1,450,000**

A.19 BICYCLE PARKING AT MIDDLE SCHOOLS

Objective 2.6: Summary of Bicycle Parking at Middle Schools

Middle School Name	Student Capacity 2022-2023	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
A. Mario Loiederman	986	50	0	30	30	50	$15,000
Argyle	897	44	0	40	40	44	$7,000
Benjamin Banneker	799	40	0	40	40	40	$4,000
Briggs Chaney	927	46	0	20	20	46	$18,000
Cabin John	1125	56	0	30	30	56	$19,000
Dr. Martin Luther King, Jr	914	46	0	20	20	46	$18,000
Earle B. Wood	936	46	0	20	20	46	$18,000
Eastern	1012	50	0	18	18	50	$21,000
Forest Oak	955	48	0	12	12	48	$23,000
Francis Scott Key	961	48	0	36	36	48	$11,000
Gaithersburg	996	50	0	10	10	50	$25,000
Hallie Wells	969	48	0	30	30	48	$14,000
Herbert Hoover	1139	56	0	39	39	56	$14,000
John Poole	478	24	0	63	63	24	$3,000
John T. Baker	762	38	0	0	0	38	$23,000
Julius West	1432	72	0	34	34	72	$27,000
Kingsview	1041	52	16	0	16	36	$22,000
Lakelands Park	1147	58	14	0	14	44	$27,000
Montgomery Village	844	42	0	56	56	42	$5,000
Neelsville	965	48	0	0	0	48	$29,000
Newport Mill	837	42	0	20	20	42	$15,000
North Bethesda	1233	62	0	30	30	62	$23,000
Odessa Shannon	897	44	0	40	40	44	$7,000
Parkland	982	50	0	0	0	50	$30,000
Redland	757	38	0	4	4	38	$21,000
Ridgeview	988	50	0	16	16	50	$22,000
Robert Frost	1051	52	16	0	16	36	$22,000
Roberto W. Clemente	1218	60	0	20	20	60	$26,000
Rocky Hill	1012	50	0	10	10	50	$25,000
Rosa M. Parks	945	48	0	24	24	48	$17,000
Shady Grove	846	42	0	9	9	42	$21,000
Silver Creek	894	44	68	0	68	0	$0
Silver Spring International	1082	54	0	10	10	54	$28,000
Sligo	958	48	0	50	50	48	$5,000
Takoma Park	1330	66	54	0	54	12	$7,000
Thomas W. Pyle	1523	76	0	44	44	76	$24,000
Tilden	1244	62	60	0	60	2	$1,000
Westland	1073	54	0	40	40	54	$13,000
White Oak	992	50	0	18	18	50	$21,000
William H. Farquhar	816	40	14	0	14	26	$16,000
Total	**39963**	**1994**	**242**	**833**	**1075**	**1776**	**$686,000**

A.20 BICYCLE PARKING AT HIGH SCHOOLS

Objective 2.6: Summary of Bicycle Parking at High Schools

High School Name	Student Capacity 2022-2023	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Albert Einstein	1602	80	0	20	20	80	$38,000
Bethesda-Chevy Chase	2475	124	0	41	41	124	$55,000
Clarksburg	2034	102	0	26	26	102	$49,000
Col. Zadok Magruder	1885	94	0	6	6	94	$54,000
Damascus	1543	78	0	4	4	78	$45,000
Gaithersburg	2474	124	0	30	30	124	$60,000
James Hubert Blake	1743	88	0	20	20	88	$43,000
John F. Kennedy	2159	108	0	16	16	108	$57,000
Montgomery Blair	2867	144	40	0	40	104	$63,000
Northwest	2291	114	6	38	44	108	$46,000
Northwood	1526	76	0	20	20	76	$36,000
Paint Branch	1985	100	0	160	160	100	$11,000
Poolesville	1170	58	0	30	30	58	$20,000
Quince Orchard	1800	90	0	10	10	90	$49,000
Richard Montgomery	2250	112	0	44	44	112	$46,000
Rockville	1525	76	2	10	12	74	$40,000
Seneca Valley	2520	126	0	40	40	126	$56,000
Sherwood	2152	108	0	0	0	108	$65,000
Springbrook	2117	106	0	12	12	106	$58,000
Thomas S. Wootton	2120	106	0	27	27	106	$51,000
Walt Whitman	2231	112	0	84	84	112	$26,000
Walter Johnson	2291	114	0	59	59	114	$40,000
Watkins Mill	1742	88	0	16	16	88	$45,000
Wheaton	2237	112	2	50	52	110	$42,000
Winston Churchill	1991	100	0	24	24	100	$48,000
Total	**50,730**	**2,540**	**50**	**787**	**837**	**2,490**	**$1,142,000**

