



MONTGOMERY COUNTY'S
PEDESTRIAN 
PLAN

APPROVED AND ADOPTED FALL 2023





MONTGOMERY COUNTY'S
PEDESTRIAN 
PLAN

APPROVED AND ADOPTED FALL 2023

The Maryland-National Capital Park and Planning Commission
Prepared by the Montgomery County Planning Department
MontgomeryPlanning.org

ABSTRACT

The Pedestrian Master Plan contains the text and supporting maps and tables for a comprehensive amendment to all past functional plans, area master plans and sector plans, bringing Montgomery County in line with leading practices in pedestrian planning. The plan is a key element in *Thrive*

Montgomery 2050 and Montgomery County's *Vision Zero Action Plan* to eliminate traffic-related fatalities and serious injuries.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

The Maryland-National Capital Park and Planning (M-NCPPC) Commission is a bicounty agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties; the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises about 1,001 square miles, while the Metropolitan District (parks) comprises about 919 square miles, in the two counties.

The Commission prepares, adopts, and amends or extends The General Plan (*Thrive Montgomery 2050*) for the physical development of the Maryland- Washington Regional District in Montgomery County. The Commission operates in each county through Planning Boards appointed by the respective county governments. The Planning Boards are responsible for implementation of local plans, recommendations on zoning map amendments, zoning text amendments and subdivision regulation amendments, and the general administration of their respective park systems.

The M-NCPPC encourages the involvement and participation of all individuals, including those with disabilities. The M-NCPPC will generally provide, upon request, appropriate aids and services and make reasonable accommodations for persons with disabilities. To request accommodation (e.g., large print materials, listening

devices, sign language interpretation, etc.), please contact the M-NCPPC Montgomery County Commissioners Office by telephone at 301-495-4605 or by email at mcp-chair@mncppc-mc.org, or contact the Montgomery Planning ADA Coordinator at 301-495-1324. Maryland residents can also use the free Maryland Relay Service for assistance with calls to or from hearing- or speech-impaired persons by calling 7-1-1. For more information about the Maryland Relay go to www.mdrelay.org or call 800-552-7724.

Source of Copies:

The Maryland-National Capital Park and Planning Commission

2425 Reedie Drive

Wheaton, MD 20902

Online at <https://montgomeryplanning.org/walkinghere>

Certification of Approval and Adoption

Pedestrian Master Plan

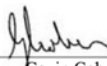
This Comprehensive Amendment to the *Master Plan of Highways & Transitways*, the *Bicycle Master Plan* (2018), the *Rustic Roads Functional Master Plan* (2023), the *Preservation of Agricultural and Rural Open Space Functional Master Plan* (1980), the *Purple Line Functional Plan* (2010), the *Countywide Transit Corridors Functional Master Plan* (2013), the *Intercounty Connector Limited Functional Master Plan Amendment: Bikeways and Interchanges* (2009), and *Thrive Montgomery 2050* (2022), as amended; being also an amendment to the following area master plans, as amended: the *10 Mile Creek Area Limited Amendment* (2014), the *Ashton Village Center Sector Plan* (2021), the *Aspen Hill Master Plan* (1994), the *Aspen Hill Minor Master Plan Amendment* (2015), the *Bethesda Downtown Sector Plan* (2017), the *Bethesda-Chevy Chase Master Plan* (1990), the *Boyd's Master Plan* (1985), the *Burtonsville Commercial Crossroads Neighborhood Plan* (2012), the *Capitol View and Vicinity Sector Plan* (1982), the *Chevy Chase Lake Sector Plan* (2013), the *Clarksburg Master Plan and Hyattstown Special Study Area* (1994), the *Cloverly Master Plan* (1997), the *Damascus Master Plan* (2006), the *East Silver Spring Master Plan* (2000), the *Fairland Master Plan* (1997), the *Forest Glen/Montgomery Hills Sector Plan* (2020), the *Four Corners Master Plan* (1996), the *Friendship Heights Sector Plan* (1998), the *Gaithersburg and Vicinity Master Plan* (1996), the *Germantown Employment Area Sector Plan* (2009), the *Germantown Master Plan* (1989), the *Glenmont Sector Plan* (2013), the *Great Seneca Science Corridor Master Plan* (2010), the *Greater Lyttonsville Sector Plan* (2017), the *Grosvenor/Strathmore Metro Area Minor Master Plan* (2018), the *Kemp Mill Master Plan* (2001), the *Kensington Sector Plan* (2012), the *Kensington/Wheaton Master Plan* (1989), the *Long Branch Sector Plan* (2013), the *MARC Rail Communities Sector Plan* (2019), the *Montgomery Village Master Plan* (2016), the *North and West Silver Spring Master Plan* (2000), the *North Bethesda/Garrett Park Master Plan* (1992), the *Olney Master Plan* (2005), the *Potomac Subregion Master Plan* (2002), the *Rock Spring Sector Plan* (2017), the *Sandy Spring/Ashton Master Plan* (1998), the *Sandy Spring Rural Village Plan* (2015), the *Shady Grove Minor Master Plan* (2021), the *Shady Grove Sector Plan* (2006), the *Silver Spring Downtown and Adjacent Communities Plan* (2022), the *Takoma/Langley Crossroads Sector Plan* (2012), the *Takoma Park Master Plan* (2000), the *Twinbrook Sector Plan* (2009), the *Upper Rock Creek Master Plan* (2004), the *Veirs Mill Corridor Master Plan* (2019), the *Westbard Sector Plan* (2016), the *Wheaton CBD Sector Plan* (2012), the *White Flint Sector Plan* (2010), the *White Flint 2 Sector Plan* (2018), the *White Oak Master Plan* (1997), and the *White Oak Science Gateway Master Plan* (2014) has been approved by the Montgomery County Council, sitting as the District Council, by Resolution Number 20-300 on October 10, 2023, and has been adopted by The Maryland-National Capital Park and Planning Commission by Resolution Number 23-22 on November 15, 2023, after duly advertised public hearings pursuant to the Land Use Article – Division II, of the Annotated Code of Maryland.



Peter A. Shapiro
Chair



Artie L. Harris
Vice-Chair



Gavin Cohen
Secretary-Treasurer



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
6611 Kenilworth Avenue • Riverdale, Maryland 20737

MCPB NO. 23-107

M-NCPPC NO. 23-22

RESOLUTION

WHEREAS, The Maryland-National Capital Park and Planning Commission, by virtue of the Land Use Article of the Annotated Code of Maryland, is authorized and empowered, from time to time, to make and adopt, amend, extend and add to *Thrive Montgomery 2050*; and

WHEREAS, the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission, pursuant to procedures set forth in the Montgomery County Code, Chapter 33A, held a duly advertised public hearing on March 23, 2023 on the Public Hearing Draft of the *Pedestrian Master Plan*, being also an amendment to portions of the following functional master plans: the *Master Plan of Highways & Transitways* (2018), the *Bicycle Master Plan* (2018), the *Rustic Roads Functional Master Plan* (2023), the *Preservation of Agricultural and Rural Open Space Functional Master Plan* (1980), the *Purple Line Functional Plan* (2010), the *Countywide Transit Corridors Functional Master Plan* (2013), the *Intercounty Connector Limited Functional Master Plan Amendment: Bikeways and Interchanges* (2009), the *Thrive Montgomery 2050* (2022); and the following area master plans: the *10 Mile Creek Area Limited Amendment* (2014), the *Ashton Village Center Sector Plan* (2021), the *Aspen Hill Master Plan* (1994), the *Aspen Hill Minor Master Plan Amendment* (2015), the *Bethesda Downtown Sector Plan* (2017), the *Bethesda-Chevy Chase Master Plan* (1990), the *Boyd's Master Plan* (1985), the *Burtonsville Commercial Crossroads Neighborhood Plan* (2012), the *Capitol View and Vicinity Sector Plan* (1982), the *Chevy Chase Lake Sector Plan* (2013), the *Clarksburg Master Plan and Hyattstown Special Study Area* (1994), the *Cloverly Master Plan* (1997), the *Damascus Master Plan* (2006), the *East Silver Spring Master Plan* (2000), the *Fairland Master Plan* (1997), the *Forest Glen/Montgomery Hills Sector Plan* (2020), the *Four Corners Master Plan* (1996), the *Friendship Heights Sector Plan* (1998), the *Gaithersburg and Vicinity Master Plan* (1996), the *Germantown Employment Area Sector Plan* (2009), the *Germantown Master Plan* (1989), the *Glenmont Sector Plan* (2013), the *Great Seneca Science Corridor Master Plan* (2010), the *Greater Lyttonsville Sector Plan* (2017), the *Grosvenor/Strathmore Metro Area Minor Master Plan* (2018), the *Kemp Mill Master Plan* (2001), the *Kensington Sector Plan* (2012), the *Kensington/Wheaton Master Plan* (1989), the

Approved as to
Legal Sufficiency: /s/ Emily Vaias
M-NCPPC Legal Department

Long Branch Sector Plan (2013), the *MARC Rail Communities Sector Plan* (2019), the *Montgomery Village Master Plan* (2016), the *North and West Silver Spring Master Plan* (2000), the *North Bethesda/Garrett Park Master Plan* (1992), the *Olney Master Plan* (2005), the *Potomac Subregion Master Plan* (2002), the *Rock Spring Sector Plan* (2017), the *Sandy Spring/Ashton Master Plan* (1998), the *Sandy Spring Rural Village Plan* (2015), the *Shady Grove Minor Master Plan* (2021), the *Shady Grove Sector Plan* (2006), the *Silver Spring Downtown and Adjacent Communities Plan* (2022), the *Takoma/Langley Crossroads Sector Plan* (2012), the *Takoma Park Master Plan* (2000), the *Twinbrook Sector Plan* (2009), the *Upper Rock Creek Master Plan* (2004), the *Veirs Mill Corridor Master Plan* (2019), the *Westbard Sector Plan* (2016), the *Wheaton CBD Sector Plan* (2012), the *White Flint Sector Plan* (2010), the *White Flint 2 Sector Plan* (2018), the *White Oak Master Plan* (1997), and the *White Oak Science Gateway Master Plan* (2014).

WHEREAS, the Montgomery County Planning Board, after said public hearing and due deliberation and consideration, on May 25, 2023, approved the Planning Board Draft of the *Pedestrian Master Plan*, recommended that it be approved by the Montgomery County Council sitting as the District Council for the portion of the Maryland-Washington Regional District lying within Montgomery County (the "Montgomery County District Council"), and forwarded it to the Montgomery County Executive for recommendations and analysis; and

WHEREAS, the Montgomery County Executive reviewed and made recommendations on Planning Board Draft of the *Pedestrian Master Plan* and forwarded those recommendations and analysis to the Montgomery County District Council on August 18, 2023; and

WHEREAS, the Montgomery County District Council held a public hearing on July 25, 2023, wherein testimony was received concerning the Planning Board Draft of the *Pedestrian Master Plan*; and

WHEREAS, the District Council, on October 10, 2023 approved the Planning Board Draft of the *Pedestrian Master Plan* subject to the modifications and revisions set forth in District Council Resolution No. 20-300.

NOW, THEREFORE BE IT RESOLVED, that the Montgomery County Planning Board and The Maryland-National Capital Park and Planning Commission do hereby adopt the said *Pedestrian Master Plan*, together with *Thrive Montgomery 2050*, as amended, and as amendment to portions of the following functional master plans: the *Master Plan of Highways & Transitways* (2018), the *Bicycle Master Plan* (2018), the *Rustic Roads Functional Master Plan* (2023), the *Preservation of Agricultural and Rural Open Space Functional Master Plan* (1980), the *Purple Line Functional Plan* (2010), the *Countywide Transit Corridors Functional Master Plan* (2013), the *Intercounty Connector Limited Functional Master Plan Amendment: Bikeways and Interchanges* (2009); as well as the following area master plans: the *10 Mile Creek Area Limited Amendment* (2014), the *Ashton Village Center Sector Plan* (2021), the *Aspen Hill Master Plan* (1994), the *Aspen Hill Minor Master Plan Amendment* (2015), the *Bethesda Downtown Sector Plan* (2017), the *Bethesda-Chevy Chase Master Plan* (1990), the *Boyd's Master Plan* (1985), the *Burtonsville Commercial Crossroads Neighborhood Plan* (2012), the *Capitol View and Vicinity*

Sector Plan (1982), the Chevy Chase Lake Sector Plan (2013), the Clarksburg Master Plan and Hyattstown Special Study Area (1994), the Cloverly Master Plan (1997), the Damascus Master Plan (2006), the East Silver Spring Master Plan (2000), the Fairland Master Plan (1997), the Forest Glen/Montgomery Hills Sector Plan (2020), the Four Corners Master Plan (1996), the Friendship Heights Sector Plan (1998), the Gaithersburg and Vicinity Master Plan (1996), the Germantown Employment Area Sector Plan (2009), the Germantown Master Plan (1989), the Glenmont Sector Plan (2013), the Great Seneca Science Corridor Master Plan (2010), the Greater Lyttonsville Sector Plan (2017), the Grosvenor/Strathmore Metro Area Minor Master Plan (2018), the Kemp Mill Master Plan (2001), the Kensington Sector Plan (2012), the Kensington/Wheaton Master Plan (1989), the Long Branch Sector Plan (2013), the MARC Rail Communities Sector Plan (2019), the Montgomery Village Master Plan (2016), the North and West Silver Spring Master Plan (2000), the North Bethesda/Garrett Park Master Plan (1992), the Olney Master Plan (2005), the Potomac Subregion Master Plan (2002), the Rock Spring Sector Plan (2017), the Sandy Spring/Ashton Master Plan (1998), the Sandy Spring Rural Village Plan (2015), the Shady Grove Minor Master Plan (2021), the Shady Grove Sector Plan (2006), the Silver Spring Downtown and Adjacent Communities Plan (2022), the Takoma/Langley Crossroads Sector Plan (2012), the Takoma Park Master Plan (2000), the Twinbrook Sector Plan (2009), the Upper Rock Creek Master Plan (2004), the Veirs Mill Corridor Master Plan (2019), the Westbard Sector Plan (2016), the Wheaton CBD Sector Plan (2012), the White Flint Sector Plan (2010), the White Flint 2 Sector Plan (2018), the White Oak Master Plan (1997), and the White Oak Science Gateway Master Plan (2014) and as approved by the District Council in the attached Resolution No.20-300; and

BE IT FURTHER RESOLVED, that copies of said *Pedestrian Master Plan* must be certified by The Maryland-National Capital Park and Planning Commission and filed with the Clerk of the Circuit Court for both Montgomery and Prince George's Counties, as required by law.

This is to certify that the foregoing is a true and correct copy of Resolution No. 23-107 adopted by the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission at its regular meeting held on Thursday, October 26, 2023 in Wheaton, Maryland on motion of Commissioner Hedrick, seconded by Vice Chair Pedoeem, with a vote of 4-0, with Chair Harris, Vice Chair Pedoeem, and Commissioners Hedrick, and Linden voting in favor of the motion. Commissioner Bartley necessarily absent.



Artie L. Harris, Chair
Montgomery County Planning Board

This is to certify that the foregoing is a true and correct copy of Resolution 23-22 adopted by the Maryland-National Capital Park and Planning Commission on motion of Commissioner Geraldo, seconded by Vice Chair Harris, with Commissioners Bailey, Bartley, Doerner, Geraldo, Harris, Pedoeem and Shapiro voting in favor of the motion, and Commissioners Hedrick, Linden and Washington being absent for the vote, at its regular meeting held on November 15, 2023, virtually and in person at the Wheaton Headquarters Building Auditorium in Wheaton, Maryland.


Asuntha Chiang-Smith Executive
Director

TABLE OF CONTENTS

Executive Summary.....	1
Introduction.....	4
Racial Equity and Social Justice	6
Vision and Goals.....	8
Vision Statement	10
Goals.....	10
Goal 1: Increase Walking Rates and Pedestrian Satisfaction in Montgomery County....	12
Goal 2: Create a Comfortable, Connected, Convenient Pedestrian Network	16
Goal 3: Enhance Pedestrian Safety	18
Goal 4: Build an Equitable and Just Pedestrian Network	19
Existing Conditions	22
Equity	26
Existing Conditions Findings.....	28
Walking Rates and Satisfaction	28
A Comfortable, Connected, Convenient Pedestrian Network.....	37
Pedestrian Safety	50
An Equitable and Just Pedestrian Network.....	58
Recommendations	60
Design, Policy, and Programming	62
Build.....	70
Maintain.....	91
Protect	94
Expand Access	106
Fund	115
Bicycle and Pedestrian Priority Area Prioritization.....	116

Complete Streets Design Guide Area Type Designations.....	128
Pedestrian Infrastructure Recommendations.....	198
Pedestrian Shortcuts.....	199
Country Sidepaths.....	241
Implementation	248
Design, Policy, and Programming Recommendations	249
Pedestrian Infrastructure Prioritization.....	250
Complete Streets Design Guide Area Type Designations.....	250
Pedestrian Shortcuts and Country Sidepaths.....	250
Monitoring	252
Recommendations.....	253
Example Monitoring Report.....	256
Glossary	260
References	264
Acknowledgments.....	265
County Council Resolution.....	266

Appendices

- A. Comfortable Connectivity
- B. Design Toolkit
- C. Engagement
- D. Pedestrian Level of Comfort Methodology
- E. Prioritization Methodology
- F. Pedestrian Shortcut Methodology
- G. Student Travel Tally



EXECUTIVE SUMMARY



The Pedestrian Master Plan is the first countywide plan in Montgomery County to make recommendations to improve the pedestrian experience in a holistic way. An important element in the county's 2017 *Vision Zero Action Plan* and 2021 *Climate Action Plan*, the Pedestrian Master Plan supports the *Thrive Montgomery 2050* goal to “develop a safe, comfortable and appealing network for walking, biking and rolling.” The plan documents the pedestrian experience in Montgomery County today, and makes recommendations in line with national and international best practices so being a pedestrian here is even better in the years ahead.

The plan envisions a county where walking (and rolling using a mobility device) is safer, more comfortable, more convenient and more accessible for pedestrians of all ages and abilities. In line with this vision, the plan includes the following goals:

- 1 Increase Walking Rates and Pedestrian Satisfaction
- 2 Create a Comfortable, Connected, Convenient Pedestrian Network
- 3 Enhance Pedestrian Safety
- 4 Build an Equitable and Just Pedestrian Network

The plan featured significant in-person and virtual engagement to understand the issues important to pedestrians in all areas of the county and from people of different backgrounds, ages, and types of mobility. A description of engagement activities can be found in the Engagement appendix.

In addition to community engagement, the plan included first-of-its-kind data collection and analysis to support effective plan recommendations. These innovative efforts included:

Countywide Pedestrian Level of Comfort (PLOC) Analysis

The project team collected information about streetscape features (sidewalk width, traffic buffer width, etc.) for all county roadways and intersections to estimate pedestrian comfort. This data collection supported analysis around comfortable access to schools, transit stations, libraries, and other community destinations-identifying disparities in comfortable access countywide.

Montgomery County Public Schools (MCPS) Student Travel Tally

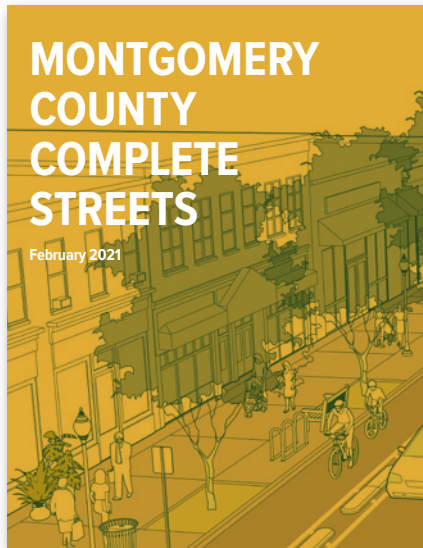
The project team worked closely with MCPS to understand student travel patterns by distributing and analyzing a survey that was completed by more than 70,000 students in late 2019. The survey results provide unique insights into which schools already see significant arrivals and departures on foot, and where opportunities for improvement exist.

2015–2020 Pedestrian Crash Analysis

The project team summarized the number and severity of pedestrian crashes in Montgomery County over this five-year period. Analysis identified important context, like presence of lighting and roadway speed limit, to underscore factors related to crash severity and likelihood.

The Plan documents the pedestrian experience in Montgomery County today





Countywide Pedestrian Survey

The project team designed, distributed, and analyzed a statistically valid countywide survey with questions about type and frequency of pedestrian activity, satisfaction with different elements of the pedestrian environment (sidewalks, crosswalk presence, vehicle speed, etc.), knowledge of traffic laws, and others. The survey was distributed to 60,000 randomly selected households countywide and the results were weighted in line with the county's demographics.

The engagement and data collection efforts are the foundation of the Pedestrian Master Plan. Together, they identify the issues that the plan's recommendations address.

Building on the county's Complete Streets Design Guide—a document that identifies the type and appropriate size of pedestrian facilities for each street type across the county—the Pedestrian Master Plan recommendations are focused on helping the county achieve systemic improvement to the pedestrian experience in several ways:

Design, Policy, and Programming

These recommendations address systemic issues that negatively affect the pedestrian experience by recommending changes to how pedestrian amenities are designed and constructed, the policies that guide transportation engineering in the county, as well as opportunities for expanded traffic safety education and more robust programming. The design, policy, and programming recommendations are the heart of the Pedestrian Master Plan because they address at a countywide level the issues highlighted through public engagement and existing conditions data collection.

Particularly significant recommendations in this section include:

- o Providing more time for younger pedestrians, older pedestrians, and those with mobility issues to cross the street safely
- o Updating pedestrian pathway and intersection lighting standards
- o Improving driver education, particularly for people driving vehicles with identified pedestrian safety issues
- o Adopting a more proactive, data-driven sidewalk construction and maintenance approach
- o Increasing the number of places pedestrians can safely cross the street
- o Identifying opportunities to change the streetscape to help mitigate climate impacts that affect pedestrians, such as extreme heat
- o Exploring ways for state highways to better contribute to achieving the county's land use and transportation vision
- o Developing a plan to provide public restrooms countywide
- o Reimagining Safe Routes to School programming
- o Increasing the number of Automated Traffic Enforcement locations countywide
- o Removing obstructions like utility poles from pedestrian pathways



Bicycle Pedestrian Priority Area Prioritization

These recommendations identify where in the county bicycle and pedestrian capital improvement projects should be prioritized in a data-driven way based on equity, comfortable access, safety and other metrics.

Complete Streets Design Guide Area Type Classification

These recommendations advance the transition from the Road Code area type classification (Urban, Suburban, Rural) to the Complete Streets Design Guide classifications (Downtown, Town Center, Suburban, Industrial, Country) to ensure that pedestrian-friendly streets are provided as roadways are reconstructed in the years ahead.

Pedestrian Shortcut Identification

These recommendations identify locations where public or private investment will shorten pedestrian trips and make the pedestrian network more accessible.

Country Sidepath Identification

These recommendations indicate where sidepaths—shared pedestrian and bicycle pathways—should be built along roadways in the more rural parts of the county, in line with guidance in the Complete Streets Design Guide.

Creative funding strategies and dedicated revenue sources may be helpful in implementing the plan's recommendations.

The Montgomery County Planning Department will track progress in implementing the Pedestrian Master Plan's vision using a biennial monitoring report and interactive website. The two tools will document how the county is implementing the plan recommendations and striving to achieve the plan's performance measure targets.





INTRODUCTION



The Pedestrian Master Plan is an opportunity to make walking safer, more comfortable, more convenient, and more equitable by improving policy and programming, prioritizing infrastructure investments, and insisting on pedestrian-oriented design in all Montgomery County communities. Whether walking to a bus stop on Veirs Mill Road, rolling to work on a mobility scooter in Germantown, or making the trip to school in Burtonsville, all Montgomery County residents are pedestrians at some point during the day. A safe, comfortable, and convenient walking experience is a fundamental right.

The Pedestrian Master Plan lays out the specific steps the county should take to eliminate the barriers to walking that have developed since the 1950s. Through ideas big and small, the plan knits together communities with new sidewalks, safe

street crossings, and direct pedestrian routes. The plan connects people to where they learn, shop, play, and work in ways difficult to imagine today. It will make walking a viable option to nearby schools, shops, parks, and businesses for people who don't feel they have that choice today.

Prioritizing walking is essential to achieving many county goals, from transportation safety and greenhouse gas reduction to equity. Pedestrians are the most vulnerable people using the transportation system. Improving pedestrian safety will have an outsized effect on black and brown communities, as they bear the brunt of the county's severe and fatal pedestrian injuries. More Montgomery County residents walking also means improved public health, increased economic competitiveness, and better quality of life. Today, only 7.5% of weekday trips in the county take place on foot, even though

20% of all trips are shorter than 1 mile—a walkable distance for most people. By implementing the plan, this number should grow as walking becomes a more practical option for more people.

Achieving the vision in Downtown Silver Spring may look different from achieving it in Hyattstown, but by implementing the recommendations in this plan, we will achieve it in both places and everywhere in between.

The plan's goals aim to increase walking, build a connected pedestrian network, and improve pedestrian safety, all in an equitable and just way. Each goal has associated performance measures to ensure accountability and allow the community to track implementation progress. Each plan recommendation is related to one or more goals.



Yet, this is not a traditional transportation master plan.

While the *2018 Bicycle Master Plan* provides recommendations for specific bikeways and the *Master Plan of Highways and Transitways* does the same for roadways and transit lines, the Pedestrian Master Plan instead focuses on policies, programs, and priorities to improve walking. These recommendations support the larger goals of *Thrive Montgomery 2050* and specific policies the general plan envisions, including “a safe, comfortable and appealing network for walking, biking and rolling” and to “prioritize the provision of safe, comfortable and attractive sidewalks... roadway crossings... and other improvements to support walking... in capital budgets, development approvals and mandatory referrals.” With some limited exceptions, the plan prioritizes areas for investment, rather than what those specific investments should be.

The plan is complemented by the county’s Complete Streets Design Guide (CSDG), a document that defines the appropriate speed limit, sidewalk width, and other roadway characteristics for every road in the county. With those more specific nuances already addressed, the Pedestrian Master Plan’s recommendations will improve the pedestrian experience systematically, not one street at a time. By changing approaches and procedures, routine maintenance and other ongoing efforts will yield major pedestrian benefits.

The Plan is organized into several sections:

1 Vision and Goals

This section describes what the pedestrian experience in Montgomery County will be once the plan recommendations are implemented and identifies performance measures to track implementation progress.

2 Existing Conditions

This section provides a baseline understanding of the pedestrian experience in Montgomery County today using an array of data sources, including several developed specifically for this planning effort.

3 Recommendations

This section includes a suite of policy, design, infrastructure, and programming improvements that the county should make to address the issues described in the Existing Conditions section and to work toward achieving the master plan vision.

4 Implementation

This section explains the different opportunities that exist to implement plan recommendations.

5 Monitoring

This section identifies how community members will be able to track plan implementation progress.

6 Appendices

This section provides additional technical information about different elements of the plan.

The plan affirmatively furthers the goals of the Racial Equity and Social Justice Act and is responsive to the county’s climate assessment requirements.

Creating a more walkable Montgomery County where pedestrians are the priority is a long-term endeavor. The decisions that led to the current pedestrian circumstances have accumulated over the course of many decades and reflect the priorities of a different time. This plan presents a new path forward, but progress will take persistence, investment, advocacy, and political will. Pushing ahead will be the work of community members, public employees, private developers, and elected officials.

Hey...
We're
walking
here!



RACIAL EQUITY AND SOCIAL JUSTICE



The Montgomery County Council passed the Racial Equity and Social Justice Act in November 2019. The act requires the Planning Board to consider the impact of a plan on racial equity and social justice in the county. This is accomplished through changes in policy, practice, and allocation of county resources to ensure that all people have the same rights and opportunities regardless of race, socioeconomic status, age, sex, religion, or other characteristics.

The Pedestrian Master Plan considers a transportation mode that has not been prioritized in the recent development of Montgomery County. For much of the 20th century, the Montgomery County transportation system was designed for motor vehicle travel to the exclusion of people walking and biking. Walking is the most universal form of transportation. The ability to walk safely, comfortably, and conveniently in one's community is the minimum expectation a Montgomery County resident should have. Today, that expectation is not being met equally across the county.

Equity is a major consideration throughout the development of the Pedestrian Master Plan. It underpins the entire planning effort. The plan goals are to increase walking, to create a comfortable pedestrian network, to enhance pedestrian safety, and to do all of these things in an equitable and just way.



Throughout the planning process, Montgomery Planning has actively sought out opportunities to identify disparities in pedestrian access and safety and to better understand issues that affect particular pedestrian communities. This effort goes beyond race and socioeconomic background to engage members of the disability community, with the goal of making Montgomery County a truly accessible place for people of all ages, backgrounds, and walking abilities.

The Existing Conditions Report includes analysis to determine if countywide findings also hold true across race, ethnicity, income, English language proficiency, and disability. This work relied on several data sources:

- Montgomery Planning’s Equity Focus Areas (EFAs) are areas of the county where “lower income communities of color who may speak English less than very well” live. These data points were combined with pedestrian comfort and crash data to better understand disparities in comfortable access and pedestrian safety.
- Montgomery County Public Schools (MCPS) Title I/Focus Schools/High FARMS Rate Schools designations allow for school mode choice (how students are arriving to and departing from school) comparisons and comfortable access analysis between schools that have different population characteristics.
- The Countywide Pedestrian Survey asked questions about the pedestrian experience, activity, and perception—breaking out responses by race, age, ethnicity, and reported disability.

The Existing Conditions and associated public engagement activities identified disparities throughout the county. The plan recommendations were developed to address these issues. While many of the recommendations are broad in scope—affecting how different agencies function—other

recommendations are specifically responsive to disparities identified in the Existing Conditions Report. The plan guides the county to update policies and procedures that may currently benefit connected individuals and communities that have the time and resources to advocate for themselves at the expense of communities that may have greater need for pedestrian infrastructure and amenities. In addition, the plan includes a data-driven approach to prioritize where future pedestrian and bicycle capital projects should be constructed, giving particular weight to projects within EFAs.

Montgomery Planning will continue to assess how these recommendations are being implemented. Many plan performance measures will track how equitably the county is progressing toward a pedestrian-friendly future with a biennial monitoring report. Planning staff will take advantage of additional opportunities to ensure that racial equity and social justice remain at the forefront of pedestrian planning in the years to come.

Equity
is a **major**
consideration
throughout the
development of
the **Pedestrian**
Master Plan.



VISION AND GOALS

Defining the Pedestrian Master Plan vision is about more than just a statement on a piece of paper. A transparent framework supports the vision and will allow comprehensive plan implementation monitoring. The different levels of that framework are defined here.



VISION STATEMENT

The Vision Statement paints a clear picture of what the plan intends to achieve. Specific goals expand on this statement.



GOALS

Goals are broad conditions that must be met to achieve the plan's vision. Goals can always be improved. They articulate the conditions that will lead to the vision being achieved. Each goal has several objectives.



OBJECTIVES

Objectives are specific conditions that must be met to advance a goal. Objectives are achievable, measurable, and time specific. They do not prejudge a solution but articulate the conditions that may lead to a solution. Objectives are carefully designed and avoid subjective interpretation.



METRICS

Metrics are the data points that measure how well objectives are being met.



TARGETS

Targets are specific numbers that indicate when an objective has been achieved. Specific targets will be revisited through the Pedestrian Master Plan Biennial Monitoring Report.



DATA COLLECTION

Data Collection is the gathering of specific information required to assess each metric. It indicates the data source and whether it is currently available, could be available through changes to existing processes, or needs to be collected through new methods.



The Montgomery County Planning Department will track progress in implementing the Pedestrian Master Plan's vision using a biennial monitoring report and interactive website. The two tools will document how the county is implementing the plan recommendations and striving to achieve the plan's performance measure targets.





Vision Statement

Walking and rolling (using a mobility device) are safe, comfortable, convenient, and accessible for pedestrians of all ages and abilities across Montgomery County.

GOALS

The vision is defined by four goals.

GOAL

1

Increase Walking Rates and Pedestrian Satisfaction in Montgomery County

GOAL

2

Create a Comfortable, Connected, Convenient Pedestrian Network

GOAL

3

Enhance Pedestrian Safety

GOAL

4

Build an Equitable and Just Pedestrian Network

These goals are not listed in order of importance. Rather, they intend to show that the ultimate success of this plan will be reflected in higher rates of walking in Montgomery County (**Goal 1**), which will come about only if we are successful in creating a more comfortable, connected, and convenient pedestrian network (**Goal 2**) that enhances pedestrian safety (**Goal 3**) in a way that is equitable and just (**Goal 4**).





GOAL

Increase Walking Rates and Pedestrian Satisfaction in Montgomery County

Making it easier and safer to walk across the county will allow walking to be a viable option for more people in their daily lives. High rates of walking are associated with improved health, lower greenhouse emissions, and a vibrant economy. Improved pedestrian access is also vital to promote economic development in the county. As a result, an important measure of success for the Pedestrian Master Plan is the extent to which walking rates and pedestrian satisfaction increase in Montgomery County.

1,2 People commuting by public transportation are very likely to walk or roll as part of their commute journey, either to or from a transit station. So, including public transportation commute share helps provide a more complete picture of pedestrian travel.

Objective 1.1:

Countywide, 12.0% of all trips by Montgomery County residents will be pedestrian trips, up from 7.5% in 2018. 22.0% of trips in urban areas will be pedestrian trips compared with 11.3% in 2018 12.0% along transit corridors compared with 7.3% in 2018, and 7.0% in exurban/rural areas compared with 4.6% in 2018.

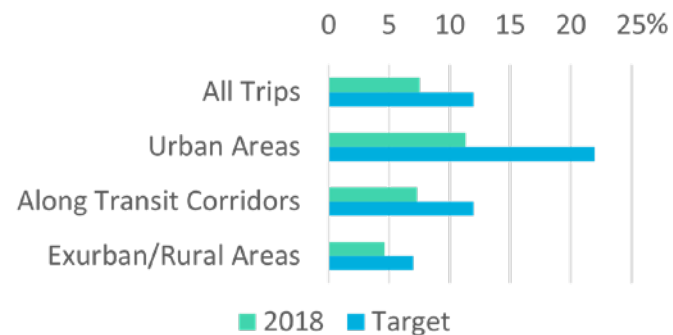
Metric

Pedestrian trips as a percentage of all trips

Data Requirement

Regional Travel Surveys, Metropolitan Washington Council of Governments

Pedestrian Trips as a Percentage of All Trips in Montgomery County (%)



Objective 1.2:

Countywide, 3.0% (30.0% including the use of public transportation)¹ of residents will commute on foot, up from 1.8% (12.8%) in 2021.

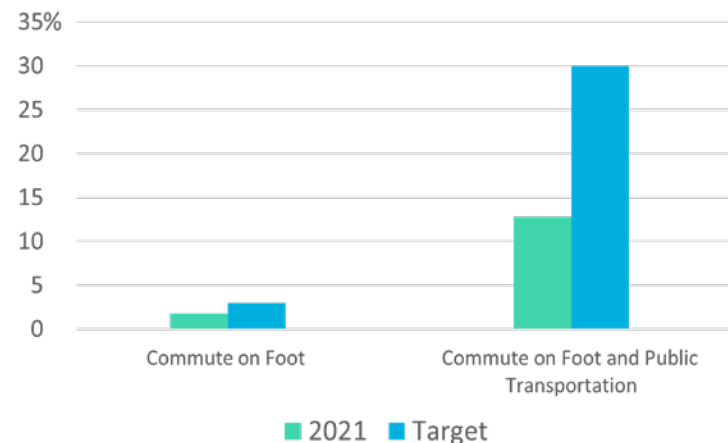
Metric

Percentage of residents who commute on foot (including the use of public transportation)

Data Requirement

Means of Transportation to Work: American Community Survey, United States Census

Countywide Commute Mode Share (%)



Objective 1.3:

The percentage of people who commute on foot (including the use of public transportation)² to a Montgomery County Transportation Management District (TMD) will be:

- 10.0% (40.0% including the use of public transportation) in the Bethesda TMD, up from 2.6% (11.6%) in Fall 2022
- 10.0% (50.0%) in the Silver Spring TMD, up from 2.4% (11.1%) in Fall 2022
- 4.0% (35.0%) in the Friendship Heights TMD, up from 2.2% (7.9%) in Fall 2022
- 1.5% (7.0%) in the Greater Shady Grove TMD, up from 0.1% (4.5%) in Fall 2022
- 4.0% (25.0%) in the North Bethesda TMD, up from 1.2% (5.6%) in Fall 2022
- 2.0% (10.0%) in the White Oak TMD (no data from Fall 2022)

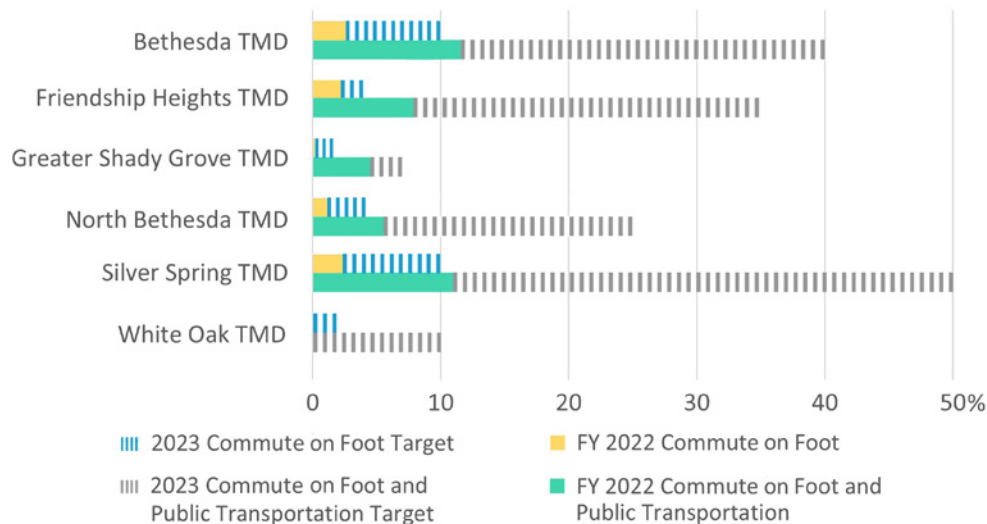
Metric

Percentage of TMD employees who commute on foot or using public transportation

Data Requirement

TMD Commuter Surveys, Montgomery County Department of Transportation (MCDOT)

% of People Commuting on Foot or Public Transportation to TMD



Objective 1.4:

The percentage of people walking to access transit will be:

- 50.0% to WMATA Red Line stations
- 10.0% to MARC Brunswick Line stations
- 70.0% to MDOT Purple Line stations

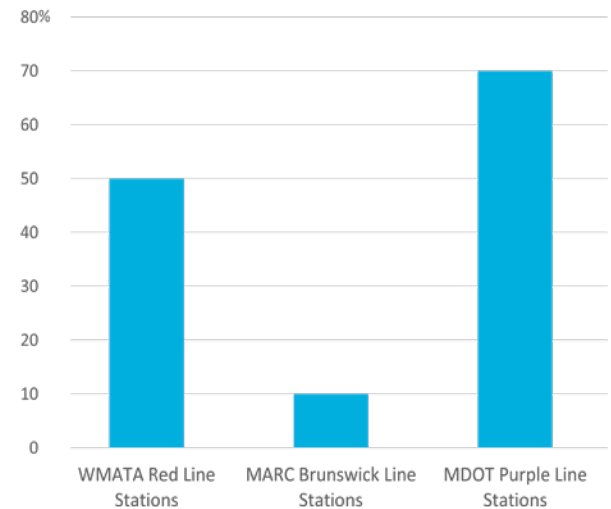
Metric

Percentage of transit riders arriving at a public transportation station on foot

Data Requirement

User Surveys, Washington Metropolitan Area Transit Authority (WMATA) and Maryland Transit Administration (MTA)

% of People Walking to Access Transit





Objective 1.5:

The percentage of students walking to school will be:

- 50.0% for elementary school students, up from 16.0% in 2019
- 30.0% for middle school students, up from 11.0% in 2019
- 15.0% for high school students, up from 8.0% in 2019

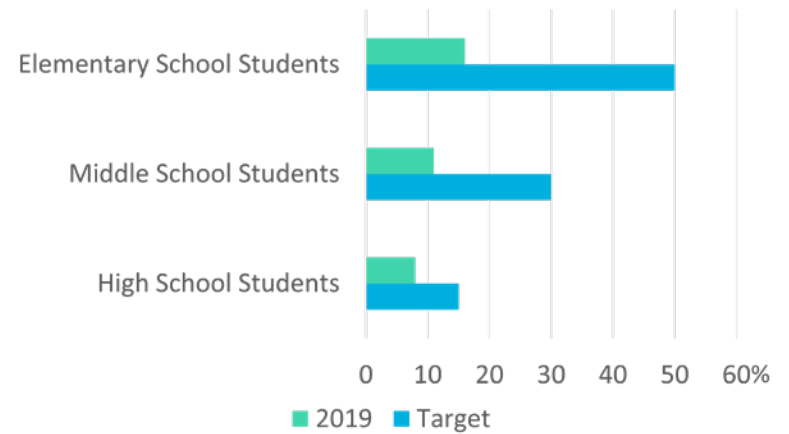
Metric

Percentage of MCPS students walking to arrive at school

Data Requirement:

Annual Travel Tally, MCPS

% of Students Walking to School



Objective 1.6:

The percentage of students walking from school will be:

- 55.0% for elementary school students, up from 19.0% in 2019
- 40.0% for middle school students, up from 15.5% in 2019
- 20.0% for high school students, up from 12.2% in 2019

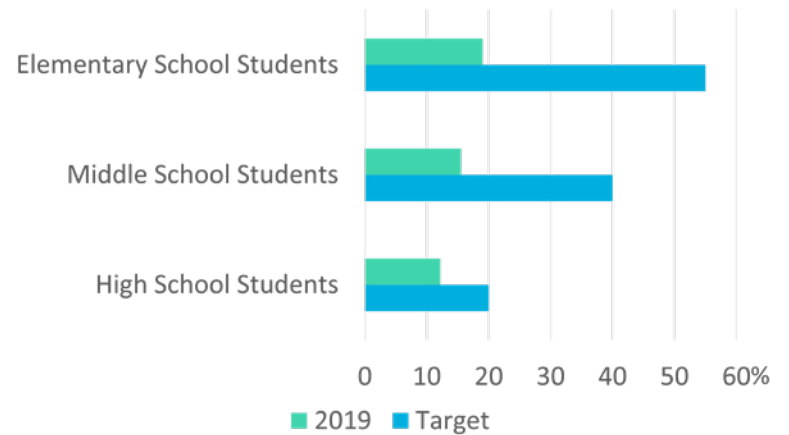
Metric

Percentage of MCPS students walking to depart from school

Data Requirement:

Annual Travel Tally, MCPS

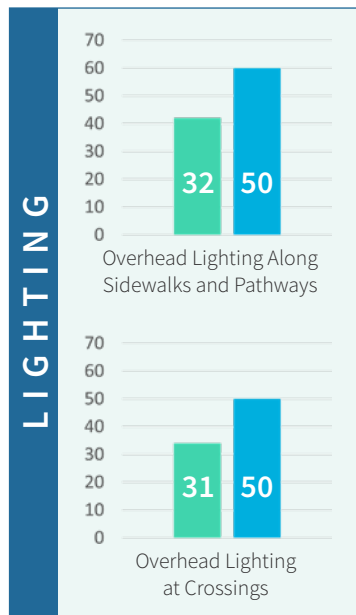
% of Students Walking from School



Objective 1.7:

Satisfaction with various elements of the pedestrian experience will be (%):

2020 Target



Metric
Satisfaction with elements of the pedestrian experience



Data Requirement:
Biennial Countywide Pedestrian Survey, Montgomery Planning



GOAL

2

Create a Comfortable, Connected, Convenient Pedestrian Network

County residents, employees, and visitors will have a comfortable pedestrian experience, whether walking for recreation, to work, or for other purposes. Improving the pedestrian network can be achieved by building new pathways or reconstructing old ones, reducing vehicular travel speeds along and across pedestrian routes, and increasing separation between pedestrians and motor vehicles, among other things.

Objective 2.1:

Comfortable³ pedestrian connectivity will be:

- 70.0% for pathways, up from 62.0% in 2023
- 55.0% for crossings, up from 43.0% in 2023

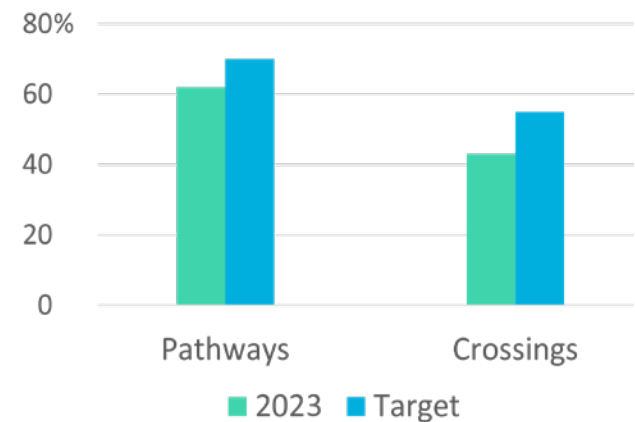
Metric

Miles of comfortable pathways and crossings in Montgomery County divided by length of all pathways and crossings in Montgomery County

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning

Comfortable Pedestrian Connectivity %



Objective 2.2:

Comfortable pedestrian access to schools (pathway/crossing) will be:

- 80.0%/60% for elementary schools, up from 55.1%/43.4% in 2022
- 65.0%/50% for middle schools, up from 37.9%/23.4% in 2022
- 30.0%/20% for high schools, up from 27.0%/12.5% in 2022

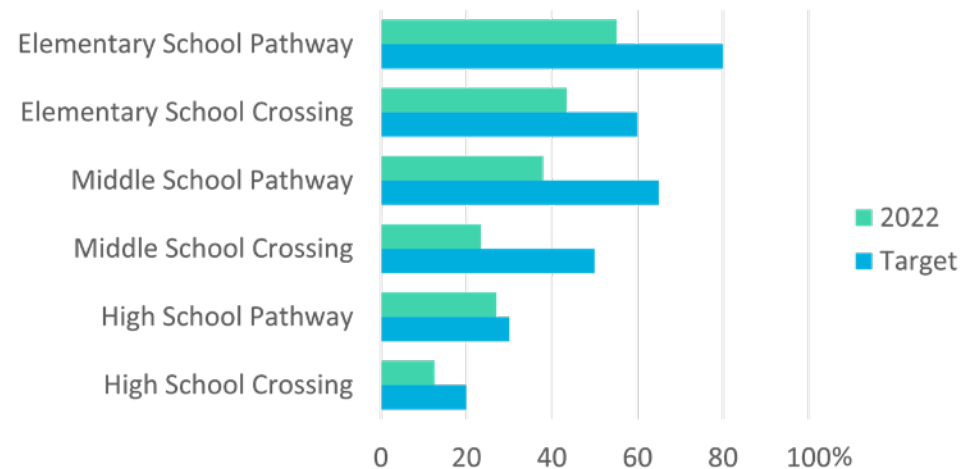
Metric

Percentage of pedestrian trip lengths that are comfortable, within one mile of elementary schools, one and a half miles of middle schools, and two miles of high schools, in line with Montgomery County Public Schools student walking criteria

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning

Comfortable Pedestrian Access to School %



³ Comfort is described using the Pedestrian Level of Comfort (PLOC) methodology. A variety of pathway and crossing factors are considered to determine a comfort score for each crossing and street segment. The four main scores are: undesirable, uncomfortable, somewhat comfortable, and very comfortable. A detailed methodology can be found in the PLOC appendix.