A.21 BICYCLE PARKING AT LIBRARIES

Objective 2.8: Summary of Bicycle Parking at Libraries

Library Name	Calculated Ground Floor Area (ft2)	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Aspen Hill	16,131	4	0	12	12	4	$400
Bethesda	24,402	4	0	10	10	4	$400
Chevy Chase	16,306	4	0	10	10	4	$400
Damascus	15,725	2	0	10	10	2	$200
Davis/Special Needs	19,542	4	0	6	6	4	$400
Gaithersburg	49,495	8	20	0	20	0	$0
Germantown	49,183	8	0	16	16	8	$900
Kensington Park	14,858	2	0	6	6	2	$200
Little Falls	13,214	2	0	10	10	2	$200
Long Branch	20,615	4	0	10	10	4	$400
Marilyn J. Praisner	16,930	4	0	6	6	4	$400
Noyes Library for Young Children	1,085	2	0	0	0	2	$1,200
Olney	21,085	4	0	16	16	4	$400
Poolesville	7,000	2	0	6	6	2	$200
Potomac	16,986	4	0	8	8	4	$400
Quince Orchard	18,468	4	0	4	4	4	$400
Silver Spring	79,678	10	12	0	12	0	$0
Wheaton	78,572	10	22	0	22	0	$0
White Oak	20,728	4	0	6	6	4	$400
Total	**N/A**	**86**	**54**	**136**	**190**	**58**	**$7,300**

A.22 BICYCLE PARKING AT RECREATION CENTERS

Objective 2.8: Summary of Bicycle Parking at Recreation Centers

Community or Recreation Center Name	Calculated Ground Floor Area (ft2)	Industry-Established Need	Adequate Existing Spaces	Inadequate Existing Spaces	Total Existing Spaces	Shortage	Cost
Bauer Drive	20,364	4	4	0	4	0	$0
Clara Barton	23,205	4	0	4	4	4	$400
Damascus	33,624	6	4	12	16	2	$200
East County	27,700	4	0	10	10	4	$400
Germantown	24,463	4	40	0	40	0	$0
Gwendolyn E. Coffield	28,394	4	0	10	10	4	$400
Jane E. Lawton	18,533	4	0	10	10	4	$400
Leonard D. Jackson	2,184	2	0	0	0	2	$1,000
Long Branch	26,922	4	0	10	10	4	$400
Longwood	20,420	4	0	6	6	4	$400
Marilyn J. Praisner	31,294	4	0	8	8	4	$400
Mid County	31,086	4	0	24	24	4	$400
North Potomac	48,084	8	0	40	40	8	$900
Plum Gar Neighborhood	19,583	4	0	8	8	4	$400
Potomac	29,772	4	8	0	8	0	$0
Scotland Neighborhood	13,039	2	0	4	4	2	$200
Upper County Neighborhood	17,848	4	0	32	32	4	$400
Wheaton	13,428	2	3	0	3	0	$0
White Oak	54,022	8	0	50	50	8	$900
Wisconsin Place	18,102	4	12	0	12	0	$0
Total	**N/A**	**84**	**71**	**228**	**299**	**62**	**$8,000**