Objective 2.3:

Comfortable pedestrian access to schools (pathway/crossing) will be:

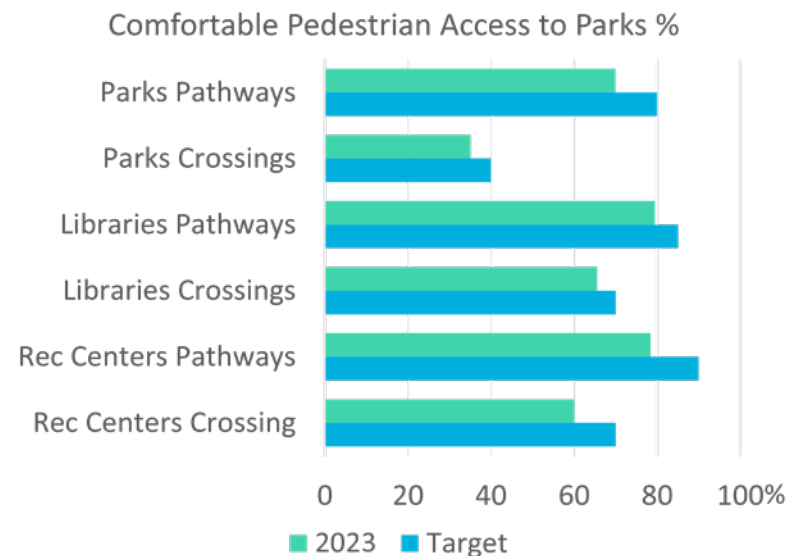
- 80.0%/40.0% for parks, up from 69.9%/35.1% in 2023
- 85.0%/70% for libraries, up from 79.5%/65.5% in 2023
- 90.0%/70% for recreation centers, up from 78.4%/60.0% in 2023

Metric

Percentage of pedestrian trip lengths that are comfortable within a certain distance of parks, libraries, and recreation centers

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning



Objective 2.4:

Comfortable pedestrian access to transit stations (pathway/crossing) will be:

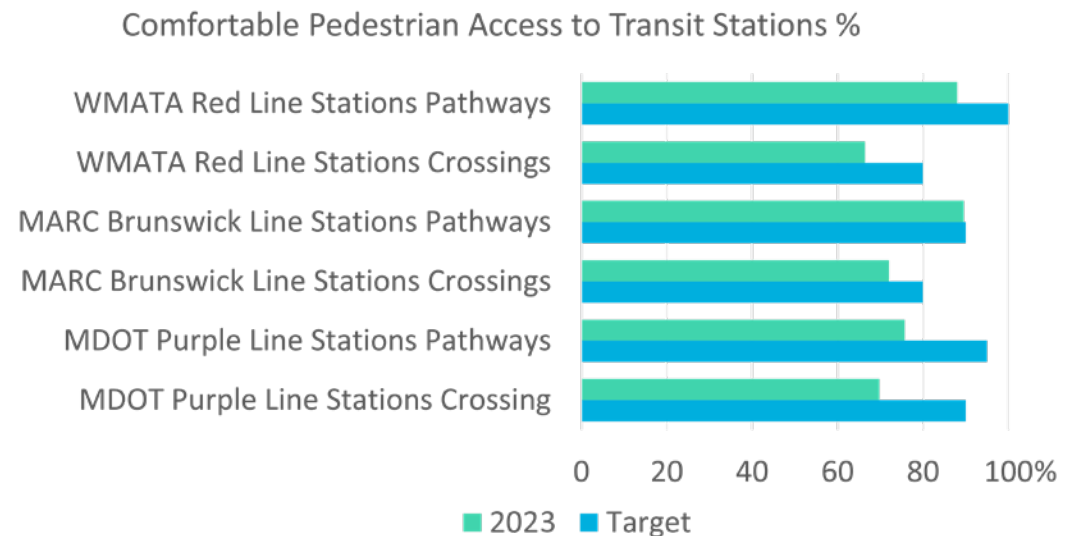
- 100.0%/80.0% for WMATA Metro Red Line stations, up from 88.0%/66.4% in 2023
- 90.0%/80.0% for MARC Brunswick Line stations, up from 89.5%/72.0% in 2023
- 95.0%/90.0% for MDOT Purple Line stations, up from 75.7%/69.8% in 2023

Metric

Percentage of pedestrian trip lengths that are comfortable within a certain distance of transit stations

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning



Objective 2.5:

Tree canopy will shade 40.0% of sidewalks, up from 28.0% in 2020.

Metric

Percentage of sidewalks that are shaded by tree canopy

Data Requirement

Pedestrian Level of Comfort and Tree Canopy Data, Montgomery Planning





GOAL 3

Enhanced Pedestrian Safety

Montgomery County has a goal of eliminating transportation-related fatalities and severe injuries by 2030. This “Vision Zero” policy starts with the ethical belief that everyone has the right to move safely in their communities.

Objective 3.1:

Pedestrian fatalities and severe injuries will be reduced to zero, down from 84 in 2022.

Metric

Pedestrian fatalities and severe injuries

Data Requirement

Crash Data, Montgomery County

Objective 3.2:

Residents satisfied or very satisfied with their personal safety while walking will be 75.0%, up from 52.0% in 2020

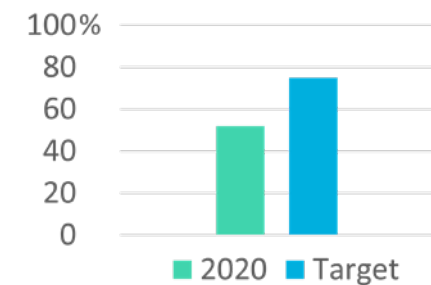
Metric

Percentage of respondents satisfied or very satisfied with personal safety while walking

Data Requirement

Biennial Countywide Pedestrian Survey, Montgomery Planning

Satisfaction with Safety While Walking (%)



GOAL
4

Build an Equitable and Just Pedestrian Network

Providing community members with a pedestrian network that meets everyone’s needs is a critical aspect of achieving the county’s racial and social justice goals.

Objective 4.1:

All pathways countywide will be accessible to persons with disabilities, up from TBD⁴

Metric

Percentage of sidewalks countywide with Americans with Disabilities Act faults

Data Requirement

Sidewalk Quality Data, MCDOT

⁴ Sidewalks traveling along steep slopes are considered accessible as long as they follow the adjacent roadway grade.

Objective 4.2:

Title I/Focus/High FARMS-designated (“designated”) schools will be as comfortable to access as non-designated schools.

Percentage of Trips to Each School Type Along Completely Comfortable Pathways and Crossings

Destination School Type	Pathways		Crossings	
	Title I/Focus and High FARMS Rate Schools	All Other Schools	Title I/Focus and High FARMS Rate Schools	All Other Schools
Elementary Schools	60.5%	49.9%	47.5%	39.4%
Middle Schools	34.8%	41.6%	22.8%	24.2%
High Schools	26.2%	27.6%	8.9%	16.3%

Metric

Comparison of comfortable pathway/crossing connectivity to schools between designated/non-designated schools

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning



Objective 4.3:

Transit stations will be as comfortable to access from Equity Focus Areas (EFAs) (Figure 2) as from outside EFAs.

- WMATA Red Line stations
 - Pathways (92.3% comfortable EFA/86.5% non-EFA)
 - Crossings (64.8% comfortable EFA/66.8% non-EFA)
- MARC Brunswick Line stations
 - Pathway (94.0% comfortable EFA/87.1% non-EFA)
 - Crossings (80.3% comfortable EFA/69.1% non-EFA)
- MDOT Purple Line stations
 - Pathway (75.4% comfortable EFA/75.9% non-EFA)
 - Crossings (73.4% comfortable EFA/67.3% non-EFA)
- Montgomery County BRT stations
 - Pathway (85.0% comfortable EFA/82.0% non-EFA)
 - Crossings (63.0% comfortable EFA/58.0% non-EFA)

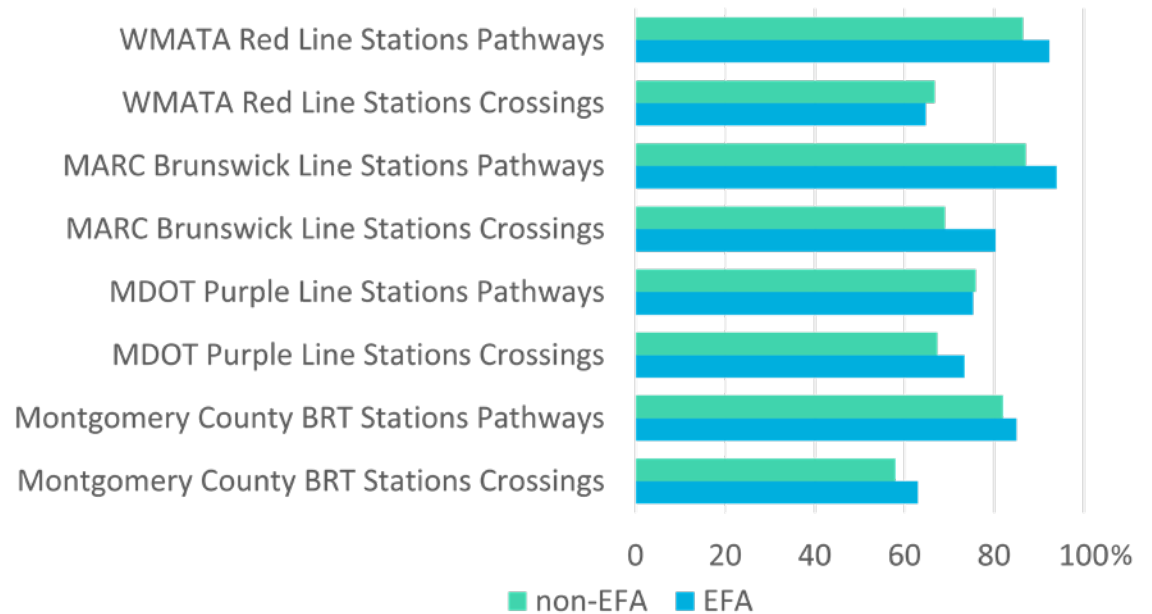
Metric

Comparison of comfortable pathway/crossing connectivity to transit stations from EFAs and other areas

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning

Comfortable Transit Stations from Equity Focus Areas (EFAs) %



Objective 4.4:

Parks, libraries, and recreation centers will be as comfortable to access from EFAs (Figure 2) as from outside EFAs.

- Parks
 - Pathways (71.0% comfortable EFA/69.0% non-EFA)
 - Crossings (36.0% comfortable EFA/35.0% non-EFA)
- Libraries
 - Pathways (80.0% comfortable EFA/79.0% non-EFA)
 - Crossings (61.0% comfortable EFA/67.0% non-EFA)
- Recreation Centers
 - Pathways (83.0% comfortable EFA/77.0% non-EFA)
 - Crossings (48.0% comfortable EFA/65.0% non-EFA)

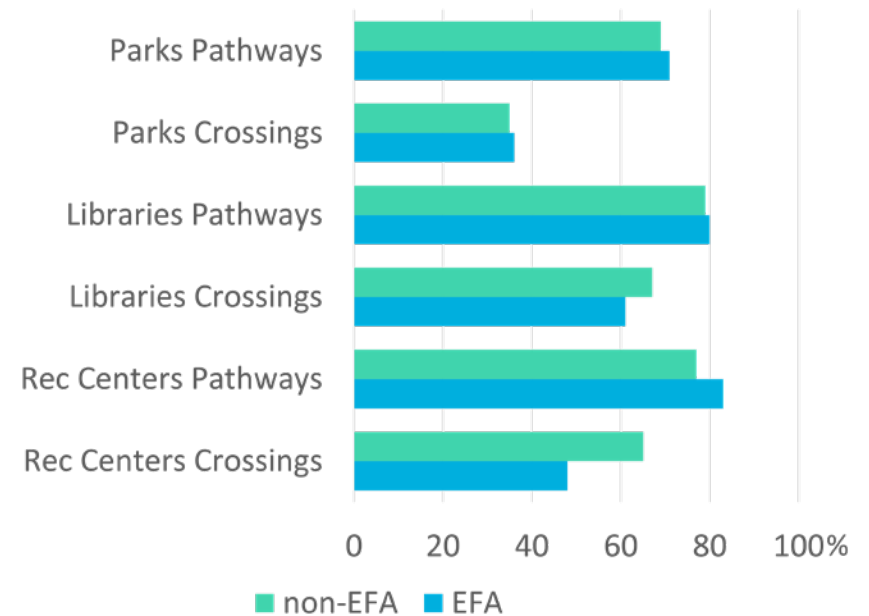
Metric

Comparison of comfortable pathway/crossing connectivity to parks, libraries, and recreation centers from EFAs and other areas

Data Requirement

Pedestrian Level of Comfort Data, Montgomery Planning

Comfortable Park, Library, and Recreation Center Access from Equity Focus Areas (EFAs) %



Objective 4.5:

Eliminate the disparity in the rate of pedestrian fatalities and severe injuries between EFAs (Figure 2) and non-EFAs. In 2022, there were 4.2 times more severe pedestrian injuries and fatalities inside EFAs than outside them.

Metric

Ratio of pedestrians killed or severely injured per mile of roadway inside EFAs compared with outside EFAs

Data Requirement

Crash Data, Montgomery County

Objective 4.6:

People with disabilities will be at least as satisfied with their pedestrian experience as those without disabilities. In 2020, people with disabilities were 10.0% less satisfied.

Metric

Difference in overall pedestrian satisfaction between people with disabilities and those without

Data Requirement

Biennial Countywide Pedestrian Survey, Montgomery Planning



EXISTING CONDITIONS

The Pedestrian Master Plan establishes an ambitious vision for future pedestrian conditions in the county, supported by four goals and 20 objectives. But what does the pedestrian experience look like today? The Existing Conditions section of the Pedestrian Master Plan provides an in-depth look at the state of walking in Montgomery County between 2019 and 2023 based on the plan's goals and objectives.





HARDWOOD ARTISANS

HARDWOOD ARTISANS

This Plan establishes an ambitious vision for future pedestrian conditions in the county.

What does the pedestrian experience look like today?



In addition to various national and regional data sources, the Existing Conditions analysis includes several data sources developed specifically for this planning effort, including:

- 1 A statistically valid survey**
to document pedestrian activity for the county as a whole and for different land use types, sent to 60,000 randomly selected households countywide
- 2 A student travel tally**
to understand how students arrive to and depart from school on a daily basis, completed by over 70,000 Montgomery County Public School (MCPS) students
- 3 A Pedestrian Level of Comfort (PLOC) Analysis**
cataloguing pedestrian conditions along the entirety of the pedestrian transportation network in Montgomery County
- 4 A pedestrian crash analysis**
to understand the circumstances surrounding pedestrian-involved crashes occurring between 2015 and 2020

In addition to analyzing existing conditions at the countywide level, this section also identifies more specific distinctions based on land use and equity.

Land use is categorized as urban, transit corridor, or exurban/rural. These are defined below and illustrated in **Figure 1**.

Urban areas include the county's downtowns and town centers, as well as their immediate surroundings. Downtowns are envisioned as Montgomery County's highest intensity areas with dense, transit-oriented development and a walkable street grid. Town centers are similar to downtowns but generally feature less intensive development and cover a smaller geographic area.

Transit corridors are more suburban and include areas within a half-mile of Washington Metropolitan Area Transit Authority and MCDOT RideOn transit services arriving at least every 20 minutes during the busiest time of day.

The remainder of the county, apart from the cities of Rockville and Gaithersburg (shown in dark brown in **Figure 1**), is defined as **exurban/rural**.⁵



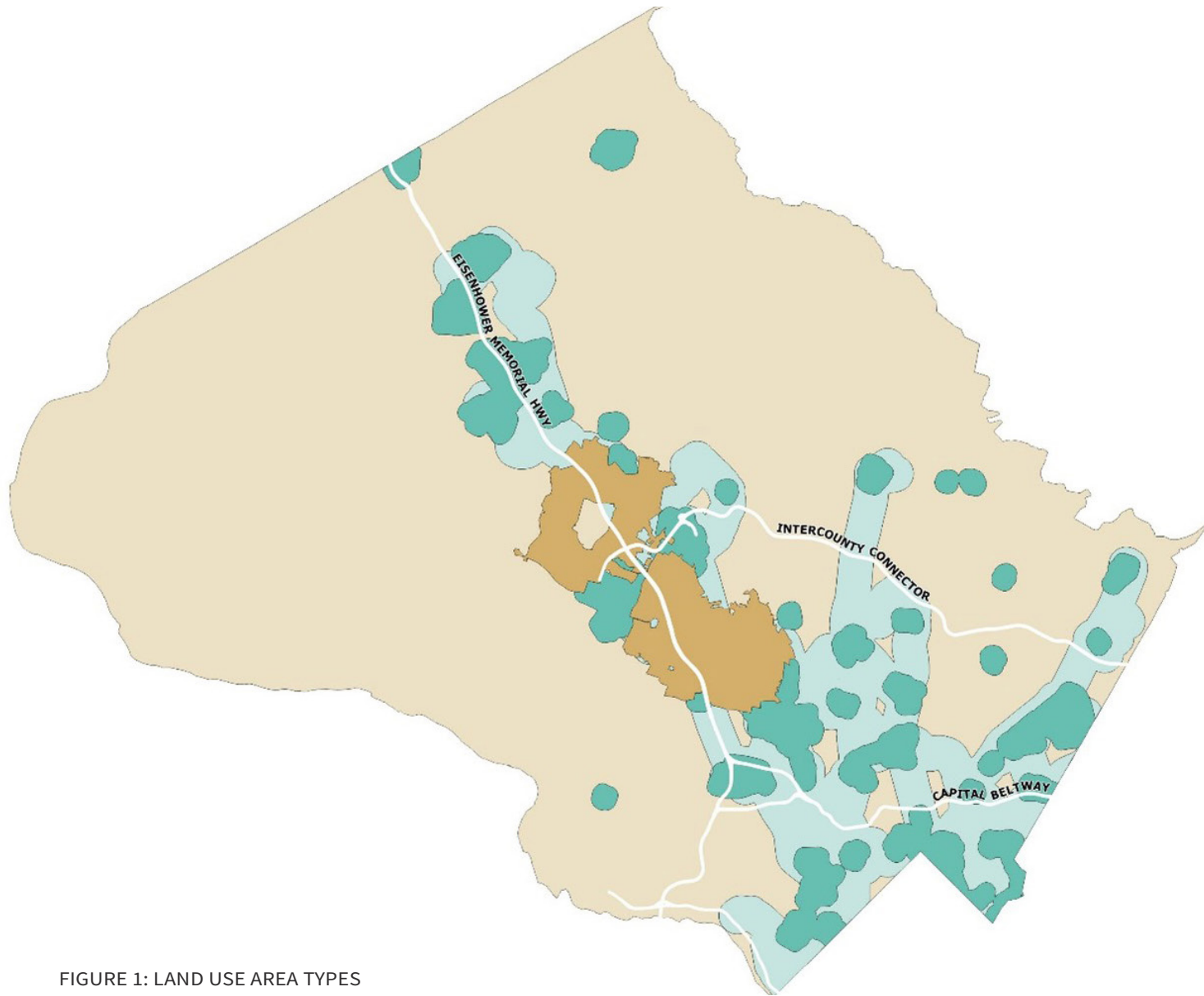


FIGURE 1: LAND USE AREA TYPES

- Urban
- Transit Corridor
- Rural/Exurban
- Rockville/Gaithersburg

rsburg have been
 nalysis except
 tgomery Planning
 ing authority in



Equity

Equity Focus Areas (EFAs) are parts of Montgomery County that are characterized by high concentrations of lower-income people of color who may also report speaking English less than “very well.” About 26% of the county’s population live in EFAs.

Equity is typically analyzed by comparing Equity Focus Areas (EFAs) with the rest of the county on several metrics (Figure 2) to highlight any disparities that may exist.

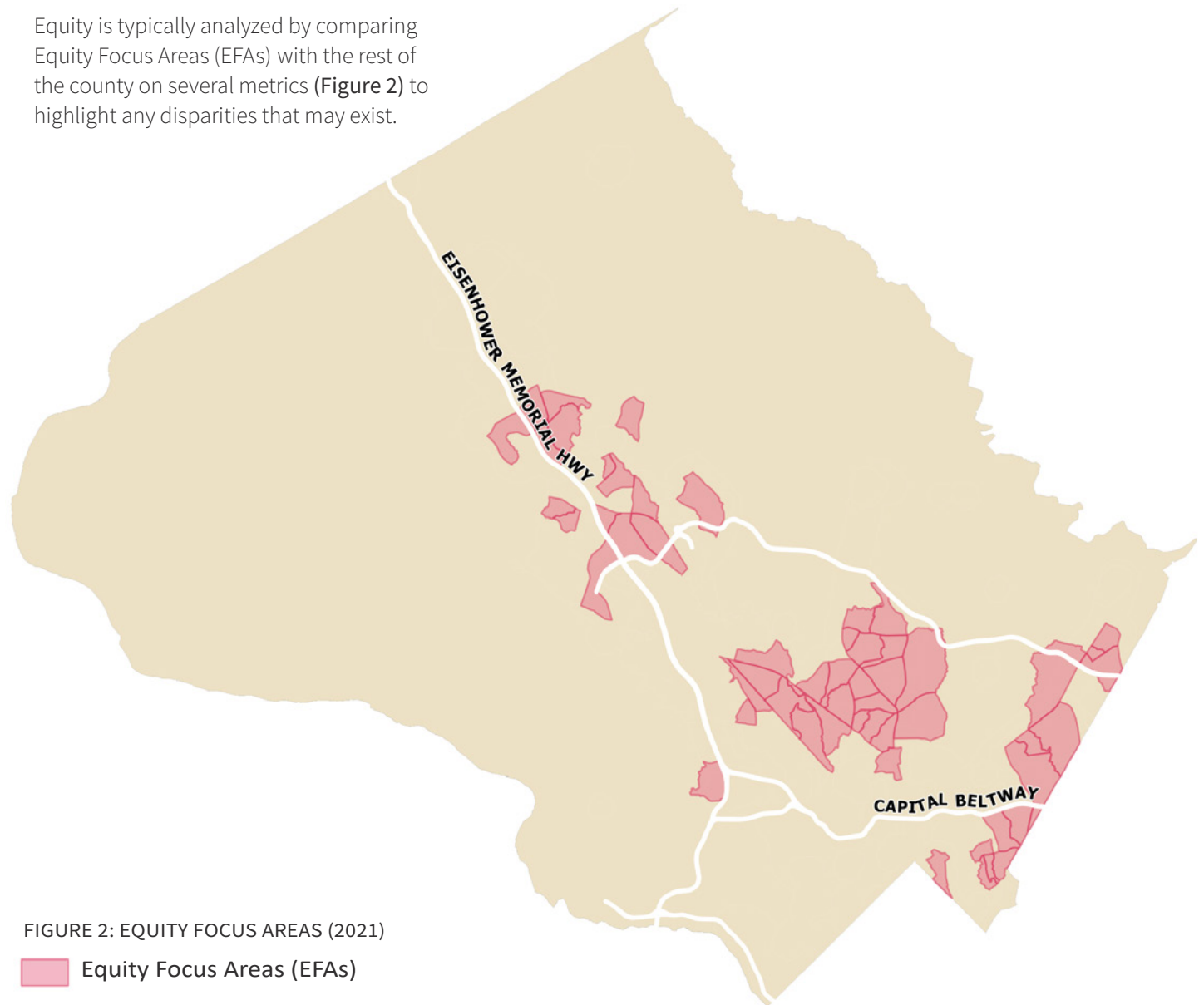


FIGURE 2: EQUITY FOCUS AREAS (2021)

Equity Focus Areas (EFAs)



Additionally, for school access measures, high Free and Reduced Meal Services (FARMS) rates and Title I/Focus School status are used to make equity comparisons (Figure 3).

Lastly, some of the results from the countywide pedestrian survey are broken out based on reported disability status. Because equity is a foundational goal of the Pedestrian Master Plan, equity analyses are highlighted throughout this section.

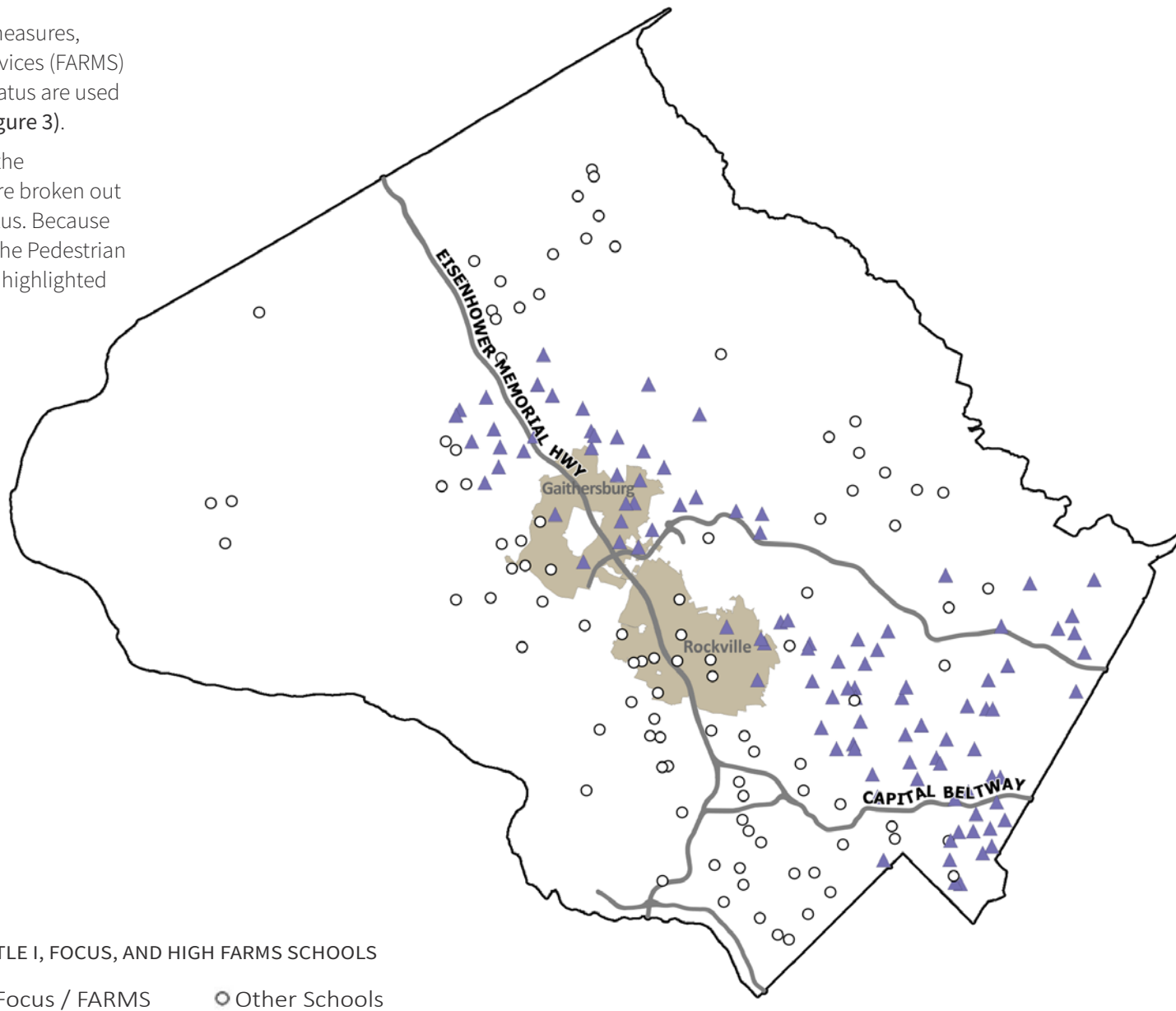


FIGURE 3: TITLE I, FOCUS, AND HIGH FARMS SCHOOLS

▲ Title I / Focus / FARMS ○ Other Schools



Existing Conditions Findings

The existing conditions analysis is organized around the Pedestrian Master Plan goals described in the Vision and Goals section.

Walking Rates and Satisfaction

The Pedestrian Master Plan aims to increase the number of trips made by walking and rolling (using a mobility device). The following is a summary of current pedestrian behavior, including what portion of trips residents—and students, specifically—make by walking, for what purposes residents walk, and how satisfied residents are with the pedestrian environment.

Mode Share

The Countywide Pedestrian Survey found that 98% of respondents had taken at least one pedestrian trip in the past month.

Overall, 7.5% of weekday trips are made by walking (**Table 1**) and 1.8% of commute trips are made by walking in Montgomery County. Walking rates vary greatly by land use type, with a greater share of trips made by walking in urban areas (11.3%) compared with transit corridors (7.3%) and exurban/rural areas (4.6%). In addition, a greater share of residents in urban areas commute on foot (3.2%) than those in transit corridors (1.5%) or exurban/rural areas (1.0%).

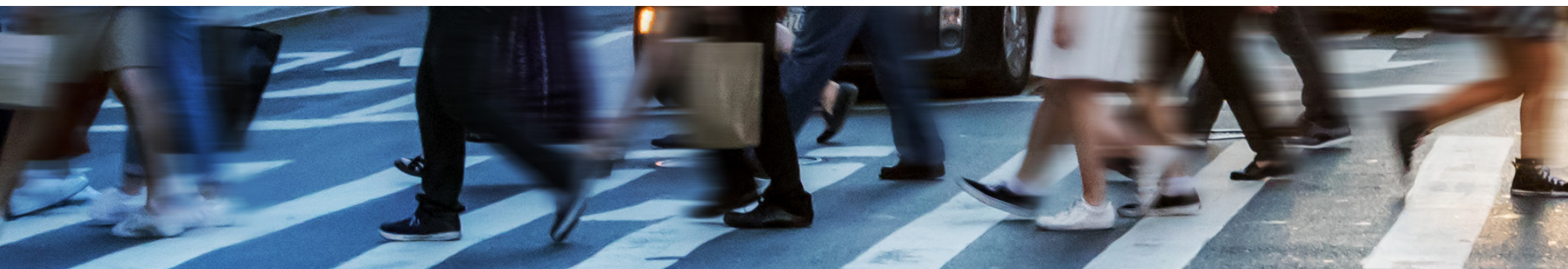
Walking rates vary depending on whether an area is an EFA. Residents in EFAs make 9.6% of trips by walking, while residents in non-EFAs make 7.0% of trips by walking. The share of commute trips by walking is only slightly greater in EFAs (1.9%) than in non-EFAs (1.8%).

Table 1. Pedestrian Mode Share by Area Types

	Total	Land Use Type			Equity Focus Areas	
		Urban	Transit Corridor	Exurban/Rural	EFAs	Non-EFAs
Overall Weekday Trips*	7.5%	11.3%	7.3%	4.6%	9.6%	7.0%
Commute Trips**	1.8%	3.2%	1.5%	1.0%	1.9%	1.8%

* Regional Travel Survey, 2017-2018 ** American Community Survey, 2021 Five-Year Estimates

Note: County mode share (the percentage of trips made by different travel modes) includes Rockville and Gaithersburg.



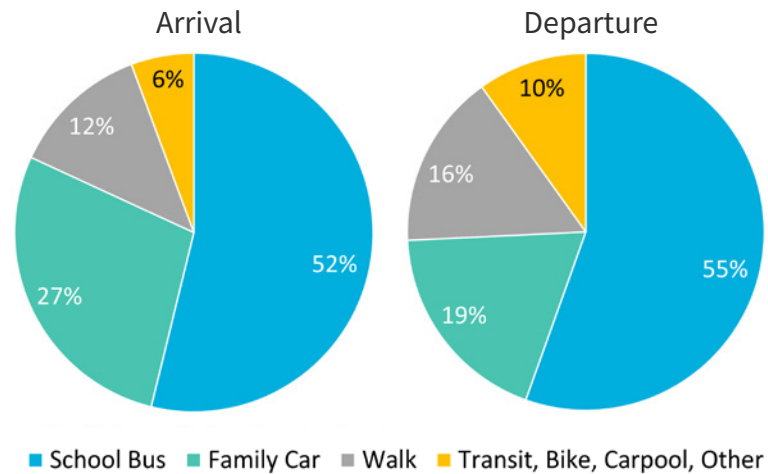
While the county's pedestrian commuter mode share is low, it is higher than all other counties in the region, except Arlington County (Table 2). In urban areas such as the City of Rockville and Silver Spring Census Designated Place, commuter mode share is higher. For instance, the 2021 American Community Survey reports that the rate of walking is 2.3% in Rockville and 2.8% in Silver Spring.⁶

Jurisdiction	Pedestrian Mode Share
Washington, D.C.	6.7%
Arlington County, VA	4.3%
Montgomery County, MD	1.8%
Frederick County, MD	1.8%
Prince George's County, MD	1.7%
Fairfax County, VA	1.4%
Howard County, MD	0.9%

Source: American Community Survey, 2021 Five-Year Estimates
 Note: County mode share (the percentage of trips made by different travel modes) includes Rockville and Gaithersburg.

In addition to evaluating travel to work, Montgomery Planning also analyzed travel to school. Figure 4 shows that walking is the third-most common mode of transportation to and from school, with 12% of students arriving and nearly 16% of students departing on foot, compared with 52% arriving and 55% departing by school bus and 27% arriving and 19% departing by family car. Students are more likely to walk in the afternoon. This is the case for students at every grade level from kindergarten to 12th grade.

FIGURE 4: STUDENT MODE SHARE BY ARRIVALS AND DEPARTURES



Source: Montgomery County Student Travel Tally
 Note: Analysis includes schools in Rockville and Gaithersburg.

⁶ Silver Spring Census Designated Place includes Downtown Silver Spring, East Silver Spring, Woodside, Woodside Park, Lyttonsville, North Hills Sligo Park, Long Branch, Indian Spring, Goodacre Knolls, Franklin Knolls, Montgomery Knolls, Clifton Park Village, New Hampshire Estates, and Oakview.



Walking is most prevalent among elementary school students, with 16% of arrivals by walking and 18% of departures by walking (**Table 3**). Walking is least prevalent among high school students, with 8% of arrivals and 12% of departures on foot. By comparison, surveys of other jurisdictions in the region found the following rates of walking to school: 23% of Washington, D.C., public school students in 2017 ⁷; 21% of Alexandria public school students in 2019 ⁸; and 20% of students in Arlington in 2019.⁹ These communities are more compact than Montgomery County, but their walk mode shares provide context for the county’s own results.

Table 3. Walking Arrivals and Departures by School Levels

School Level	Arrival	Departure
Elementary School	16%	18%
Middle School	11%	16%
High School	8%	12%
Total	12%	16%

Source: Montgomery County Student Travel Tally

Note: Data include schools in Rockville and Gaithersburg.

Walking rates to school vary slightly based on whether schools are designated as Title I/Focus or have a high FARMS rate. For elementary school students, those at designated schools have higher walk rates both to school (18% vs. 13%) and from school (21% vs. 15%) than at non-designated schools (**Table 4**). For middle school and high school students, non-designated schools have slightly higher rates of walking. Overall, walk rates are higher at designated schools than non-designated schools.

Table 4. Walking Arrivals and Departures for Title I/Focus and High FARMS Rate Schools and Non-Designated Schools

School Level	Title I/Focus and High FARMS Schools		Non-Title I/Focus and Low FARMS Schools	
	Arrival	Departure	Arrival	Departure
Elementary School	18%	21%	13%	15%
Middle School	10%	14%	13%	18%
High School	7%	11%	8%	12%
Total	13%	17%	11%	15%

Note: Data include schools in Rockville and Gaithersburg.

While walking departure rates from school are generally below 20%, there is wide variation in walking rates among individual schools. In some cases, walking rates exceed 30 or 40% of school access mode share. **Table 5** shows those

elementary, middle, and high schools with the highest walking departure rates. Many of the schools with the highest walking rates are schools designated as Title I/Focus or high FARMS rate schools. High walking rates may

7 “How Many Public School Students in DC Could Walk to Their School?” 10/2019. dme.dc.gov/sites/default/files/dc/sites/dme/publication/attachments/DME_Edsight%20Distance%20to%20School%20FINAL.pdf

8 “Student Travel Tally Report: Combining Schools in One Data Collection Season,” Fall 2019. https://dot.virginia.gov/programs/resources/safe_routes/2018/STTW_Reports/Fall_2018_STTW_All_Schools.pdf

9 “Arlington County Public Schools Student Travel Tally,” 2/21/2020.



be related to shorter walking distances, neighborhood conditions conducive to comfortably and safely walking to/from school, and whether walking is the only option because busing is not provided (within a certain distance of the school) and parents or guardians are not available to drive the student.

Table 5. Schools with the Highest Walking Departure Rates by School Type

Schools	Walk Mode Share
Elementary Schools	
<i>Glen Haven Elementary School</i>	50%
Snowden Farm Elementary School	49%
<i>Gaithersburg Elementary School</i>	48%
<i>New Hampshire Estates Elementary School</i>	43%
Middle Schools	
<i>Montgomery Village Middle School</i>	46%
Hallie Wells Middle School	43%
Takoma Park Middle School	36%
<i>Gaithersburg Middle School</i>	34%
High Schools	
Bethesda-Chevy Chase High School	24%
<i>Wheaton High School</i>	20%
<i>Albert Einstein High School</i>	19%
<i>Rockville High School</i>	17%

Source: Montgomery County Student Travel Tally

Note: Data include schools in Rockville and Gaithersburg.

Italics indicates that a school is designated as a Title I/Focus and high FARMS rate school.

Table 6 lists those elementary, middle, and high schools that have the lowest walking departure rates.¹⁰ Additional findings from the student travel tally can be found in the Student Travel Tally appendix.

Table 6. Schools with the Lowest Walking Departure Rates by School Type

Schools	Walk Mode Share
Elementary Schools	
Luxmanor Elementary School	<1%
<i>Bel Pre Elementary School</i>	1%
Cedar Grove Elementary School	1%
<i>Maryvale Elementary School</i>	1%
Middle Schools	
William H. Farquhar Middle School	1%
<i>Redland Middle School</i>	2%
<i>Briggs Chaney Middle School</i>	3%
<i>Benjamin Banneker Middle School</i>	4%
High Schools	
<i>Col. Zadok Magruder High School</i>	2%
<i>James Hubert Blake High School</i>	2%
Sherwood High School	4%
<i>Paint Branch High School</i>	5%

Source: Montgomery County Student Travel Tally

Note: Data include schools in Rockville and Gaithersburg.

Italics indicates that a school is designated as a Title I/Focus and high FARMS rate school.

¹⁰ Schools included in this table have established walk zones where school bus service is not provided by MCPS.

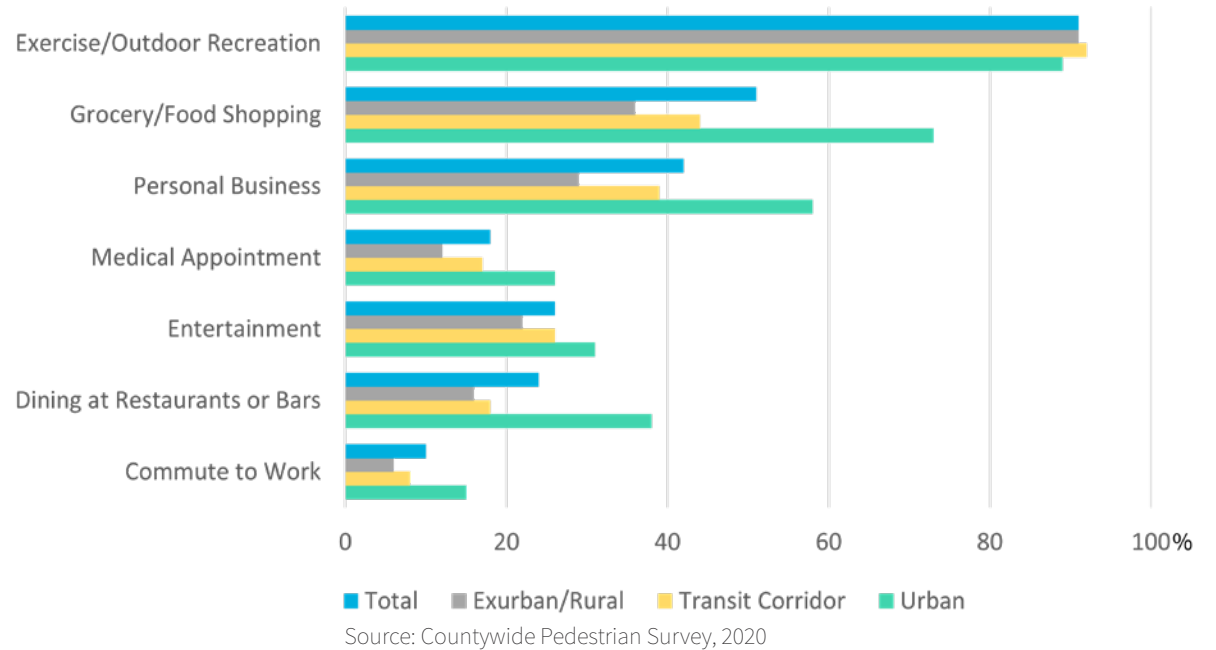


Walk Purpose

Pedestrian trips are made for many reasons, from recreational walking and exercise to walking to work or to complete errands. **Figure 5** summarizes why respondents have taken trips in the past month. No matter the land use type, exercise and outdoor recreation are the most common reasons for walking. More than 90% of respondents walked for recreation in the past month.

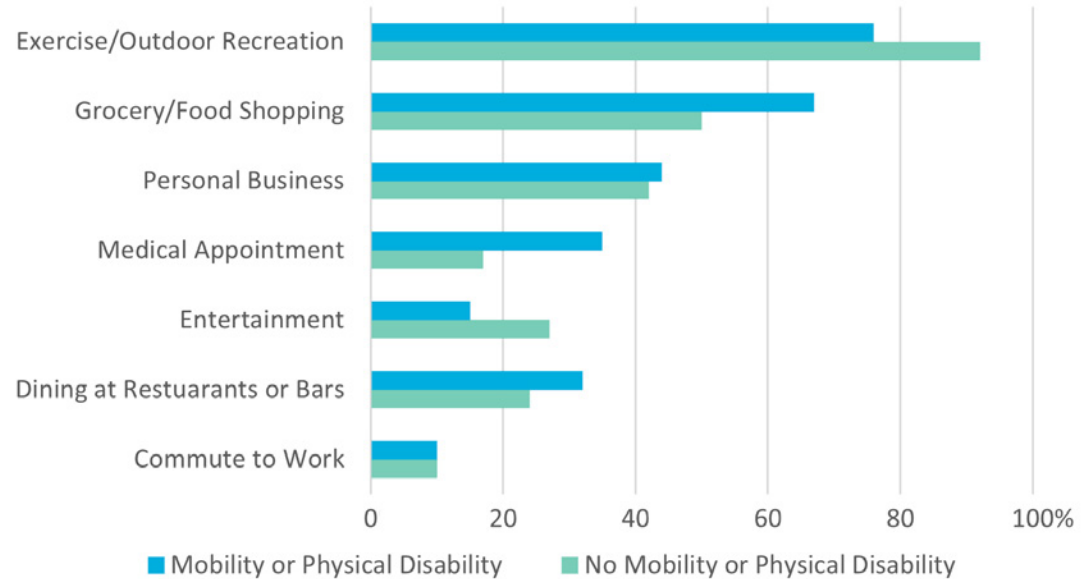
Utilitarian pedestrian trips—where the purpose of walking is accomplishing errands or getting to a destination—are more common for residents in urban areas (shown in green in **Figure 5**) than residents of transit corridors or exurban/rural areas (shown in yellow and grey, respectively).

FIGURE 5: PEDESTRIAN TRIP PURPOSE BY LAND USE IN THE PRIOR MONTH



Respondents with reported disabilities were more likely to walk for non-recreational trips than people without reported disabilities, as seen in **Figure 6**. In fact, respondents with disabilities were twice as likely as others to walk to a medical appointment (35% to 17%), and significantly more likely to walk to the grocery store/food shopping (67% to 50%) and to dine at restaurants (32% to 24%). However, respondents with disabilities take 16% fewer trips for exercise or outdoor recreation than respondents without reported disabilities (76% to 92%).

FIGURE 6: PEDESTRIAN TRIP PURPOSE BY REPORTED DISABILITY



Trip Frequency and Length

Exercise/recreation trips are also the most frequently made pedestrian trip. Overall, 58% of pedestrian travel was for exercise or recreation.

There is a marked difference between urban areas and the rest of the county when it comes to the number of pedestrian trips taken and their purpose. Urban area respondents take about 32% more pedestrian trips than those in transit corridors and 27% more than those in exurban/rural areas. Also, the majority of trips taken in urban areas were for a utilitarian purpose: 53% compared with 37% in transit corridors and 32% in exurban/rural areas.

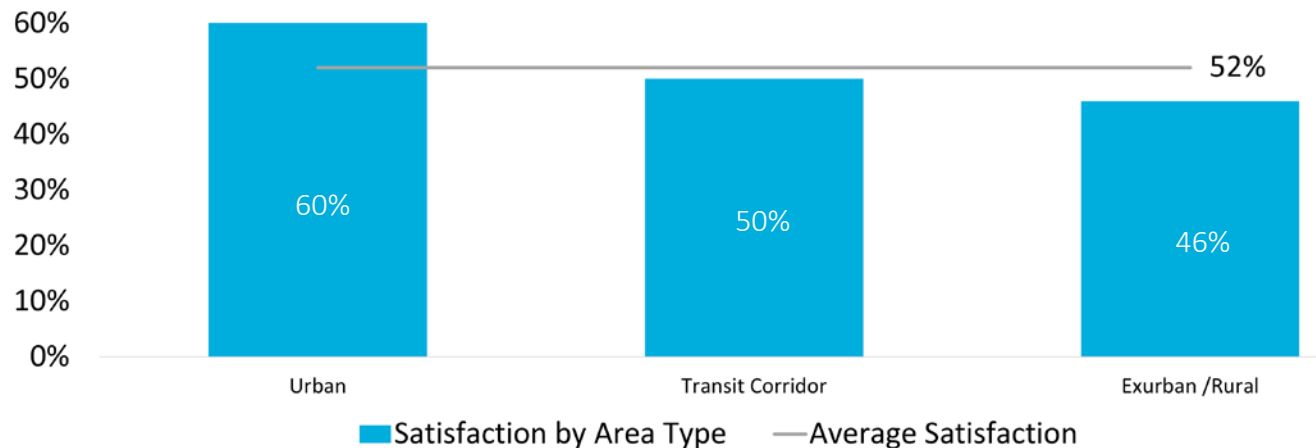
Countywide, exercise/recreational walking trips are longer than utilitarian trips. While 86% of recreational trips are longer than 20 minutes, the majority of trips for grocery/food shopping, personal business, medical appointments, entertainment, dining, and commuting are 20 minutes or less. This makes sense because the purpose of a recreational walk is the walk itself, while for other trip types, the purpose is to reach a destination. If a utilitarian pedestrian trip takes too long, it's likely the trip will not be taken or will instead become a car or transit trip.

Travel-time differences are also apparent between urban areas and the rest of the county. For example, 62% of trips for grocery/food shopping in urban areas are 20 minutes or less, while in transit corridors and exurban/rural areas, 39% and 42% of these trips are 20 minutes or less, respectively. So, not only are there more pedestrian trips to grocery/food stores in urban areas but these trips are also shorter. With more destinations within that 20-minute walking distance in the more urban areas of the county, it makes sense that residents are taking more of these trips.