Appendix B : Status of Bikeway Project

B.1 BIKEWAY PROJECTS COMPLETED BY PUBLIC SECTOR IN 2021 AND 2022

Table B.1: Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Cameron Street to Planning Place Cycle Track Connection	Separated Bike Lanes	0.1	MCDOT	Silver Spring CBD
Capital Crescent Surface Trail (Phase 1)	Separated Bike Lanes	0.2	MCDOT	Bethesda CBD
Frederick Road Bike Path	Sidepath	1.6	MCDOT	Clarksburg, Clarksburg Town Center, Germantown East
Grove Street Neighborhood Greenway - Phase 1	Neighborhood Greenway	0.4	MCDOT	East Purple Line
MD 355 Intersection Improvements at West Old Baltimore Road	Sidepath	0.3	MCDOT	Clarksburg
Snouffer School Road North Road Widening & Sidepath	Sidepath	0.5	MCDOT	Montgomery Village/Airpark
Snouffer School Road South Road Widening & Sidepath	Sidepath	0.1	MCDOT	Montgomery Village/Airpark
Woodmont Avenue Cycle Track - Phase 1	Separated Bike Lanes	0.2	MCDOT	Bethesda CBD

Table B.2: Non-Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
MD 187 (Old Georgetown Road) from Nicholson Lane to I-495	Separated Bike Lanes	4.8	MDOT/SHA	Bethesda/Chevy Chase, North Bethesda
MD 187 (Old Georgetown Road) from I-495 to Cedar Lane	Separated Bike Lanes	1.2	MDOT/SHA	Bethesda/Chevy Chase
MD 190 (River Road) & Pyle Road Traffic Signal	Sidepath	0.2	MDOT/SHA	Bethesda/Chevy Chase
Snouffer School Road South Road Widening & Sidepath	Conventional Bike Lanes	1.1	MCDOT	Montgomery Village/Airpark

Table B.3: Upgrades to Existing Bikeways

Project	Bikeway	Length (ft)	Lead Agency	Policy Area
Beach Drive over Silver Creek Bridge	Stream Valley Park Trail	0.1	Parks	Kensington/Wheaton

B.2 BIKEWAY PROJECTS COMPLETED BY DEVELOPERS IN 2021 AND 2022

Table B.4: Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
7272 Wisconsin Avenue	Off-Street Trail	0.1	Developer	Bethesda CBD
9800 Medical Center Drive	Sidepath	0.2	Developer	R&D Village
Avocet Towers/7359 Wisconsin Avenue	Separated Bike Lanes	0.1	Developer	Bethesda CBD
Brightview Grosvenor	Sidepath	0.1	Developer	North Bethesda
Brookeville Preserve	Sidepath	0.3	Developer	Olney
Cabin Branch	Sidepath	0.3	Developer	Clarksburg
Chevy Chase Lake - Block B	Separated Bike Lanes	0.0	Developer	Chevy Chase Lake
East Village at North Bethesda Gateway	Separated Bike Lanes	0.1	Developer	White Flint
Marriott International Headquarters	Separated Bike Lanes	0.1	Developer	Bethesda CBD
Montgomery Village Whetstone Center	Sidepath	0.1	Developer	Montgomery Village/Airpark
Mt. Prospect	Sidepath	0.5	Developer	North Potomac, Rural West
Ripley II	Off-Street Trail	0.1	Developer	Silver Spring CBD
Ripley II	Separated Bike Lanes	0.1	Developer	Silver Spring CBD

Table B.5: Non-Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
9800 Medical Center Drive	Sidepath	0.1	Developer	R&D Village
9950 Medical Center	Sidepath	0.1	Developer	R&D Village
Black Hill - Viasat	Off-Street Trail	0.2	Developer	Germantown West
Chevy Chase Lake - Block B	Sidepath	0.0	Developer	Chevy Chase Lake
Dowden's Station	Off-Street Trail	0.1	Developer	Clarksburg
Knowles Manor	Sidepath	0.0	Developer	Kensington/Wheaton
Shady Grove Metro West	Conventional Bike Lanes	0.1	Developer	Shady Grove Metro Station

B.3 PROJECTS UNDER CONSTRUCTION BY PUBLIC SECTOR ON 12/31/2022

Table B.6: Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Brookeville Bypass	Bikeable Shoulders	0.7	MDOT / SHA	Olney, Rural East
Capital Crescent Trail from Elm Street Park to Silver Spring Transit Center	Off-Street Trail	4.9	MTA	Multiple
Clarksburg Road/Snowden Farm Pkwy	Conventional Bike Lanes	0.3	MCDOT	Clarksburg Town Center
Clarksburg Road/Snowden Farm Pkwy	Sidepath	0.3	MCDOT	Clarksburg Town Center
Emory Lane Shared Use Path	Sidepath	0.1	MCDOT	Aspen Hill
Hillandale Local Park Renovation	Sidepath	0.2	Parks	White Oak
MD 185 (Connecticut Avenue) at Jones Bridge Road and Kensington Parkway Phase 3	Sidepath	0.5	MDOT / SHA	Chevy Chase Lake
Montgomery Lane/Avenue Cycle Track Phase 1 & 2A	Separated Bike Lanes	0.2	MCDOT	Bethesda CBD
Silver Spring Green Trail	Sidepath	0.7	MTA	East Purple Line, Silver Spring CBD
White Flint West Phase 2	Separated Bike Lanes	0.2	MCDOT	White Flint

Table B.7: Non-Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Silver Spring Green Trail	Sidepath	0.1	MTA	Silver Spring CBD, East Purple Line
White Flint West Phase 2	Conventional Bike Lanes	0.2	MCDOT	White Flint

B.4 PROJECTS UNDER CONSTRUCTION BY DEVELOPERS ON 12/31/2022

Table B.8: Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Century	Sidepath	0.1	Developer	Germantown Town Center
Crescent at Chevy Chase	Sidepath	0.1	Developer	Chevy Chase Lake
New Hampshire Avenue Restaurant Redevelopment	Sidepath	0.0	Developer	Cloverly

Table B.9: Non-Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
8015 Old Georgetown Road	Off-Street Trail	0.1	Developer	Bethesda CBD

B.5 PROJECTS FUNDED IN THE CAPITAL IMPROVEMENT PROGRAM AS OF 12/31/2022

Table B.10: Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Amherst Avenue Cycle Track	Separated Bike Lanes	1.1	MCDOT	Kensington/Wheaton, Wheaton CBD
Aspen Hill Neighborhood Greenway	Neighborhood Greenway	0.5	MCDOT	Aspen Hill, Kensington/Wheaton
Bowie Mill Road Bikeway	Sidepath	2.0	MCDOT	Olney, Rural East
Boyds Transit Center	Sidepath	0.1	MCDOT	Rural West
Capital Crescent Surface Trail (Phase 2)	Sidepath	0.1	MCDOT	Bethesda CBD
Capital Crescent Trail Under MD 355	Off-Street Trail	0.1	MCDOT	Bethesda CBD
Cedar / Bonifant / Grove / Sligo / Woodbury Neighborhood Greenway	Neighborhood Greenway	0.3	MCDOT	East Purple Line
Charles W. Woodward High School Reopening	Sidepath	0.2	MCPS	North Bethesda
Cheltenham Separated Bike Lanes	Neighborhood Greenway	0.1	MCDOT	Bethesda CBD
Cheltenham Separated Bike Lanes	Separated Bike Lanes	0.3	MCDOT	Bethesda CBD
Clarksburg Road at MD 355	Sidepath, Conventional Bike Lanes	0.9	MCDOT	Clarksburg Town Center
Dale Drive Shared Use Path and Safety Improvements	Sidepath	0.9	MCDOT	Silver Spring/Takoma Park
Dennis Avenue Bridge	Sidepath	0.0	MCDOT	Kensington/Wheaton
Dixon Lane Separated Bike Lanes	Separated Bike Lanes	0.3	MCDOT	Silver Spring CBD
Domer/Barron/Gilbert Neighborhood Greenway	Neighborhood Greenway	0.5	MCDOT	East Purple Line
Fenton Street at MD 410	Separated Bike Lanes	0.1	MCDOT	Silver Spring CBD
Fenton Street Cycle Track	Separated Bike Lanes	0.7	MCDOT	Silver Spring CBD
Garrett Park Road Bridge over Rock Creek	Sidepath	0.2	MCDOT	Kensington/Wheaton, North Bethesda