Satisfaction

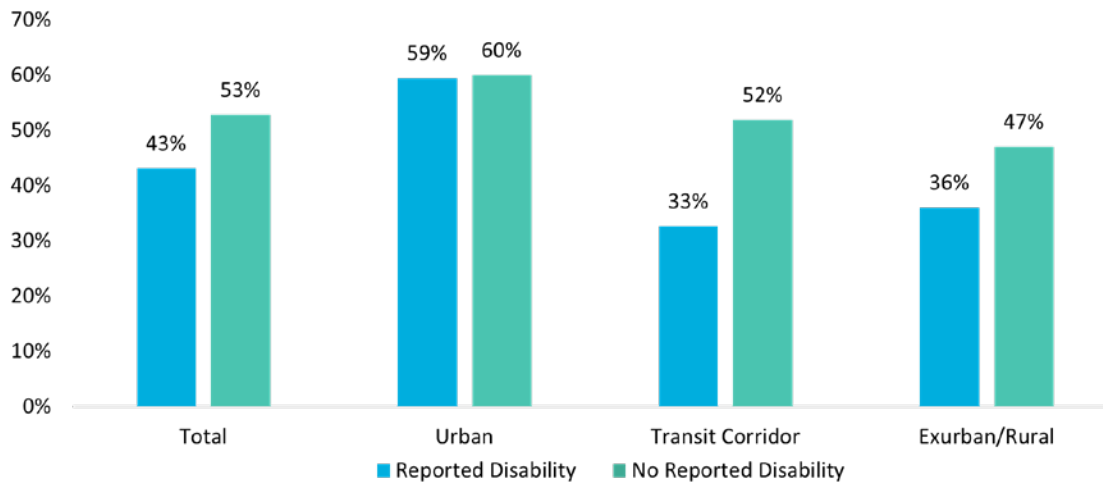
The Countywide Pedestrian Survey also included questions about how satisfied respondents are with different elements of the pedestrian experience. As shown in **Figure 7**, 52% of respondents are satisfied with the overall pedestrian experience in Montgomery County, with respondents in urban areas reporting the highest rates of satisfaction (60%) and those in exurban/rural areas reporting the lowest (46%). Higher satisfaction rates in urban areas are not surprising, considering that these areas are the best endowed with both pedestrian accommodations and destinations.

FIGURE 7: SATISFACTION WITH THE OVERALL PEDESTRIAN EXPERIENCE



As shown in Figure 8, only 43% of pedestrians with reported disabilities are satisfied with their overall pedestrian experience in Montgomery County, compared with 53% of respondents without reported disabilities. However, there are notable differences based on land use type, with respondents in urban areas indicating the same level of satisfaction whether they have a reported disability (59%) or not (60%). In contrast, respondents with reported disabilities in transit corridors are substantially less satisfied (33%) than respondents without reported disabilities (52%). Respondents with reported disabilities in exurban/rural areas are also less satisfied (36%) than respondents without reported disabilities (47%), but the differences are less pronounced.

FIGURE 8: OVERALL SATISFACTION BY REPORTED DISABILITY STATUS AND LAND USE TYPE



Source: Countywide Pedestrian Survey, 2020



In addition to overall satisfaction, the Countywide Pedestrian Survey broke down the pedestrian experience into different elements:

- access to destinations
- the experience walking and rolling along streets
- the pedestrian experience at intersections and crossings
- the presence of lighting

Access to Destinations

As shown in **Figure 9**, 44% of respondents are satisfied with walking to retail, restaurants, parks, etc., with respondents in urban areas reporting the highest rates of satisfaction (63%) and respondents in exurban/rural areas reporting the lowest satisfaction (29%).

Walking Along a Street

Several elements define the experience of walking along a street: the amount and width of pathways along a route, the distance between sidewalks and the roadway, and the speed of adjacent vehicles. **Table 7** compares pedestrian satisfaction while walking along the street in different areas of the county.

While satisfaction rates for this experience are less than 50%, county residents are most satisfied with the “amount of sidewalks on their route” (44%) and the “width of sidewalks” (44%) but least satisfied with the “speed of cars along sidewalks and paths” (21%) and “snow removal” (28%). Satisfaction levels across land use types are generally similar, except that urban residents express greater satisfaction with the “amount of sidewalk on their route” (55%) than transit corridor (45%) and exurban/rural (31%) residents.

FIGURE 9: PEDESTRIAN SATISFACTION WITH ACCESS TO RETAIL, RESTAURANTS, PARKS, ETC.

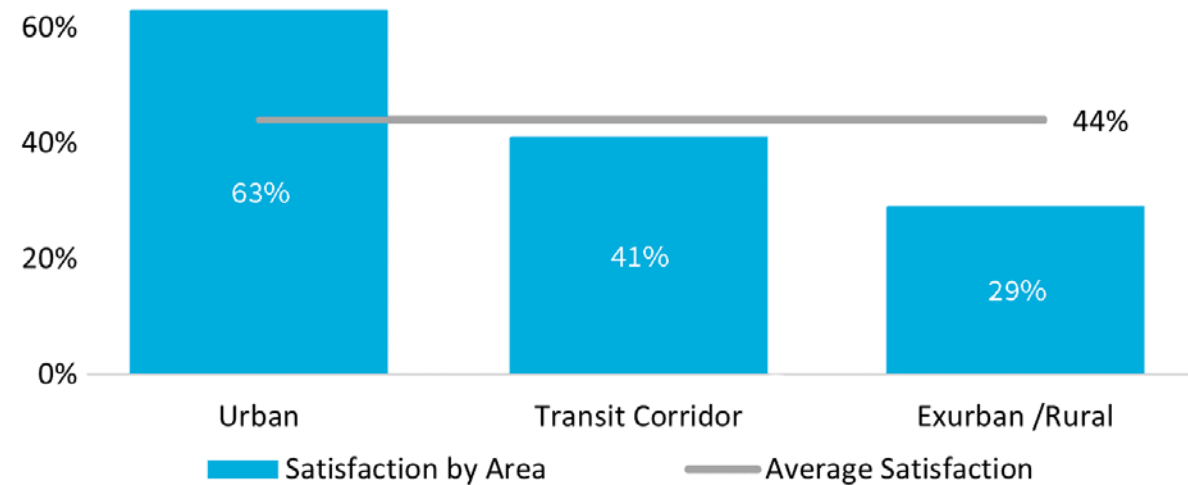


Table 7. Pedestrian Satisfaction Walking Along the Street

Experience Walking Along the Street	Urban	Transit Corridor	Exurban/Rural	Total
Amount of sidewalks on pedestrian route	55%	45%	31%	44%
Width of sidewalks	45%	45%	43%	44%
Shading by trees or buildings	39%	42%	38%	39%
How often driveways cross sidewalks	36%	34%	34%	35%
Distance between sidewalks and cars	33%	31%	28%	31%
Snow removal	28%	30%	26%	28%
Speed of cars along sidewalks and paths	23%	19%	22%	21%

Source: Countywide Pedestrian Survey, 2020



Pedestrian Experience at Intersections and Crossings

Similar to the experience walking along the street, the crossing/intersection experience is composed of several elements. **Table 8** compares pedestrian satisfaction at intersections and crossings in different areas of the county. As with walking along the street, the majority of residents expressed dissatisfaction with all elements of intersections and crossings that they were asked about. Survey respondents indicated that they are most satisfied with the “distance to cross the street” (49%) and the “time to cross the street at pedestrian signals” (47%) and are least satisfied with the “number of vehicles cutting across the crosswalk” (22%), “places to stop partway while crossing” (33%), and “drivers stopping for me when I cross the street” (34%).

While urban respondents tend to have greater levels of satisfaction than exurban/rural respondents for “number of places to safely cross the street,” “number of marked crosswalks,” “distance to cross the street,” and “places to stop partway while crossing,” respondents in transit corridors have slightly higher levels of satisfaction with the “time to cross the street at pedestrian signals” and the “wait time for a pedestrian walk signal” than urban or exurban/rural respondents.

Lighting

While survey respondents expressed low satisfaction with lighting levels along sidewalks/pathways and at crossings (32% and 31%), urban respondents (40% and 39%) are more satisfied with lighting than transit corridor (30% and 28%) or exurban/rural (28% and 26%) respondents (**Table 9**).

Table 8. Pedestrian Satisfaction at Intersections and Crossings

Experience at Intersections and Crossings	Urban	Transit Corridor	Exurban/Rural	Total
Distance to cross the street	53%	50%	45%	49%
Time to cross the street at pedestrian signals	47%	52%	43%	47%
Number of marked crosswalks	50%	48%	39%	46%
Wait time for a pedestrian walk signal	43%	47%	43%	44%
Number of places to safely cross the street	46%	43%	35%	42%
Drivers stopping for me when I cross the street	32%	34%	35%	34%
Places to stop partway while crossing	39%	32%	27%	33%
Number of vehicles cutting across the crosswalk	20%	22%	23%	22%

Source: Countywide Pedestrian Survey, 2020

Table 9. Pedestrian Satisfaction with Lighting

Lighting Experience	Urban	Transit Corridor	Exurban/Rural	Total
Overhead lighting along sidewalks and pathways	40%	30%	28%	32%
Overhead lighting at crossings	39%	28%	26%	31%

Source: Countywide Pedestrian Survey, 2020

From the pedestrian satisfaction responses in the Countywide Pedestrian Survey, it is clear that there is room for improvement. While a slim majority of respondents were satisfied overall with their experience as pedestrians, when asked to consider the elements that define that overall experience, they reported much lower satisfaction.



A Comfortable, Connected, Convenient Pedestrian Network

Montgomery County’s current walking rates and degree of satisfaction with the pedestrian experience may be explained, in part, by the low level of comfort that pedestrians experience when walking and rolling in the county. This section details the specific pedestrian accommodations and resulting pedestrian comfort levels that exist along streets, trails, and at roadway crossings.

Comfort is described using the Pedestrian Level of Comfort (PLOC) methodology. A variety of pathway and crossing factors are considered to determine a comfort score for each crossing and street segment. The four main scores are: undesirable, uncomfortable, somewhat comfortable, and very comfortable.¹¹

“Comfort” is not the same as “safety.” While safety will always be the bedrock principle of the transportation system (and is the focus of Goal 3), increasing pedestrian comfort can also help create a pedestrian experience in Montgomery County that residents and visitors enjoy and look forward to, *not just tolerate or overcome*.

Pedestrian Accommodations

Pedestrian accommodations are the parts of the environment that pedestrians use to travel. They include elements along roads, like sidewalks or sidepaths; elements that cross roads, such as marked crosswalks and pedestrian refuge islands; and elements away from roads, like trails and connections between cul-de-sacs.

Pedestrian Accommodations Along the Street

Table 10 summarizes sidewalk mileage by street classification,¹² as well as where there are sidewalk gaps (sections of missing sidewalk). Countywide, there are about 2,500 miles of sidewalks (primarily on local—or residential—

streets) and 220 miles of sidewalk gaps on non-local streets. Many of these gaps are located on roads that connect people to destinations, including major highways, arterials, and primary residential streets.

Table 10. Sidewalk Mileage by Street Classification

Street Classification	Street Mileage	Existing Sidewalks (miles)	Sidewalk Gaps (miles)
Controlled Major Highway	19	20	1
Major Highway	159	205	49
Parkway	9	3	0
Arterial	243	202	98
Minor Arterial	48	63	7
Business	50	81	2
Primary Residential	215	228	58
Industrial	7	12	1
Country Road	35	2	3
Rustic Road	149	2	0
Exceptional Rustic Road	40	0	1
Local Streets	2,121	1,622	N/A
Total	3,095	2,438	220

Source: Pedestrian Level of Comfort Analysis

Note: Missing sidewalks on local streets are not classified as sidewalk gaps because traffic volumes and speed limits often allow for a comfortable experience for those pedestrians traveling in the roadway.

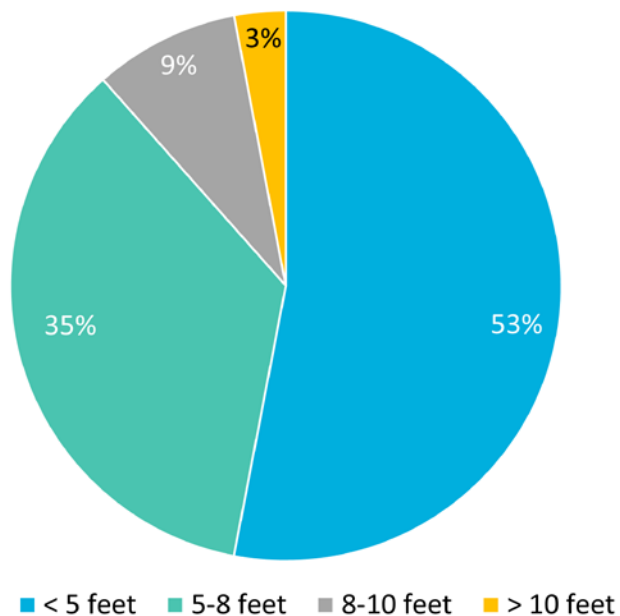
- 11 The existing pedestrian network can be viewed on the Pedestrian Level of Comfort Map at mcatlas.org/pedplan. A detailed methodology can be found in the Pedestrian Level of Comfort appendix.
- 12 A street’s classification is determined by the Master Plan of Highways and Transitways, which was comprehensively updated in 2018. A street’s classification reflects its function in the county’s transportation network. Some streets, like local streets, exist to provide access to/from residences, while others, like major highways, facilitate higher-speed travel between regional destinations and provide access to businesses. Other streets balance access and mobility in different ways.



These sidewalk gaps are not evenly distributed across the county; 79% of the sidewalk gap mileage is in the exurban/rural part of the county. The highlighted cells in **Table 11** call out those sidewalk gaps in urban and transit corridor communities along busier, faster streets and locations with more pedestrian activity.

Not all sidewalks are equal. Factors such as how wide a sidewalk is and how far away it is from a parallel street affect the pedestrian experience. Wider sidewalks and wider buffers are associated with greater comfort. As depicted in **Figure 10**, over half the sidewalks in the county are less than five feet wide (53%). Of the remaining sidewalks, most are five to eight feet wide (35%).¹³

FIGURE 10: SIDEWALK WIDTH



Street Classification	Existing Sidewalks (miles)	Gap Mileage			
		Urban	Transit Corridor	Exurban/Rural	Total
Controlled Major Highway	20	1	0	0	1
Major Highway	205	4	7	38	49
Parkway	3	0	0	0	0
Arterial	202	4	10	84	98
Minor Arterial	63	0	2	5	7
Business	81	2	0	0	2
Primary Residential	228	3	8	47	58
Industrial	12	0	0	1	1
Country Road	2	0	0	3	3
Rustic Road	2	0	0	0	0
Exceptional Rustic Road	0	0	0	1	1
Local Streets	1,622	N/A	N/A	N/A	N/A
Total	2,438	14	27	179	220

Source: Pedestrian Level of Comfort Analysis

Note: Missing sidewalks on local streets are not classified as sidewalk gaps.

¹³ Sidewalks less than five feet wide are less likely to be compliant with the Americans with Disabilities Act and the Public Rights-of-Way Accessibility Guidelines (PROWAG). While these narrower sidewalks (four feet or more) are allowed, five-foot wide passing spaces every 200 feet or less must be constructed. The county’s Complete Streets Design Guide includes a six-foot default sidewalk width for all street types.



As **Table 12** highlights, local streets tend to have narrower sidewalks: 62% of sidewalks along local streets are less than five feet wide. While higher classification streets tend to have wider sidewalks, there are still many sidewalks along major highways (23%), arterials (26%), business streets (17%) and similar streets that are narrower than five feet.

As **Figure 11** indicates, sidewalks in EFAs tend to be somewhat narrower than sidewalks in other areas of the county. In EFAs, 59% of sidewalks are between three and a half and five feet wide, while 53% of sidewalks outside EFAs are in this category. At the other end of the spectrum, non-EFA sidewalks are more likely to be between eight and 10 feet (9% vs. 5%) and greater than 10 feet (3% vs. 2%).

FIGURE 11: SIDEWALK WIDTH BY EFA STATUS

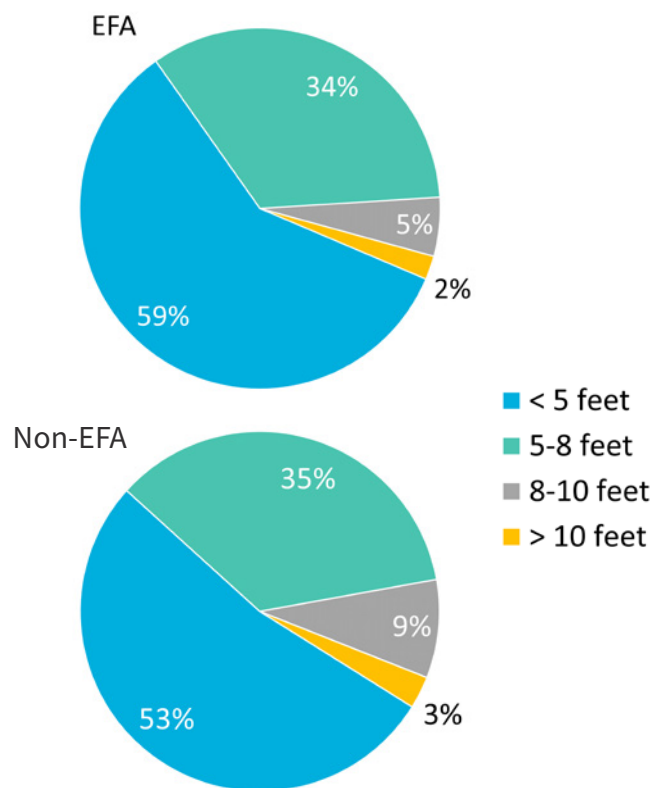


Table 12. Sidewalk Width by Street Classification

Street Classification	Mileage	Sidewalk Width			
		3.5' to < 5'	>= 5' to <8'	>=8' to <10'	>=10'
Controlled Major Highway	20	17%	40%	38%	5%
Major Highway	205	23%	54%	18%	5%
Parkway	3	3%	47%	8%	42%
Arterial	202	26%	47%	24%	3%
Minor Arterial	63	56%	40%	3%	1%
Business	81	17%	58%	14%	12%
Primary Residential	228	74%	21%	5%	0%
Industrial	12	14%	68%	12%	6%
Country Road	2	0%	18%	82%	0%
Rustic Road	2	0%	97%	0%	3%
Exceptional Rustic Road	0	48%	52%	0%	0%
Local Streets	1,622	62%	31%	5%	2%
Total Mileage	2,438	1,328	851	196	63

Source: Pedestrian Level of Comfort Analysis



Street buffer width is the distance between the pathway and the curb. Street buffers separate moving vehicles from pedestrians, and they may allow the planting of larger street trees to provide robust physical separation from traffic, shade canopy, and a sense of enclosure for pedestrians. Without a buffer, pedestrians may “shy away” from adjacent travel lanes, effectively using part of the pathway as a buffer from the road, reducing the pathway’s effective width.

Of the 2,438 miles of county sidewalks, most (51%) have at least a six-foot buffer between the sidewalk and the street. However, nearly half (47%) of sidewalks along major highways like Georgia Avenue are missing buffers. By contrast, 19% of arterial sidewalks, 11% of primary residential sidewalks, and 19% of local street sidewalks are missing buffers (**Table 13**).

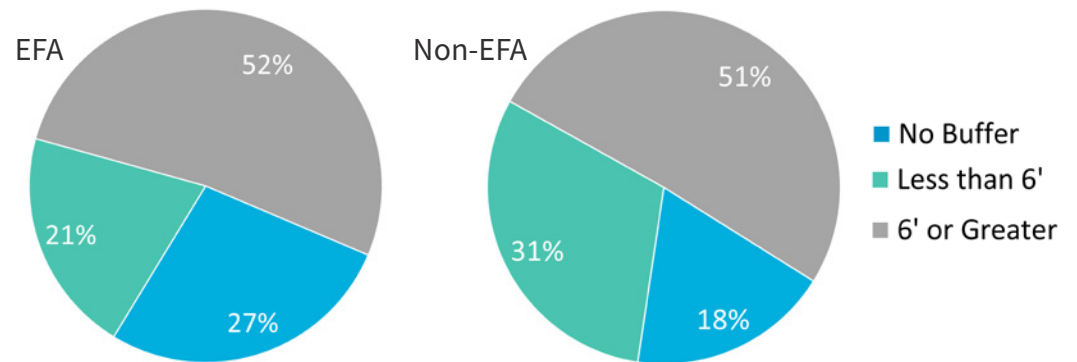
Table 13. Street Buffer Width by Street Classification

Street Classification	Buffer Width		
	No Buffer	Less than Six Feet	Six Feet or Greater
Controlled Major Highway	3%	74%	23%
Major Highway	47%	34%	19%
Parkway	4%	36%	61%
Arterial	20%	35%	45%
Minor Arterial	21%	34%	45%
Business	28%	44%	28%
Primary Residential	11%	23%	66%
Industrial	14%	27%	59%
Country Road	0%	4%	96%
Rustic Road	7%	33%	60%
Exceptional Rustic Road	52%	27%	21%
Local Streets	18%	26%	56%

Source: Pedestrian Level of Comfort Analysis

Sidewalks in EFAs are less likely to have buffers than those outside of EFAs. While 27% of sidewalks in EFAs are missing street buffers, only 18% of non-EFA sidewalks are (**Figure 12**).

FIGURE 12: STREET BUFFER WIDTH BY EFA STATUS



Wider street buffers are more important along roads with higher speeds, but the higher the roadway speed limit, the less likely there is to be a wide buffer between the sidewalk and the street (**Table 14**). The widest buffers are found on the slowest streets. Along streets with speed limits less than 30 mph, 64% of buffers are six feet or greater, while along streets with speed limits above 40 mph, this number drops to 30%. Sidewalks along the fastest streets are the ones least likely to have a buffer from traffic.

Pedestrian Accommodations Crossing the Street

Pedestrian comfort at crossings is largely a function of five factors: traffic control, the posted speed limit, the number of lanes of the street being crossed, median type, and crosswalk type.



Different marked crosswalk designs -- continental, zebra, and ladder designs are classified as "high-visibility."
Image Credit: SF Better Streets

There are three different approaches to crosswalks on county roads. Unmarked crossings have no pavement markings to denote the crosswalk.¹⁴ Standard crosswalk markings include stamped concrete, parallel lines, and dashed marking patterns. High-visibility crosswalks have proven pedestrian safety benefits over standard crosswalk markings and include continental, ladder, zebra, and solid designs. **Table 15** summarizes the crosswalk types by street classification. Countywide, 69% of legal crossings are unmarked, while 15% have a standard marked crosswalk and 17% have a high-visibility crosswalk. The highest portion of marked crosswalks (standard or high-visibility) are on high-volume, higher-order roadways, such as controlled major highways, major highways, and parkways.

Table 14. Sidewalk Buffer by Posted Speed Limit

Posted Speed Limit	No Buffer	Less than Six Feet	Six Feet or Greater
Less than 30 mph	18%	26%	55%
30-40 mph	27%	34%	39%
Greater than 40 mph	30%	43%	27%
Total	21%	28%	51%

Source: Pedestrian Level of Comfort Analysis

Table 15. Crossing Type by Street Classification

Street Classification	Unmarked	Standard	High-Visibility
Controlled Major Highway	28%	34%	38%
Major Highway	33%	28%	39%
Parkway	29%	16%	55%
Arterial	47%	16%	37%
Minor Arterial	57%	15%	28%
Business	28%	24%	47%
Primary Residential	69%	14%	17%
Industrial	50%	19%	31%
Country Arterial	100%	0%	0%
Country Road	100%	0%	0%
Rustic Road	83%	4%	13%
Exceptional Rustic Road	89%	11%	0%
Local	77%	13%	10%
Total	69%	15%	17%

Source: Pedestrian Level of Comfort Analysis

¹⁴ According to MD Transportation Code Ann. § 21-101 (2020), a crosswalk without lines or other markings is defined as “the part of a roadway that is . . . within the prolongation or connection of the lateral lines of sidewalks at any place where 2 or more roadways of any type meet or join, measured from the curbs or in the absence of curbs, from the edges of the roadway.”