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Good Hope Road Shared Use Path	Sidepath	0.3	MCDOT	Cloverly
Grandview Avenue Neighborhood Greenway (Arcola Avenue to Blueridge Avenue)	Neighborhood Greenway	0.3	MCDOT	Wheaton CBD
Grandview Avenue Neighborhood Greenway (Georgia Avenue to Arcola Avenue)	Neighborhood Greenway	0.7	MCDOT	Kensington/Wheaton
Greenwood Road Neighborhood Greenway (Piney Branch Road to Wabash Avenue)	Neighborhood Greenway	0.3	MCDOT	East Purple Line
Greenwood Road Neighborhood Greenway (Wabash Avenue to Division Street)	Neighborhood Greenway	0.5	MCDOT	East Purple Line, Silver Spring/ Takoma Park
Heritage Trail Triangle Phase 1 (Dr. Bird/ Norwood Road) Shared Use Path	Sidepath	0.6	MCDOT	Rural East
Life Sciences Center Loop Trail	Sidepath	1.4	MCDOT	R&D Village
Marinelli Road Separated Bike Lanes	Separated Bike Lanes	0.8	MCDOT	White Flint
McComas Avenue Neighborhood Greenway	Neighborhood Greenway	1.2	MCDOT	Kensington/Wheaton, Wheaton CBD
MD 355 Clarksburg Shared Use Path	Sidepath	0.5	MCDOT	Clarksburg Town Center
MD 355 Shared Use Path and Sidewalk (Grosvenor)	Sidepath	0.2	MCDOT	Grosvenor, North Bethesda
MD 97 (Georgia Avenue) Montgomery Hills Road Reconstruction	Separated Bike Lanes	0.6	MDOT / SHA	Forest Glen, Woodside
MD 97 (Georgia Avenue) Montgomery Hills Road Reconstruction	Sidepath	0.1	MDOT / SHA	Forest Glen
Metropolitan Branch Trail from Silver Spring Transit Center to King St	Off-Street Trail	0.3	MCDOT	Silver Spring CBD
Montgomery Lane/Avenue Cycle Track Phase 2C	Separated Bike Lanes	0.1	MCDOT	Bethesda CBD
Northwood High School Additional/ Facility Upgrades	Sidepath	0.1	MCPS	Kensington/Wheaton
Upton Drive Neighborhood Greenway	Neighborhood Greenway	0.2	MCDOT	Kensington/Wheaton, Wheaton CBD
Veirs Mill Road BiPPA Project	Sidepath	1.1	MCDOT	Aspen Hill, Kensington/Wheaton
Woodmont Avenue Cycle Track - Phase 1	Separated Bike Lanes	0.0	MCDOT	Bethesda CBD
Woodmont Avenue Cycle Track - Phase 2	Separated Bike Lanes	0.3	MCDOT	Bethesda CBD