The PLOC evaluates crossings based on the highest posted speed limit where the crossing is located (typically at an intersection but also at mid-block crossings). Marked crosswalks, and specifically high-visibility crosswalks, are more prevalent on higher speed streets (Table 16). Marked crossings of all types are more common in urban areas than in transit corridors and more common in transit corridors than in exurban/rural areas.

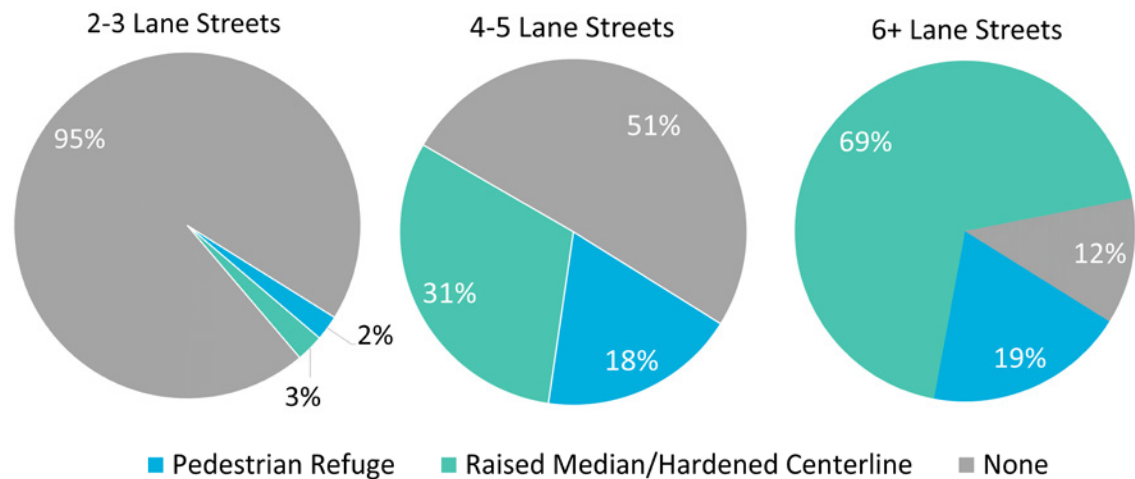
Having a place to stop between directions of motor vehicle traffic improves pedestrian comfort. Medians are categorized as either a pedestrian refuge island (greater than or equal to six feet) or as a raised median less than six feet wide/hardened centerline. While raised pedestrian refuge islands have the greatest crossing safety and comfort benefits, medians that do not meet the criteria for a refuge may also be beneficial. Figure 13 highlights how prevalent different median treatments are based on the number of lanes pedestrians have to cross. On streets with two or three travel lanes, the crossing distance is short and there are few medians. As roadways widen beyond three lanes, medians become more prevalent; medians are present at 49% of four-to five-lane street crossings and 88% of crossings on streets with six or more lanes.

Table 16. Crossing Type by Roadway Speed by Land Use

Posted Speed Limit	Urban			Transit Corridor			Exurban/Rural		
	Unmarked	Standard	High Visibility	Unmarked	Standard	High Visibility	Unmarked	Standard	High Visibility
Less than 30 mph	64%	14%	21%	74%	15%	11%	80%	11%	8%
30-40 mph	33%	23%	44%	50%	14%	36%	67%	11%	22%
Greater than 40 mph	21%	24%	56%	29%	25%	46%	47%	26%	27%

Source: Pedestrian Level of Comfort Analysis

FIGURE 13. MEDIAN TREATMENT BY NUMBER OF LANES



Source: Pedestrian Level of Comfort Analysis



Overall Pedestrian Comfort

Montgomery Planning’s PLOC analysis finds that 61% of pathway distance and 42% of crossing distance in the county is comfortable (Table 17), meeting either the “very comfortable” or “somewhat comfortable” metrics outlined in the PLOC methodology appendix.

Table 17. Overall Pedestrian Comfort on Streets and at Crossings

PLOC Score	Pathway Distance	Crossing Distance
Very Comfortable	25%	10%
Somewhat Comfortable	36%	32%
Uncomfortable	21%	38%
Undesirable	17%	19%

An analysis of pedestrian conditions along all streets and crossings indicates that there are large areas of the county where it is uncomfortable to walk and many locations where it is undesirable to do so. Figure 14 summarizes pedestrian comfort along pathways. Comfort levels in urban (67%) and transit corridors (71%) are greater than in exurban/rural (52%) areas of the county.

Figure 15 summarizes pedestrian conditions at crossings. Overall, only 42% of crossings are comfortable for pedestrians. Crossings in transit corridors tend to be slightly more comfortable (45% comfortable) while crossings in urban and exurban/rural areas tend to be somewhat less comfortable (41% comfortable).

- Pathway comfort levels are substantially higher in EFAs (71%) than non-EFAs (60%), likely due to where these areas are located and when they were developed.
- The comfort of crossings is similar between EFAs and non-EFAs.

FIGURE 14. OVERALL PEDESTRIAN COMFORT ALONG PATHWAYS

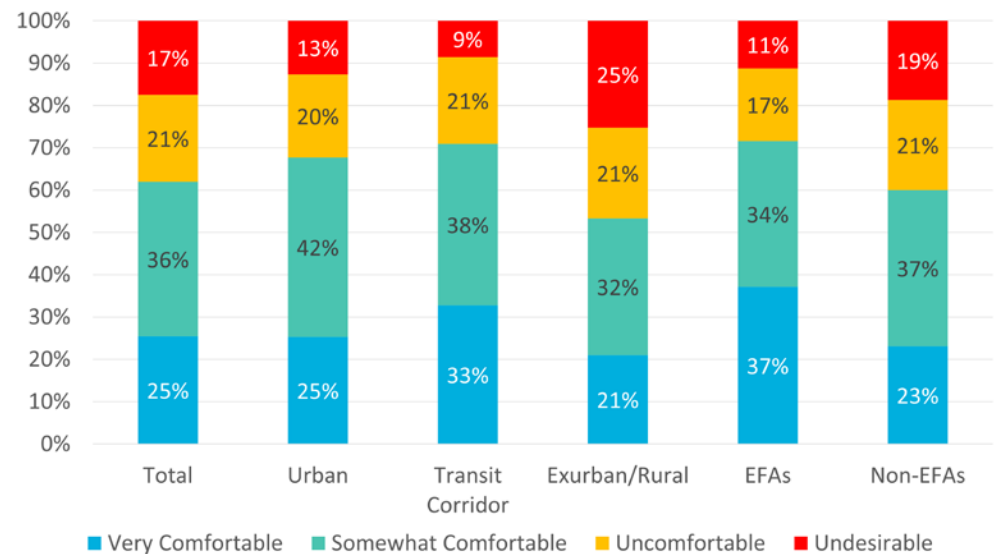
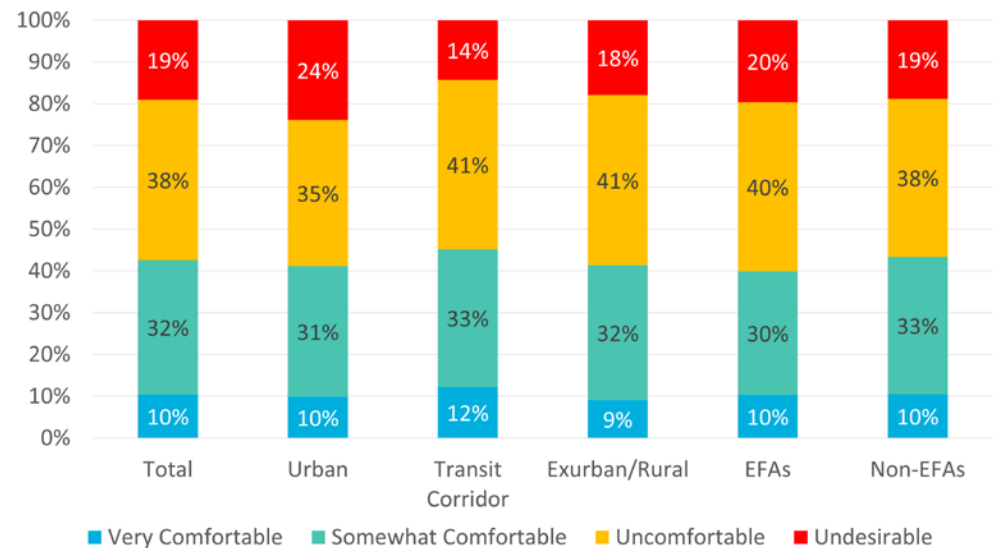


FIGURE 15. OVERALL PEDESTRIAN COMFORT AT CROSSINGS



An important aspect of understanding Pedestrian Comfort is evaluating access to common destinations.

Access to Destinations

While many people walk for recreation, as summarized under Goal 1, many people also walk for practical reasons like getting to community destinations, transit stations, or schools. The PLOC data were used to better understand how comfortable it is to get to these destinations. Analysis is described in the footnote.¹⁵

Table 18. Comfortable Pedestrian Access to Community Destinations and Transit Stations

	Pathway Distance	Crossing Distance
Community Destinations		
Libraries	79.5%	65.5%
Recreation Centers	78.4%	65.5%
Parks	69.9%	35.1%
Transit Stations		
Red Line	88%	66.4%
Purple Line	75.7%	69.8%
Brunswick Line	89.5%	72%

Source: Pedestrian Level of Comfort Analysis

$$\text{comfortable access} = \frac{\text{total comfortable distance of all residential trips to the respective destination}}{\text{total distance of all residential trips to the respective destination}}$$

Table 18 provides the comfortable access scores for walking to community destinations (libraries, recreation centers, and parks) and transit stations broken out by pathway and crossing mileage. While all libraries and recreation centers were scored, only two types of parks (regional and recreational) were included in the analysis. Overall, the pathways are the most comfortable part of the walk to these destinations. Crossing streets is generally less comfortable. While there are disparities between pathway comfort and crossing comfort for most destinations, the difference for parks is the greatest at 35%. Only 35% of the crossing distance between residences and parks was comfortable, lower than every other destination in Table 18. A breakdown of comfortable connectivity scores to specific destinations can be found in the Comfortable Connectivity appendix.

Comfortable access to community destinations and transit stations varies by area type, but the results are not consistent across each type of destination or transit service. Table 19 breaks down comfortable access for these different destinations. Across area types, pathway comfort tends to exceed crossing comfort. Libraries are most comfortable to access in urban areas, while parks are most comfortable to access in exurban/rural areas. Transit corridors and urban areas have similar comfortable connectivity to recreation centers. Comfortable connectivity to Red Line and Purple Line stations is better in urban areas than in transit corridors, while people living in exurban/rural areas within one mile of the stations have the most comfortable Brunswick Line access.

As noted in the table, not all community destinations or transit stations are present in the different area types (e.g., there are no Red Line stations in exurban/rural areas).

¹⁵ A one-mile walkshed was created around each public facility (community destination or transit station). Trips between each residence and destination were modeled using the most direct route along the PLOC network. The comfortable access percentage is the sum of all the comfortable portions of the trips divided by the total trip distance.



Table 19. Comfortable Access to Community Destinations and Transit Stations by Area Types

		Community Destinations			Transit Stations		
		Libraries	Recreation Centers	Parks	Red Line	Purple Line	Brunswick Line
Urban	Pathways	81%	82%	N/A	87%	76%	83%
	Crossings	71%	66%	N/A	67%	72%	70%
Transit Corridor	Pathways	72%	85%	63%	76%	69%	N/A
	Crossings	45%	51%	30%	51%	82%	N/A
Exurban/ Rural	Pathways	81%	62%	76%	N/A	N/A	91%
	Crossings	40%	46%	41%	N/A	N/A	89%

Note: The approach for calculating access to destinations for land use type is based on where the community destination or transit station is located (urban area, transit corridor, etc.).

Source: Pedestrian Level of Comfort Analysis

Table 20. Comfortable Access to Community Destinations by EFA Status

		Community Destinations			Transit Stations		
		Libraries	Recreation Centers	Parks	Red Line	Purple Line	Brunswick Line
EFAs	Pathways	80%	83%	71%	92%	75%	94%
	Crossings	61%	48%	36%	65%	73%	80%
Non-EFAs	Pathways	79%	77%	69%	87%	76%	87%
	Crossings	67%	65%	35%	67%	67%	69%

Note: The approach for calculating access to destinations for EFAs is based on whether each community destination or transit station is within or outside of an EFA.

Source: Pedestrian Level of Comfort Analysis

Comfortable access to community destinations and transit stations also varies by whether the walkshed (the distance around the destination from which people walk) is within an EFA. Table 20 illustrates that crossing comfort tends to be worse in EFAs, while pathway comfort is better.





Table 21 shows that walking to elementary schools tends to be more comfortable,¹⁶ with 55% comfortable access walking along streets, and 43% comfortable access at crossings. In contrast, walking tends to be the least comfortable to high schools, with only 27% comfortable access along pathways and 13% comfortable access at crossings.

While the percentage of students walking to school also decreases as school type changes (**Table 3**), the relationship between comfort

and mode share is likely correlated but not causal. The decline in both metrics is more likely a function of the distance between a residence and the school. As that distance gets farther (as it tends to when transitioning from an elementary to a middle or from a middle to a high school), the amount of walking declines, and pedestrian comfort also declines because it is more likely at least one (and likely more) of the pathways and crossings used to get to school score “uncomfortable” or “undesirable.”

$$\text{comfortable school access} = \frac{\text{total comfortable distance of all residential trips to the respective school (without travel along undesirable segments)}}{\text{total distance of all residential trips to the respective school (without travel along undesirable segments)}}$$

Table 21. Comfortable Pedestrian Access to School

School Types	Streets	Crossings
Elementary Schools	55%	43%
Middle Schools	38%	23%
High Schools	27%	13%

16 Like other community destinations, schools were also evaluated for comfortable access, but with two main differences. First, rather than a uniform one-mile distance, the walkshed for each school was defined by the school’s attendance boundary and the walking distance established by MCPS for the school type—one mile for elementary schools, one and a half miles for middle schools, and two miles for high schools.

Second, it is not reasonable to expect or encourage school-aged children to walk along undesirable pathways or crossings. Therefore, trips requiring travel along such a segment were counted as part of the total distance traveled to that particular school but comfortable portions of a trip that included an undesirable segment were not included in the total comfortable distance traveled to that school.



Comfortable pedestrian access to schools varies by land use type. While elementary and high schools located in transit corridors have the most comfortable pedestrian access, middle schools have the most comfortable access in exurban/rural areas (Table 22).

A school-by-school breakdown of comfortable connectivity scores can be found in the Comfortable Connectivity appendix.

Title I/Focus designated elementary schools have greater comfortable pedestrian access than non-designated schools, while comfortable access is similar across FARMS and non-FARMS schools for middle schools and high schools.

Table 22. Comfortable Pedestrian Access to School by Area Types and Designation

Public Facility	Land Use Type						Title I/Focus and High FARMS Rate Schools			
	Urban		Transit Corridor		Exurban/Rural		Yes		No	
	Pathways	Crossings	Pathways	Crossings	Pathways	Crossings	Pathways	Crossings	Pathways	Crossings
Elementary Schools	36%	28%	56%	51%	50%	54%	60%	47%	50%	39%
Middle Schools	12%	6%	28%	21%	38%	33%	35%	23%	42%	24%
High Schools	9%	11%	23%	15%	14%	11%	27%	9%	28%	16%

Source: Pedestrian Level of Comfort Analysis



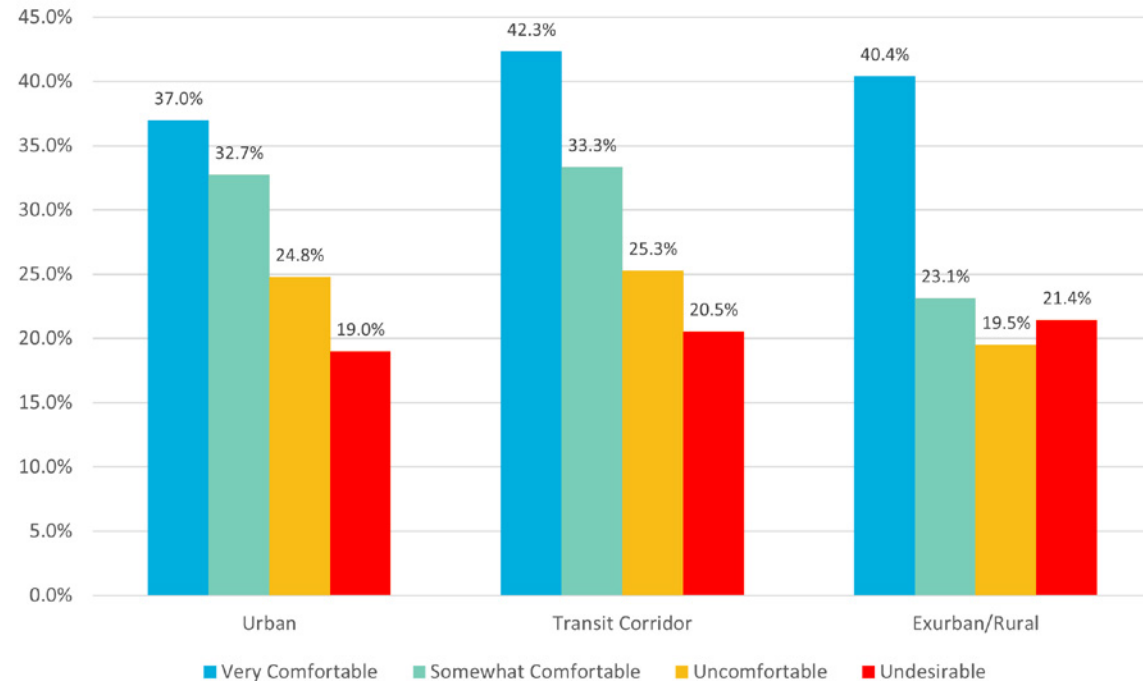
Tree Canopy

Unshaded sidewalks and pathways can be dangerously hot in the summer months. Analysis for the Silver Spring Central Business District (CBD) revealed a significant temperature difference between shaded and unshaded sidewalks.¹⁷ While the amount of tree-canopy cover needed to counteract higher temperatures associated with impervious surface cover is not known, one study found that in urban areas, daytime air temperatures were substantially reduced when tree-canopy cover and shade were greater than 40%.¹⁸ Tree canopy cover will only become more important as climate change increases temperatures over time. The Countywide Pedestrian Survey found 39% satisfaction countywide with existing shading by trees or buildings.

Currently, about 28% of all sidewalk miles in the county are shaded.¹⁹ Transit corridor sidewalks have a canopy coverage of 33%, followed by urban area sidewalks at 30%, and exurban/rural area sidewalks at 24%.²⁰

Breaking down these area statistics further by the pathway PLOC score, no matter the area, pathways that are more comfortable are also likely to have better tree canopy (Figure 16). For instance, in transit corridors, there is twice as much canopy coverage along a very comfortable pathway as along an undesirable one. Thus, pedestrians walking on narrow sidewalks along higher-speed roads without buffers (see Table 14) are also more likely to be doing so in unshaded conditions.

FIGURE 16. TREE CANOPY COVERAGE BY LAND USE BY PLOC SCORE



- 17 Silver Spring Downtown and Adjacent Communities Plan–Environment Appendix. Montgomery Planning. (2022) montgomeryplanning.org/wp-content/uploads/2022/01/SSDAC-Appendix-E-Environment.pdf
- 18 Ren, Z., Zhao, H., Fu, Y. et al. Effects of urban street trees on human thermal comfort and physiological indices: a case study in Changchun city, China. *J. For. Res.* (2021). doi.org/10.1007/s11676-021-01361-5
- 19 To estimate the percentage of county sidewalks shaded with trees, Montgomery Planning overlaid the Pedestrian Level of Comfort pathway linework and tree canopy cover data. While shade from buildings is also important, data were not readily available at the countywide level.
- 20 These are general averages and do not represent full shade conditions, tree size or health, density of cover, and street orientation, which significantly affect temperature reductions and cooling effect. Additionally, the tree-canopy cover GIS maps used indicate that the amount of shade cast on the sidewalk at noon is significantly greater than at other times of the day when the sun's angle casts different tree-canopy shadow shade.

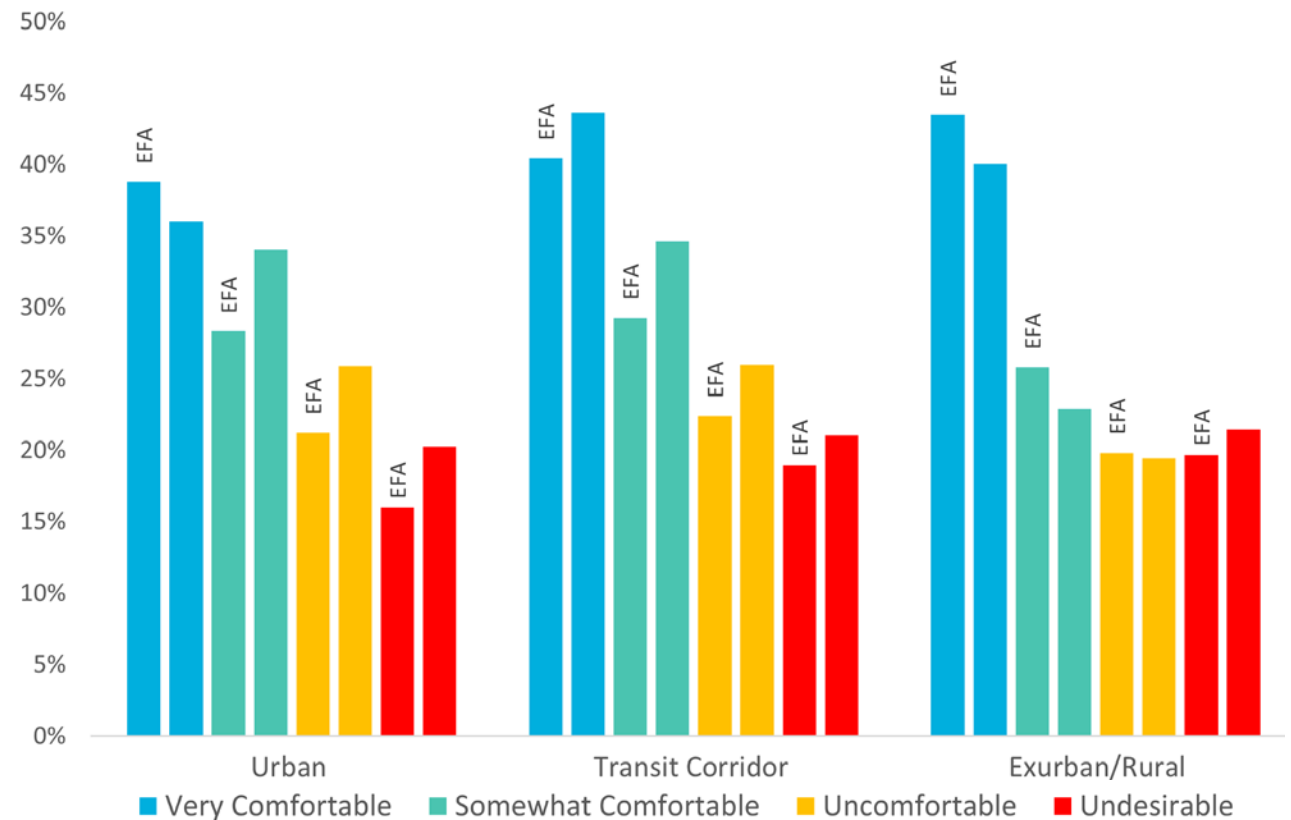


Undesirable pathways are more likely to be along wider, faster roadways like Georgia Avenue or University Boulevard where landscape panels that buffer the sidewalk (if they exist at all) may not be sufficiently wide or have enough soil volume to support the growth of canopy trees. **Table 23** shows that canopy coverage tends to be greater along pedestrian pathways with wider buffers. Pathways with at least a six-foot buffer have nearly twice the canopy coverage as those without buffers.