Table B.11: Non-Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Aspen Hill Neighborhood Greenway	Neighborhood Greenway	1.3	MCDOT	Kensington/Wheaton, Wheaton CBD
Bowie Mill Road Bikeway	Sidepath	1.5	MCDOT	Olney, Rural East
Clarksburg Road at MD 355	Sidepath	0.1	MCDOT	Clarksburg Town Center
Dale Drive Shared Use Path and Safety Improvements	Sidepath	0.2	MCDOT	Silver Spring/Takoma Park
Fenton Street at MD 410	Separated Bike Lanes	0.1	MCDOT	Silver Spring CBD
Fenton Street at MD 410	Sidepath	0.0	MCDOT	Silver Spring CBD
Fenton Street Cycle Track	Separated Bike Lanes	0.2	MCDOT	Silver Spring CBD
Goldsboro Road Sidewalk and Bikeway	Sidepath	1.2	MCDOT	Bethesda/Chevy Chase
Good Hope Road Shared Use Path	Sidepath	0.6	MCDOT	Cloverly
Life Sciences Center Loop Trail	Sidepath	1.4	MCDOT	R&D Village
Marinelli Road Separated Bike Lanes	Separated Bike Lanes	0.1	MCDOT	White Flint
MD 355 Clarksburg Shared Use Path	Sidepath	0.0	MCDOT	Clarksburg Town Center
North Branch Trail	Off-Street Trail	0.4	Parks	Aspen Hill, Rural East
Veirs Mill Road BiPPA Project	Sidepath	0.2	MCDOT	Aspen Hill, Kensington/Wheaton

Table B.12: Upgrades to Existing Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
MacArthur Boulevard Shared Use Path Phase 3	Bikeable Shoulders	2.5	MCDOT	Bethesda/Chevy Chase
MacArthur Boulevard Shared Use Path Phase 3	Sidepath	2.3	MCDOT	Bethesda/Chevy Chase
Spring Street Separated Bike Lane Upgrades	Separated Bike Lanes	0.3	MCDOT	East Purple Line, Silver Spring CBD

B.6 PROJECTS TO BE CONSTRUCTED BY DEVELOPERS AS OF 12/31/2022

Table B.13: Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
12710 Twinbrook Parkway	Separated Bike Lanes	0.0	Developer	Twinbrook
1910 University Senior Housing	Neighborhood Connector	0.1	Developer	Wheaton CBD
4725 Cheltenham Drive	Separated Bike Lanes	0.1	Developer	Bethesda CBD
4910/4920 Strathmore	Sidepath	0.4	Developer	Grosvenor, North Bethesda
9545 River Road	Sidepath	0.1	Developer	Potomac
Burtonsville Crossing Shopping Center	Separated Bike Lanes	0.1	Developer	Burtonsville Town Center
Crossroads of Kensington	Separated Bike Lanes	0.1	Developer	Kensington/Wheaton
ELP Bethesda at Rock Spring	Separated Bike Lanes	0.1	Developer	North Bethesda
Hillandale Gateway	Separated Bike Lanes	0.1	Developer	White Oak
Hillmead	Sidepath	0.0	Developer	Bethesda/Chevy Chase
Iglesia Vida Nueva Church	Sidepath	0.1	Developer	Fairland/Colesville
Liberty Mill Road	Sidepath	0.1	Developer	Germantown West
LIDL Germantown	Sidepath	0.2	Developer	Germantown Town Center
Miles Coppola	Sidepath, Buffered Bike Lanes	0.5	Developer	Clarksburg, Clarksburg Town Center
Milestone Senior Germantown	Sidepath	0.1	Developer	Germantown East
Olney Theatre Center	Sidepath	0.1	Developer	Olney
PSTA Site	Separated Bike Lanes	0.9	Developer	R&D Village
PSTA Site	Sidepath	0.3	Developer	R&D Village
Snowdens Manor	Sidepath	0.0	Developer	Cloverly
Traville Parcel N. Building A	Sidepath	0.2	Developer	R&D Village
Village at Cabin Branch	Sidepath	0.1	Developer	Clarksburg
Village at Cabin Branch Phase 2	Sidepath	0.4	Developer	Clarksburg