Buffer Width	Canopy Coverage
None	22.2%
Less than Six Feet	30.1%
Six Feet or More	39.5%

Communities within EFAs have less canopy coverage than their non-EFA counterparts along the less-comfortable roads (“somewhat comfortable” through “undesirable”) in urban and transit corridor areas, as shown in **Figure 17**. For example, somewhat comfortable pathways in EFAs in urban areas have 5.7% less canopy coverage than in urban areas in non-EFAs. In transit corridor areas, these same pathways have 5.4% less coverage.

FIGURE 17. CANOPY COVERAGE BY LAND USE BY EFA



Pedestrian Safety

Through its 2016 Vision Zero resolution, Montgomery County committed to eliminating traffic fatalities and severe injuries.²¹

This commitment represented the beginning of a fundamental change in how the county plans and designs roads, shifting from a focus on maximizing motor vehicle efficiency to ensuring that the transportation system is safe for all, regardless of travel mode. Vision Zero recognizes that people will sometimes make mistakes and that roads should be designed to ensure those inevitable mistakes do not result in severe injuries or fatalities.

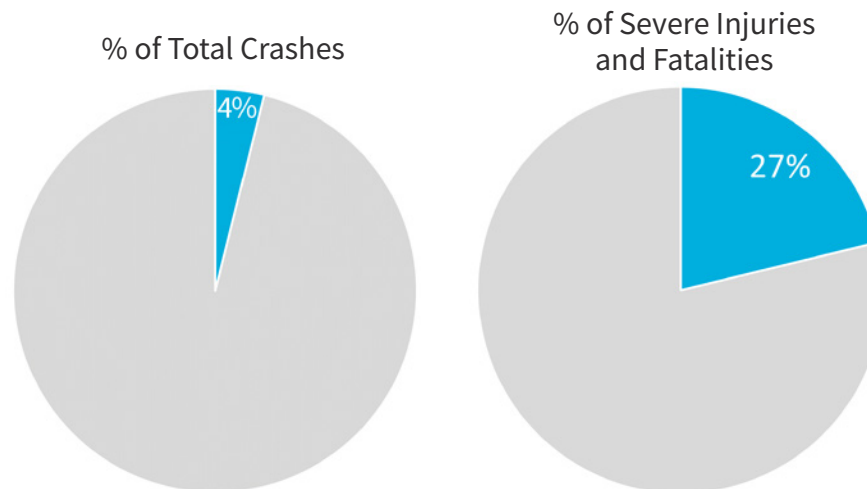
This section describes Montgomery County pedestrian crash trends between 2015 and 2022 by examining different factors, including where and when crashes occurred. Data for this section originally come from the Montgomery County Open Data Portal unless otherwise noted. The locations of specific crashes have been adjusted to better reflect where they likely occurred. Additionally, manual changes to crash severity and crash type have been implemented to correct errors in the underlying data.

Pedestrian Crashes by Severity

While users of all transportation modes suffer fatalities and severe injuries, pedestrians are particularly vulnerable.

Figure 18 shows pedestrians were only involved in 4% of total crashes between 2015 and 2022, but they accounted for 27% of severe injuries and fatalities. Pedestrian crashes disproportionately result in severe injuries and fatalities because while motor vehicles provide drivers and passengers protection from crashes, pedestrians do not have similar protection. A collision between vehicles may result in minor injuries to passengers, but a crash involving a pedestrian is more likely to result in a severe injury or a fatality.

FIGURE 18. PEDESTRIAN CRASHES AS A PERCENT OF TOTAL CRASHES AND SEVERE INJURIES AND FATALITIES



Note: Data include crashes in Rockville and Gaithersburg.

²¹ “Resolution to adopt Vision Zero in Montgomery County and urge the State of Maryland to also adopt Vision Zero.” Montgomery County Council. February 2, 2016. montgomerycountymd.gov/COUNCIL/Resources/Files/res/2016/20160202_18-390.pdf



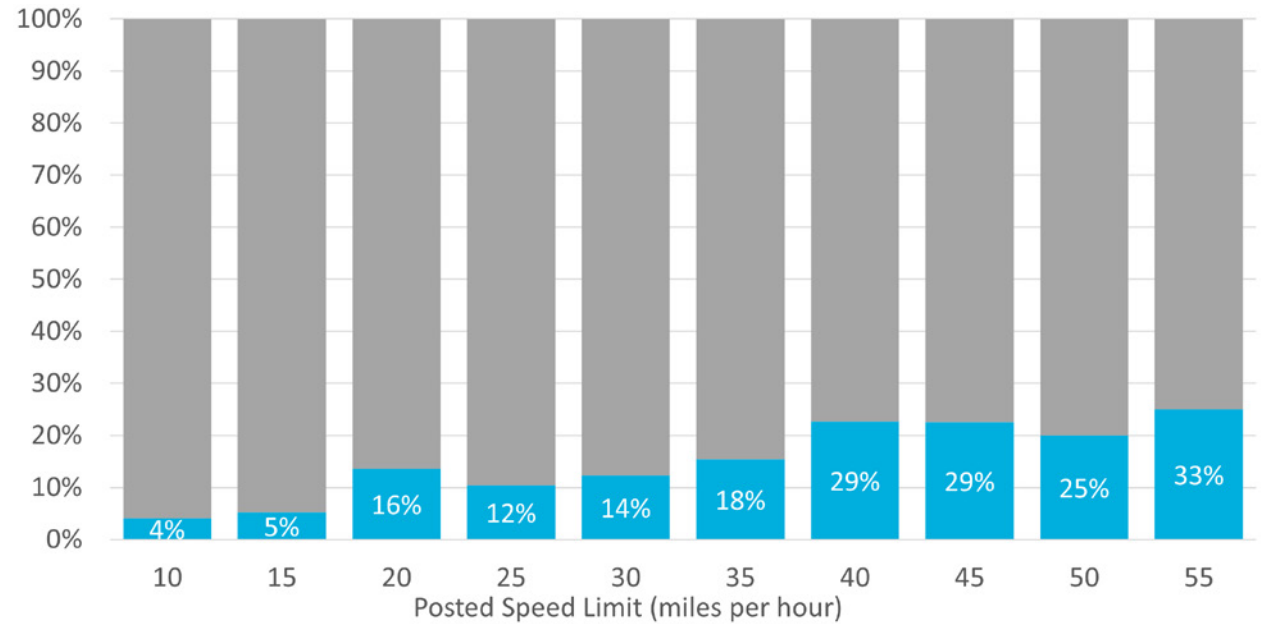
Speed is a factor in pedestrian crash severity. While 30% of crashes involving pedestrians on streets with a posted speed limit of 45 mph or higher result in a severe injury or fatality, only 11% of crashes on streets with a 25-mph posted speed limit result in a severe injury or fatality (Figure 19).

Crash Location

Crashes occur at different rates on different types of streets and in different land use contexts throughout the county. This section explores crash trends to identify where pedestrian crashes occur and where they result in severe injuries and fatalities.

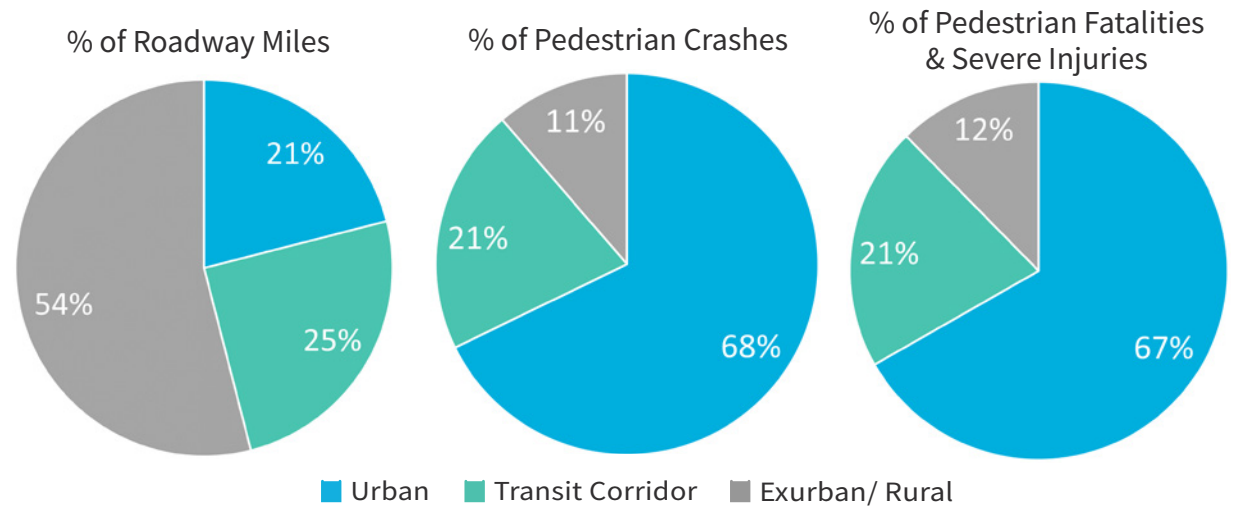
Figure 20 depicts roadway mileage, pedestrian crashes, and pedestrian fatalities and severe injuries by land use type. While over half (54%) of the roadway miles in the county are in exurban/rural areas, these areas only comprise 11% of pedestrian crashes and 7% of pedestrian fatalities and severe injuries. In contrast, urban areas only comprise 21% of roadway miles, while making up about two thirds of pedestrian crashes (68%) and pedestrian fatalities and severe injuries (67%).

FIGURE 19. PERCENT OF PEDESTRIAN CRASHES RESULTING IN A SEVERE INJURY OR A FATALITY BY SPEED LIMIT



Note: Data include crashes in Rockville and Gaithersburg.

FIGURE 20. PEDESTRIAN CRASHES BY AREA TYPE

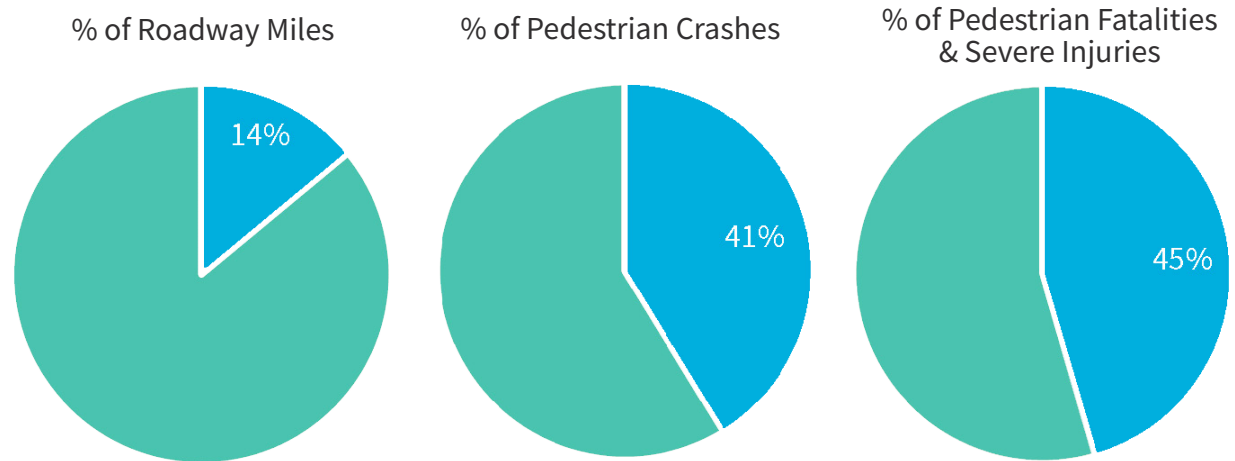


Note: Data include crashes in Rockville and Gaithersburg.



While data are not available to indicate whether low-income residents of color are disproportionately impacted by pedestrian crashes, **Figure 21** shows that streets in EFAs have higher crash rates. While EFAs contain only 14% of roadway miles in the county, they account for 41% of all pedestrian crashes and 45% of pedestrian crashes that result in a fatality or severe injury. Additionally, Black Montgomery County residents had an emergency room admission rate for motor vehicle crashes 136% higher than Asian/Pacific Islander residents and 104% higher than white, non-Hispanic residents.²²

FIGURE 21. PEDESTRIAN CRASHES IN EQUITY FOCUS AREAS



Note: Data include crashes in Rockville and Gaithersburg.

Beyond land use types, the safety analysis zooms into the specific locations and street types where crashes occur. **Table 24** shows that pedestrian crashes along a street (rather than at an intersection) are disproportionately likely to result in a severe injury or fatality. At the same time, while 19% of pedestrian crashes happen in parking lots, they are less likely to be severe or fatal. The difference between these two crash types may be due to motor-vehicle speed, as motor vehicles are likely traveling faster when they collide with pedestrians along street segments than in parking lots.

There is no meaningful difference between the crash locations in Table 24 based on whether they are in an EFA.

Table 24. Pedestrian Crashes by Location

Location	Percent of Pedestrian Crashes	Percent of Pedestrian Severe Injuries and Fatalities (KSI)
Signalized Intersection	21%	21%
Stop-Controlled Intersection	5%	4%
Uncontrolled Intersection	20%	21%
Along a Street	27%	38%
Off-Road	5%	2%
Parking Lot	19%	10%
Driveway	4%	3%
Total	100%	100%

Note: Data include crashes in Rockville and Gaithersburg.

22 Montgomery County Vision Zero Action Plan, FY 22-23 Work Plan, 2021



Higher classification roads such as controlled major highways and major highways, as well as business streets, disproportionately account for pedestrian crashes resulting in severe injuries or fatalities. **Table 25** shows that while controlled major highways, major highways, and business streets make up 8% of roadway mileage, they account for 57% of pedestrian crashes and 63% of pedestrian severe injuries and fatalities.

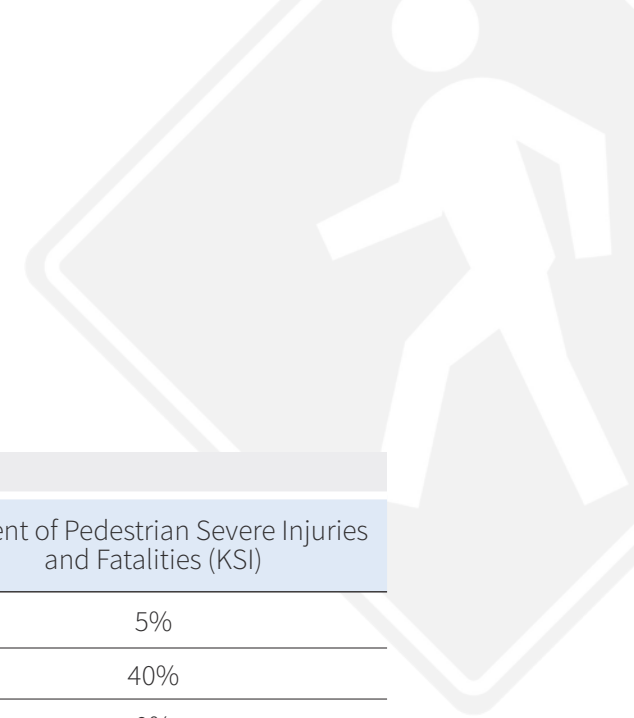


Table 25. Pedestrian Crashes by Roadway Type

Street Classification	Percent of Roadway Miles	Percent of Pedestrian Crashes	Percent of Pedestrian Severe Injuries and Fatalities (KSI)
Controlled Major Highway	1%	3%	5%
Major Highway	5%	33%	40%
Parkway	0%	0%	0%
Arterial	8%	11%	11%
Minor Arterial	2%	5%	3%
Business	2%	21%	18%
Primary Residential	7%	16%	15%
Industrial	0%	1%	0%
Country Arterial	2%	0%	0%
Country Road	1%	0%	0%
Rustic & Exceptionally Rustic	6%	0%	0%
Local	67%	10%	8%
Total	100%	100%	100%

Note: Data include crashes in Rockville and Gaithersburg.



Breaking the same data down by area type (Table 26), it is clear the majority of the pedestrian severe injuries and fatalities (KSI) along those roads occur in urban areas. For instance, even though 0.4% of total roadway miles are controlled major highways in urban areas, those roads

account for 4% of total pedestrian KSI countywide. Similarly, urban major highways represent 2% of total roadway mileage but account for 25% of pedestrian KSI countywide. The relationship is similarly disproportionate for business and primary residential streets.

Table 26. Pedestrian KSI by Area Type by Roadway Type

Street Classification	Urban		Transit Corridor		Rural		Total	
	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI
Controlled Major Highway	0.4%	3%	0.2%	1%	0.1%	0%	0.6%	5%
Major Highway	2.0%	27%	1.3%	9%	1.8%	4%	5.0%	40%
Arterial	1.8%	6%	1.2%	3%	4.7%	2%	7.7%	11%
Country Arterial	0.0%	0%	0.0%	0%	1.8%	0%	1.8%	0%
Minor Arterial	0.5%	2%	0.6%	1%	0.5%	0%	1.5%	3%
Business	1.6%	18%	0.0%	0%	0.0%	0%	1.6%	18%
Country Road	0.0%	0%	0.0%	0%	1.1%	0%	1.1%	0%
Industrial	0.0%	0%	0.1%	0%	0.1%	0%	0.2%	0%
Parkway	0.0%	0%	0.1%	0%	0.2%	0%	0.3%	0%
Local	13.6%	4%	19.4%	2%	34.3%	1%	67.4%	8%
Primary Residential	1.3%	7%	1.9%	5%	3.7%	3%	6.8%	15%
Exceptional Rustic Road	0.0%	0%	0.0%	0%	1.3%	0%	1.3%	0%
Rustic Road	0.1%	0%	0.1%	0%	4.6%	1%	4.7%	1%

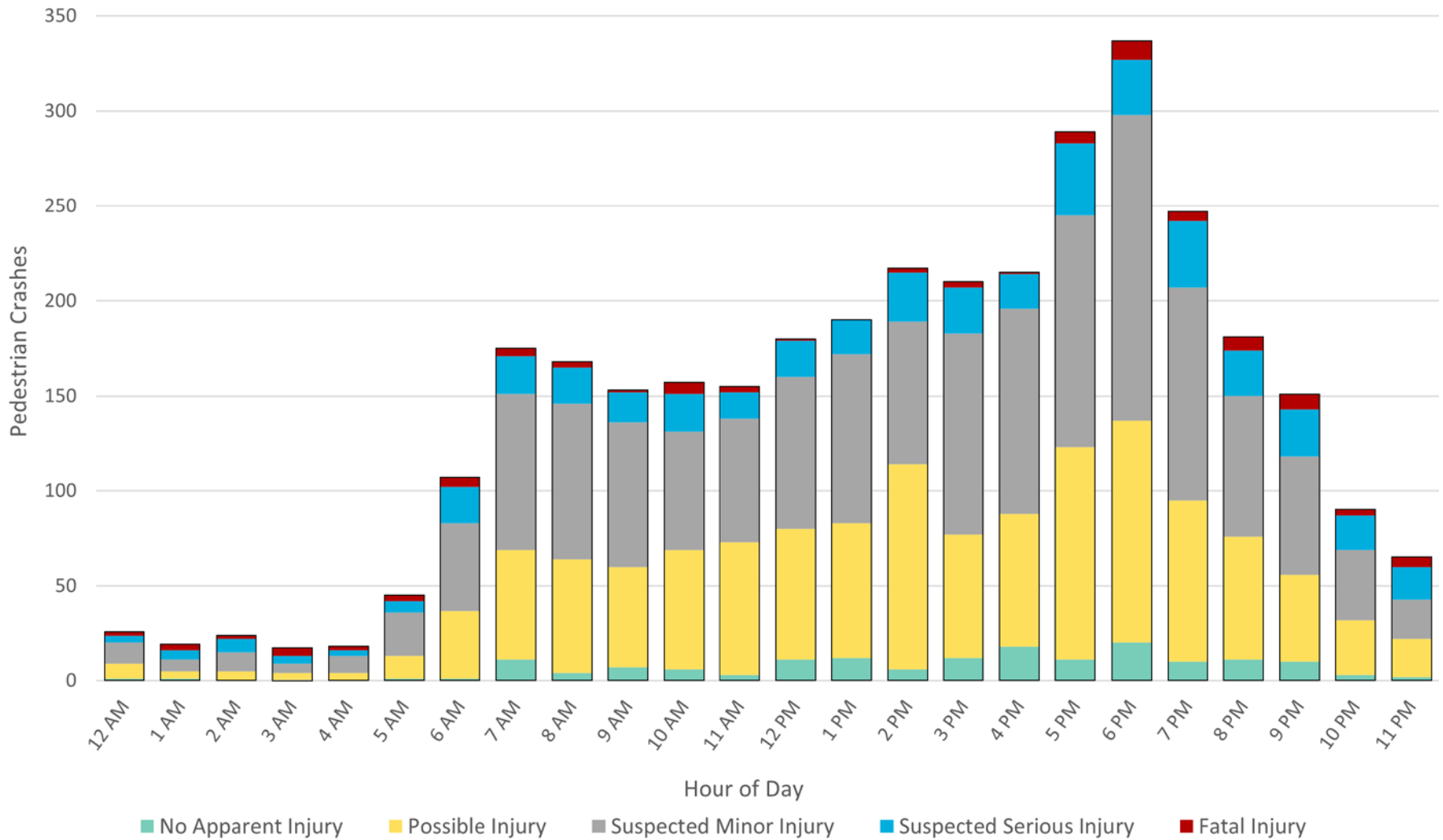
Source: Pedestrian Level of Comfort Analysis



Crashes by Time of Day and Lighting Conditions

Time of day is also an important factor when it comes to pedestrian-involved crashes. As shown in Figure 22, most crashes occur during the day, peaking during the evening rush hour.

FIGURE 22. PEDESTRIAN CRASHES BY TIME OF DAY



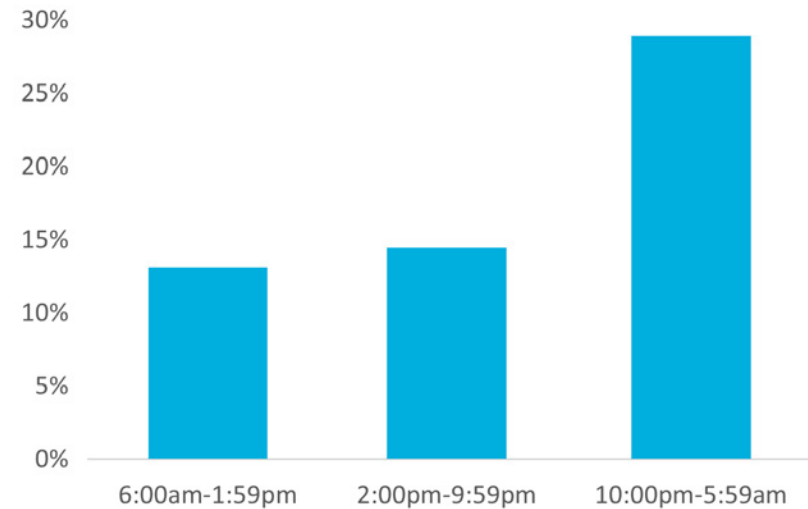
Note: Data include crashes in Rockville and Gaithersburg.



While fewer pedestrian crashes occur in the overnight hours, those crashes are more likely to result in severe or fatal injuries (**Figure 23**). For instance, while 13% of pedestrian crashes between 6:00 a.m. and 9:59 p.m. are severe or fatal, that percentage jumps to 29% between 10:00 p.m. and 5:59 a.m. In addition to increased vehicle speeds common at night due to reduced congestion and lighting-related visibility issues, impairment may also play a role in the increased likelihood of fatal and severe crashes during these time periods.