Table B.14: Non-Master-Planned Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
Burtonsville Crossing Shopping Center	Sidepath	0.2	Developer	Burtonsville Town Center
ELP Bethesda at Rock Spring	Separated Bike Lanes	0.2	Developer	North Bethesda
Johns Hopkins Medical Office & Surgery Center at B	Separated Bike Lanes	0.2	Developer	R&D Village
Johns Hopkins Medical Office & Surgery Center at B	Sidepath	0.1	Developer	R&D Village
King Souder Property	Off-Street Trail	0.2	Developer	Damascus
King Souder Property	Sidepath	0.1	Developer	Damascus
LIDL Germantown	Sidepath	0.1	Developer	Germantown Town Center
Linthicum West	Sidepath	0.9	Developer	Clarksburg
Miles Coppola	Sidepath	0.4	Developer	Clarksburg, Clarksburg Town Center
Milestone	Sidepath	0.2	Developer	Germantown East
Montgomery College Germantown	Sidepath	0.2	Developer	Germantown East
PSTA Site	Sidepath	0.5	Developer	R&D Village
Seneca Property	Sidepath	0.1	Developer	Rural West
White Oak Apartments	Sidepath	0.1	Developer	White Oak
White Oak Town Center	Sidepath	0.3	Developer	White Oak

Table B.15: Upgrades to Existing Bikeways

Project	Bikeway	Length (mi)	Lead Agency	Policy Area
FAES - Social and Academic Center	Sidepath	0.1	Developer	Bethesda/Chevy Chase

Glossary

Bicycle and Pedestrian Priority Areas (BiPPA): Defined in the Maryland state code as a geographical area where the enhancement of bicycle and pedestrian traffic is a priority. Montgomery County has designated 34 BPPAs and has established a funding program for pedestrian and bicycle improvements with these areas. A map of BiPPAs is shown here.

Bicycle Parking: The availability of secure and convenient bicycle parking is an important factor when considering making a trip by bicycle. No matter how well-connected the bikeway network, many people will forgo bicycling if their destinations lack safe places to secure their bicycles. An adequate supply of bicycle parking encourages bicycling while reducing theft and improper use of trees and street furniture for bicycle parking. Whether traveling to work, school, shopping, or home, people must feel confident that their bicycles will not be stolen or vandalized when stored. The length of time that a bicycle will be parked largely determines the level of security that is needed. The longer the time period, the more secure the bicycle parking needs to be. The *Bicycle Master Plan* recommends three types of bicycle parking:

- **Bicycle Parking Stations:** Secure bicycle storage areas often located adjacent to transit stations or in downtown areas.
- **Long-Term Bicycle Parking:** Long-term bicycle parking is intended to provide sheltered and secure bicycle storage for residents, students, employees, and long-term visitors who are leaving their bicycles for several hours or longer. It is typically provided in a fixed, safe, and weather-protected setting, including bike stations, bike rooms, or cages inside buildings and stand-alone bike lockers.
- **Short-Term Bicycle Parking:** Short-term bicycle parking prioritizes convenience and is located at entrances to public buildings, such as schools, libraries, recreation centers, and on commercial blocks. It is typically provided with "U" racks for users to quickly store and retrieve their bicycle.

Bikeways: Bikeways provide physical infrastructure to improve the comfort and safety of bicycling. They are organized into five facilities classifications based on their level of separation from traffic, ranging from trails (the most separation from traffic) to shared roads (no separation from traffic). These five classifications are then subdivided into bikeway types:

Trails: paths that are located outside of the road right-of-way. They provide two-way travel designated for walking, bicycling, jogging and skating.

- **Off-Street Trails:** shared use paths located outside of the road right-of-way that provide two-way travel for people walking, bicycling and using other non-motorized modes.
- **Stream Valley Park Trails**: shared use paths located within a M-NCPPC stream valley park that provide two-way travel for people walking, bicycling, and using other non-motorized modes of transportation.
- **Neighborhood Connectors:** short paths that provide critical connections in the residential walking and bicycling network. They create shortcuts and often bypass or minimize the amount of travel along higher-stress streets.

Separated Bikeways: Separated bikeways provide physical separation from traffic.

- **Sidepaths:** shared use paths located parallel to and within the road right-of-way. They provide two-way travel routes designated for walking, bicycling, jogging, and skating.
- **Separated Bike Lanes:** Also known as protected bike lanes or cycle tracks, they provide exclusive bikeways that combine the user experience of a sidepath with the on-street infrastructure of a conventional bike lane. They are physically separated from motor vehicle traffic and distinct from the sidewalk. They operate one-way or two-way.

Striped Bikeways: designated spaces for bicycling that are distinguished from traffic lanes and shoulders by striping and pavement markings.

- **Buffered Bike Lanes:** conventional bike lanes paired with a designated buffer space separating the bicycle lane from the adjacent vehicle travel lane and/or parking lane to increase the comfort of bicyclists.
- **Conventional Bike Lanes**: (or simply bike lanes) are portions of the street that have been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists.
- **Contra-Flow Bike Lane:** bike lanes designed to allow bicyclists to ride in the opposite direction of motor vehicle traffic.

Bikeable Shoulders: portions of the roadway that accommodate stopped or parked vehicles, emergency use, bicycles and motor scooters, and pedestrians where sidewalks do not exist.

Shared Roads: bikeways that share space with automobiles.

- **Shared Streets:** an urban design approach where pedestrians, bicycles, and motor vehicles can comfortably coexist. They prioritize pedestrian and bicycle movement by slowing vehicular speeds and communicating clearly through design features that motorists must yield to all other users. Motorists are considered "guests" in this environment.
- **Neighborhood Greenways:** streets with low motorized traffic volumes and speeds, designed and designated to give walking and bicycling priority. They use signs, pavement markings, and speed and volume management measures to discourage through-trips by motor vehicles and create safe, convenient crossings of busy arterial streets.
- **Priority Shared Lane Markings:** communicate bicyclist priority within a shared lane and guide bicyclists to ride outside of the door zone. Colored backgrounds and more frequent spacing make priority shared lane markings more conspicuous than standard shared lane markings (also known as sharrows). This treatment does not improve most bicyclists' comfort in shared lanes with traffic.

Breezeways: the arterial bikeway network.

Capital Improvements Program (CIP):
A six-year comprehensive statement of the objectives of capital programs with cost estimates and proposed construction schedules for specific projects. The proposed Montgomery County CIP is submitted by the County Executive to the County Council every two years and a general amendment is typically submitted in the off years.

Complete Streets Design Guide: A document that provides policy and design guidance on the planning, design, and operation of county roadways to provide safe, accessible, and healthy travel for all users of the roadway system, including pedestrians, bicyclists, transit riders, and motorists.

Equity Focus Area (EFA): Parts of Montgomery County that are characterized by high concentrations of lower-income people of color, who may also speak English "less than very well".

Fee-in-Lieu: a payment collected by Montgomery County as an alternative to meeting the requirements of county laws and policies.

Level of Traffic Stress (or Traffic Stress): the concept that people have a certain tolerance for bicycling near traffic, and if that tolerance is exceeded even for a short distance, they may be deterred from bicycling.

Low-Stress Bicycling Network: A bicycling network that is comfortable and safe for people of all ages and bicycling abilities. Low-stress bicycling reflects the context of the road. For example, on high-volume and high-speed suburban highways, a shared-use path with a wide buffer from the road, on downtown streets, a network of separated bike lanes, and on low-volume residential streets, bicycling in the road with traffic may be appropriate.

Transportation Management Districts (TMD): County organizations that provide concentrated services to encourage the use of transit and other commuting options in Montgomery County's major business districts. Currently, TMDs exist in Friendship Heights, downtown Bethesda, downtown Silver Spring, Greater Shady Grove, North Bethesda, and White Oak.

Vision Zero: A proven approach to preventing roadway-related deaths and serious injuries that represents a fundamental change in how we plan and design our roads, shifting from a focus on maximizing motor vehicle efficiency to ensuring that our roads are safe regardless of whether travel is by car, bus, bicycle, or foot. Vision Zero recognizes that people will sometimes make mistakes and that our roads should be designed to ensure those inevitable mistakes do not result in serious injuries or fatalities.

THE BICYCLE MASTER PLAN

Biennial Monitoring Report

2021 - 2022

Montgomery Planning