Lighting conditions are related to pedestrian crashes. During the months with longer nights, the number of pedestrian crashes increases. As shown in **Figure 24**, while the number of daylight pedestrian crashes tends to be higher during months with more daylight hours, there is a noticeable jump in pedestrian crashes occurring in darkness beginning in October and ending in February when there are fewer hours of daylight. In fact, in November, December, and January, the majority of pedestrian crashes take place when it is dark outside. Most of these nighttime crashes take place in areas with existing streetlights. Perhaps it is because there is more street lighting in places with greater pedestrian volumes, or perhaps the existing lighting does not provide sufficient illumination to ensure that pedestrians and drivers are visible to each other.

FIGURE 23. CRASHES RESULTING IN KSI AS A PERCENTAGE OF ALL PEDESTRIAN CRASHES BY TIME OF DAY

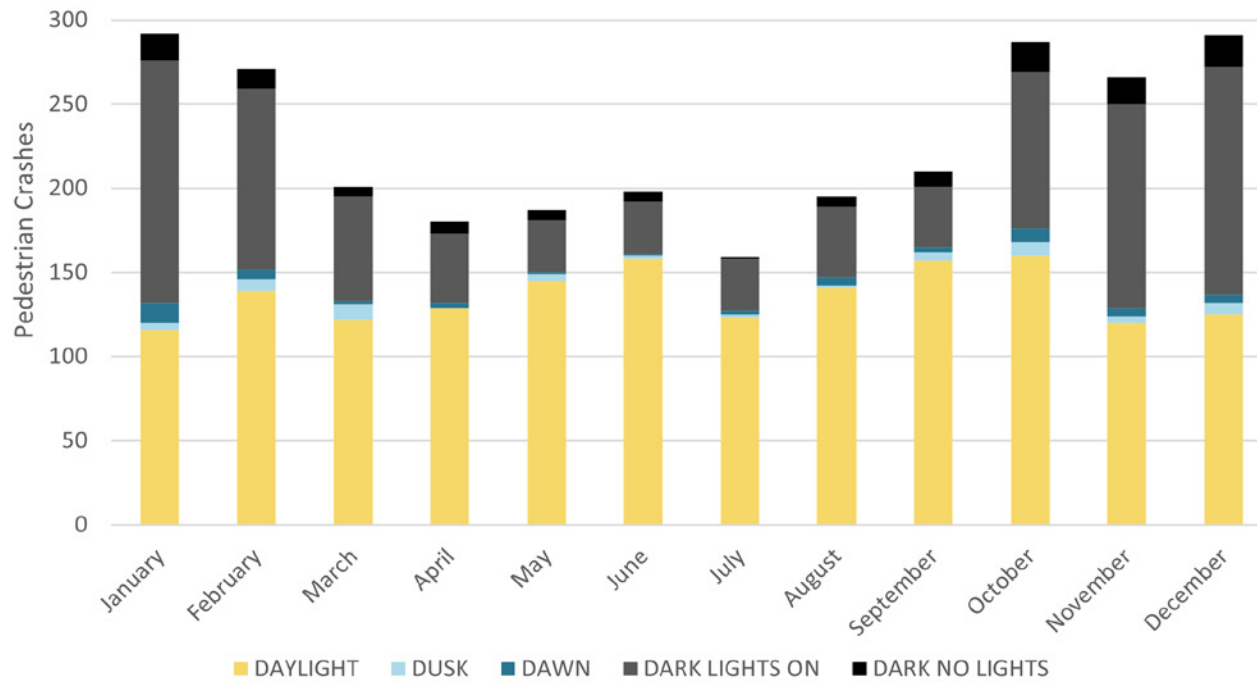


Note: Data include crashes in Rockville and Gaithersburg.

Lighting Conditions are related to pedestrian Crashes



FIGURE 24. PEDESTRIAN CRASHES BY LIGHTING CONDITIONS



Note: Data include crashes in Rockville and Gaithersburg.

Knowledge of Traffic Laws

Knowledge of traffic laws specifically focused on pedestrian behavior is mixed. As part of the Countywide Pedestrian Survey, participants were asked to decide whether statements about traffic laws were true or false.

Table 27 includes the survey questions and the portion of respondents who responded correctly to the prompt. While over 90% of respondents answered questions about driver responsibilities correctly, respondents answered questions about pedestrian responsibilities correctly at lower rates (33% and 51%). This is concerning, as creating an environment where motorists know where to expect pedestrians to be crossing the street influences their readiness to stop or yield to pedestrians. The lack of understanding about where pedestrians are permitted to cross the street may be a factor in pedestrian crashes and perpetuates the motor vehicle’s perceived dominance over the shared transportation system.

Table 27. Knowledge of Traffic Laws

Survey Questions (True or False)	% Correct
Drivers must stop for pedestrians in crosswalks (TRUE)	98%
It's okay to pass a vehicle that has stopped for a pedestrian at an intersection, as long as there is no marked crosswalk present (FALSE)	90%
It's okay for vehicles to stop in the crosswalk at a traffic light (FALSE)	90%
If a driver is turning right on red, they must yield to pedestrians crossing the perpendicular street (TRUE)	98%
It is a driver's responsibility to ensure they are not looking at their phone or distracted while driving (TRUE)	98%
Unmarked crosswalks exist at every corner where the side street has a sidewalk and where painted lines or other markings do not exist to mark the crossing (TRUE)	51%
Pedestrians must only cross the street in marked crosswalks (FALSE)	33%
If there are two intersections in close proximity, and one has a signal and the other doesn't, pedestrians must cross the street at the intersection with a signal (FALSE)	33%



An Equitable and Just Pedestrian Network

The fourth goal of the Pedestrian Master Plan addresses racial equity and social justice.

In 2019, the Montgomery County Council passed Bill 27-19 to establish a racial equity and social justice program. The bill amended County Code Section 33A-14 and requires the Planning Board to “consider the impact of the plan on racial equity and social justice in the county.”

Addressing equity and social justice first requires understanding the disparities that exist around pedestrian issues. Throughout the Existing Conditions chapter, the analysis and results have been supplemented with data about how specific topics pertain to historically disadvantaged people and areas of the county. The equity findings described throughout the previous sections are summarized below.

Walking Rates and Satisfaction

- Overall and commute walking rates are higher in EFAs: Residents in EFAs make 9.6% of trips by walking compared with 7.0% of trips by walking in non-EFAs. The share of commute trips by walking is only slightly greater in EFAs (1.9%) than non-EFAs (1.8%).
- Walk-to-school rates are slightly higher for Title I/Focus and high FARMS rate schools: Students at designated schools have walk mode shares to and from school of 13% and 17% respectively, compared with 11% and 15% arrival and departure walk shares for non-designated schools. Many of the schools with the highest walking rates are schools designated as Title I/Focus or high FARMS rate schools.
- Travelers with disabilities are more likely to make utilitarian pedestrian trips: In fact, respondents with disabilities are twice as likely as others to walk to a medical appointment (35% to 17%) and significantly more likely to walk to the grocery store (67% to 50%) and to dine at restaurants (32% to 24%).
- Pedestrian satisfaction is lower for people with reported disabilities: Only 43% of pedestrians with reported disabilities are satisfied with their overall pedestrian experience, compared with 53% of respondents without reported disabilities. Respondents in transit corridors and exurban/rural are less satisfied if they report having a disability (33% and 36%, respectively) than respondents without reported disabilities (52% and 47%, respectively).





A Comfortable, Connected, Convenient Pedestrian Network

- Crossing comfort accessing community destinations tends to be worse in EFAs, while pathway comfort is better.
- Title I/Focus elementary schools have more comfortable access than their more affluent counterparts. Pathway comfort for Title I/Focus Schools is 10% greater than it is for other elementary schools (60% vs. 60%). Crossing comfort is 8% greater (47% vs. 39%).
- Less comfortable pathways in urban and transit corridor EFAs have less tree-canopy coverage than similar pathways outside EFAs. “Somewhat comfortable” pathways in EFAs in urban areas have 5.7% less canopy coverage than non-EFAs. In transit corridor areas, these same pathways have 5.4% less coverage. Generally, people traveling along less comfortable sidewalks in EFA communities will experience higher temperatures as a result of climate change than will people in other parts of the county.

Pedestrian Safety

- Crashes and injuries are overrepresented in EFAs. While EFAs contain only 14% of roadway miles in the county, they account for 41% of all pedestrian-involved vehicular crashes and 45% of such crashes that result in a fatality or severe injury.



RECOMMENDATIONS



The Existing Conditions chapter of the Pedestrian Master Plan described deficiencies in the pedestrian experience in great detail using data sources developed specifically for this plan. This chapter provides recommendations to address the county's current shortcomings identified in the Existing Conditions chapter. The recommendations should be considered in further detail by multiagency partnerships such as the *Vision Zero Action Plan* and the *Climate Action Plan* for further refinement and consideration. New and expanded programs will be considered by this and future councils in the context of the County's overall capital and operating funds.



Recommendations are in the following five categories:

Design, Policy, and Programming

Address systemic issues that negatively affect the pedestrian experience by recommending changes to how pedestrian amenities are designed and constructed, as well as opportunities for expanded traffic safety education.

Bicycle Pedestrian Priority Area Prioritization

Prioritize where in the county bicycle and pedestrian capital improvement projects should be constructed in a data-driven way based on equity, comfortable access, safety, and other metrics.

Complete Streets Design Guide Area Type Designation

Advance the transition from the Road Code area type classification (Urban, Suburban, Rural) to the *Complete Streets Design Guide* (CSDG) classifications (Downtown, Town Center, Suburban, Industrial, Country) to ensure that pedestrian-friendly streets are provided as roadways are reconstructed in the years ahead.

Pedestrian Shortcuts

Identify locations where public or private investment will shorten pedestrian trips and make the pedestrian network more accessible.

Country Sidepaths

Indicate where sidepaths—shared pedestrian and bicycle pathways—should be built along roadways in the more rural parts of the county, in line with guidance in the CSDG.



Design, Policy, and Programming

The Pedestrian Master Plan's design, policy, and programming recommendations are grouped into one of five themes.



Build

Identify opportunities to build pedestrian amenities better, faster, safer, and more equitably.



Maintain

Clarify existing regulations and propose changes to how the county and private property owners care for sidewalks, pathways, and other pedestrian spaces so these public investments can provide a high quality of service to everyone for years to come.



Protect

Improve pedestrian safety in Montgomery County and support eliminating walking-related fatalities and severe injuries in line with the county's commitment to Vision Zero.



Expand Access

Reduce barriers to pedestrian travel for people with disabilities and other members of the community who have difficulties using the pedestrian environment today.



Fund

Indicate additional potential revenue sources that could be used to make progress on achieving the Pedestrian Master Plan vision.



Within these five themes, there are 34 recommendations. Each recommendation is supported by more specific key actions. Some recommendations have multiple key actions within them, while others only have one.

While recommendations may use general language, key actions provide more direction about how lead agencies should proceed. Implementing the key actions is essential to making progress on achieving the recommendations. Each key action in the pages that follow has a rationale that explains why the key action is important, as well as the plan goals the key action addresses and the lead agency (or agencies) best positioned to implement that key action. These agencies include:

- Montgomery Planning
- Montgomery Parks
- Montgomery County Department of Transportation (MCDOT)
- Maryland Department of Transportation State Highway Administration (MDOT SHA)
- Montgomery County Public Schools (MCPS)
- Montgomery County Department of Permitting Services (MCDPS)
- Montgomery County Department of General Services (MCDGS)
- Montgomery County Department of Housing and Community Affairs (MCDHCA)
- Montgomery County Fire and Rescue Service (MCFRS)
- Montgomery County Police Department (MCPD)
- Montgomery County Department of Recreation (MCR)
- Montgomery County Public Libraries (MCPL)
- County Executive

- County Council
- Commission on Common Ownership Communities (CCOC)
- State Legislative Delegation
- County Municipalities
- Urban Districts
- Washington Metropolitan Area Transit Authority (WMATA)
- Public Utilities (PEPCO, Washington Suburban Sanitary Commission, Verizon, Washington Gas, etc.)
- Maryland Department of Natural Resources (MDDNR)

A summary table below identifies the various agencies' roles in key action implementation. Cells marked with an "L" identify the agency in that column as a lead. Cells marked with an "S" identify the agency in that column as a support.



Table 28. Key Actions by Lead/Support Agency

Key Action	Page	Montgomery Planning	Montgomery Parks	MCDOT	MDOT SHA	MCPS	MCDPS	MCDGS	MCDHCA	MCFRS	MCPD	MCR	MCPL	County Executive	County Council	State Delegation	County Municipalities	Urban Districts	WMATA	Utilities	MDDNR	CCOC
BUILD																						
B-1a	70			L																		
B-1b	70			L																		
B-1c	71	S				L		L														
B-1d	70	L		L																		
B-1e	71			L																		
B-1f	72		L	L			L															
B-1g	72				L																	
B-2a	72			L	L												L					
B-2b	73			L	L																	
B-2c	73			L																		
B-2d	73			L	L																	
B-3a	74			L	L																	
B-3b	75			L																		
B-3c	75	S		L	L												L					
B-3d	76			L	L												L					
B-3e	76															L						
B-3f	76			L	L												L					
B-4a	77	L															L					
B-4b	77	S				L		L														
B-4c	77					L																



Key Action	Page	Montgomery Planning	Montgomery Parks	MCDOT	MDOT SHA	MCPS	MCDPS	MCDGS	MCDHCA	MCFRS	MCPD	MCR	MCPL	County Executive	County Council	State Delegation	County Municipalities	Urban Districts	WMATA	Utilities	MDDNR	CCOC
B-4d	78	L		L																		
B-4e	78	L		L	L																	
B-4f	80	S		L													L					
B-4g	80	L	L	L													L	L				
B-4h	80	L		L																		
B-5a	81	L		L																		
B-5b	81	L		S																		
B-5c	81			L																		
B-6a	82	L		L	L																	
B-6b	82			L										L	L							
B-6c	82	L		L																		
B-7a	83													L	L							
B-7b	83													L	L							
B-7c	84													L	L							
B-7d	84	L		L											L							
B-7e	84	L		L													L					
B-7f	85			S										L	L							L
B-7g	85													L	L							
B-8a	86	S	L																			
B-8b	86		L																			
B-8c	87	L																				L



Key Action	Page	Montgomery Planning	Montgomery Parks	MCDOT	MDOT SHA	MCPS	MCDPS	MCDGS	MCDHCA	MCFRS	MCPD	MCR	MCPL	County Executive	County Council	State Delegation	County Municipalities	Urban Districts	WMATA	Utilities	MDDNR	CCOC
B-8d	87	L		L											L							
B-8e	87	L		L																		
B-9a	88													L	L							
B-9b	88			L																		
B-10a	89													L		L						
B-10b	89													L		L						
B-11a	90	L		L																		
MAINTAIN																						
MA-1a	91			L																		
MA-2a	91			L	S																	
MA-2b	92														L							
MA-2c	92								L													
MA-2d	92			L																		
MA-3a	93			L			L													S		
MA-4a	93			L																L		
PROTECT																						
P-1a	94		L			L								L								
P-1b	94									L												
P-1c	95															L						
P-1d	95															L						
P-1e	95													L								



Key Action	Page	Montgomery Planning	Montgomery Parks	MCDOT	MDOT SHA	MCPS	MCDPS	MCDGS	MCDHCA	MCFRS	MCPD	MCR	MCPL	County Executive	County Council	State Delegation	County Municipalities	Urban Districts	WMATA	Utilities	MDDNR	CCOC
P-1f	96													┌								
P-2a	96			L	L																	
P-2b	97			L	L													┌				
P-2c	97			L	L												┌					
P-2d	98			L	L																	
P-2e	98			L																		
P-2f	99			L																		
P-2g	99			L	L																	
P-3a	100	L		S			S															
P-4a	100			L		L						L	L									
P-4b	100		L	L		L						L	L				L					
P-4c	101			S		L																
P-5a	101					S					L											
P-5b	101					L																
P-5c	102			L		L																
P-5d	112					L																
P-5e	102			L		L																
P-6a	103	L		L	L		L															
P-7a	103				L																	
P-7b	104			L	L																	
P-7c	104			L	L																	



Key Action	Page	Montgomery Planning	Montgomery Parks	MCDOT	MDOT SHA	MCPS	MCDPS	MCDGS	MCDHCA	MCFRS	MCPD	MCR	MCPL	County Executive	County Council	State Delegation	County Municipalities	Urban Districts	WMATA	Utilities	MDDNR	CCOC	
P-8a	104										L			L	L	L							
P-8b	105		L								L			L	L								
P-9a	105															L							
P-9b	105			L	L																		
EXPAND ACCESS																							
EA-1a	106	L																L					
EA-1b	106			L	L		L										L						
EA-1c	107			L			L																
EA-1d	107	L		L			L																
EA-2a	107	S		L	L																L		
EA-2b	108	S		L	L																L		
EA-2c	108			L													L						
EA-3a	109			L	L																		
EA-3b	109			L	L																		
EA-4a	110			L	L																		
EA-4b	110			L	L																		
EA-5a	111	S		L	S														S				
EA-5b	111													L									
EA-6a	112		L																				
EA-6b	112		L																				
EA-7a	112	S					S								L								



Key Action	Page	Montgomery Planning	Montgomery Parks	MCDOT	MDOT SHA	MCPS	MCDPS	MCDGS	MCDHCA	MCFRS	MCPD	MCR	MCPL	County Executive	County Council	State Delegation	County Municipalities	Urban Districts	WMATA	Utilities	MDDNR	CCOC
EA-8a	113															┌						
EA-8b	113	S		L			L															
EA-9a	114			L			L															
EA-9b	114			L			L															
FUND																						
F-1a	115															L						

Many recommendations reference land use area types used in the county’s Complete Streets Design Guide. The definitions of these area types are:

- Downtowns are envisioned as Montgomery County’s highest intensity areas, including central business districts and urban centers. They are envisioned to have dense, transit-oriented development and a walkable street grid (existing or planned), as well as significant areas of Commercial-Residential and Employment zoning.
- Town Centers are similar to Downtowns but generally feature less intense development and cover a smaller geographic area. While the Town Center area type includes a mixture of uses, it is

commonly envisioned as high-to-moderate intensity residential development, including multi-family buildings and townhouses as well as retail (existing or planned).

- Suburban areas are intended to be places with low-to-moderate intensity residential development.
- Industrial areas are envisioned as places where employment and industrial uses are the primary activities. These areas often have higher densities of development but maintain lower to moderate levels of bicycle and pedestrian activity.
- Country areas are the least dense portions of the county, with land uses of low-intensity residential and agriculture.





Build

Achieving Pedestrian Master Plan goals will require building new sidewalks, rehabilitating existing pathways, building more places to cross streets, improving lighting, and creating the type of places where walking is the preferred way to get around. This section lays out recommendations that will help the county build better, faster, safer, and more equitably by setting new standards, identifying barriers that need to be overcome, and reaching toward best practices.

B-1: Build more sidewalks faster.

The CSDG recommends sidewalks on both sides of the street with adequate buffers from traffic. However, the county's busiest roads lack about 225 miles of sidewalk (on one or both sides of the road), about 54% of sidewalks do not meet the minimum width (five feet), and about 21% lack a buffer from traffic. With the need for new and reconstructed sidewalks far exceeding the county's capacity to build them, the following key actions help build more sidewalks faster.

Only 44% of residents report that they are satisfied with the number of sidewalks along their walking routes, 44% are satisfied with the width of sidewalks, and 31% are satisfied with the buffer between the road and sidewalks.

Key Actions:

B-1a: Pivot the Annual Sidewalk Program from a reactive, request-driven process to an equitable, data-driven process.

An approach to sidewalk construction that relies on community requests does not necessarily address those locations with the greatest need. Using a data-driven approach to allocating the limited resources

of the Annual Sidewalk Program will ensure that the highest priority connections are made and that resources are expended equitably. Requested sidewalk projects that have already begun the public engagement, design, and construction process should proceed to implementation. Requested sidewalks that have not begun this process and existing sidewalk gaps that have not been requested for improvement should be prioritized for construction in a data-driven way, and the highest scoring projects should be constructed first.

Related Effort: *Vision Zero Action Plan*

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT

B-1b: Reimagine public engagement for sidewalk construction to ensure that community members can share valuable local perspectives while pedestrian safety and connectivity improvements are not delayed.

Public engagement is essential to understanding the unique local context that may require changes in the design of a sidewalk project. Today, public engagement around sidewalk projects tends to be centered around whether a sidewalk project should be constructed, and some important projects do not advance due to public concerns. The public process around sidewalk construction should be reframed to focus on how the sidewalks in question can best be constructed, not whether they should be constructed at all. This approach will lead to a more efficient engagement process that uses staff time



and funding more effectively, ultimately resulting in more sidewalks being built.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: MCDOT

B-1c: Require all new public buildings, as well as major renovations, to design and construct bikeways and walkways along their frontage as recommended in master plans and the CSDG, as well as to dedicate right-of-way where required.

Public projects, such as schools and libraries, should provide frontage improvements identified in master plans or other regulations, just like private development projects do. Public agencies should coordinate with the Planning Department early in the project design to help identify the master-planned frontage improvements so they can be accommodated in the project budget.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network

Leads: MCDGS, MCPS

Support: Montgomery Planning

B-1d: Require that new and reconstructed sidewalks achieve at least a “somewhat comfortable” rating using the Pedestrian Level of Comfort (PLOC) tool.

Currently, 39% of pedestrian pathway mileage in the county is rated as “uncomfortable” or “undesirable,” based on Montgomery Planning’s PLOC metric. To improve the comfort of walking, this recommendation establishes a minimum comfort standard of “somewhat comfortable” for new and reconstructed sidewalks as part of capital

improvement and private development projects. This ensures that future sidewalks and pedestrian pathways are designed and constructed to be navigable and comfortable. Note that sidewalk reconstruction does not include maintenance projects to eliminate tripping hazards.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, Montgomery Planning

B-1e: Explore use of temporary materials to create dedicated pedestrian spaces where sidewalks are not feasible.

Where there is limited available right-of-way or environmental or other limitations, use flex posts, jersey barriers, or other materials to create pedestrian space within the roadway.

Precedents: Seattle has created temporary walkways in the roadway to preserve trees and other environmental features. In Washington, D.C.’s Georgetown neighborhood, the sidewalk on M Street is widened seasonally into the street using semi-permanent materials to accommodate more pedestrians.

Related Effort: *Vision Zero Action Plan*

Goal: Comfortable/Connected Pedestrian Network

Lead: MCDOT



A painted pedestrian pathway in the street is separated from traffic by parked cars, temporary concrete curbs, and white flex posts. Photo Credit: Dongho Chang



B-1f: Document deviations from Complete Streets Design Guide streetscape default widths where applicable.

The Complete Streets Design Guide identifies preferred, default, and minimum widths of different roadway elements, from travel lanes to sidewalks and landscape buffers. These widths were agreed upon through a collaborative process between Montgomery Planning, MCDOT, and MCDPS. Where public or private projects do not provide the default widths, Planning Department and MCDOT staff must document the reasons that prevent the project from achieving the CSDG dimensions, as part of regulatory staff reports.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT, MCDPS

B-1g: Update state curb height standards to 6” in areas with pedestrian activity.

Curb ramps allow people using wheelchairs and other wheeled vehicles to transition between the road surface and the sidewalk. By law, the running slope of the curb ramp (from the street to the sidewalk) cannot exceed 8.33 percent for new sidewalks or 10 percent for sidewalks built before the ADA went into effect. A taller curb that maintains the same running slope will require a longer curb ramp. This additional space requirement often requires adjustments to the slope of adjacent sidewalks, which can have a negative effect on accessibility. Lowering the state’s 8” standard curb height to the county’s 6” standard will allow shorter ramps and more accessible sidewalks.

Goal: Equitable and Just Pedestrian Network

Lead: MDOT SHA

B-2: Eliminate the need to press a button to cross the street.

Pedestrians should not need to press a button to safely cross the street, and yet in much of Montgomery County, this is the case. A pedestrian-friendly place avoids the pedestrian push button wherever possible. The key actions below help the county achieve this recommendation. In urban areas, the default would be to automatically provide pedestrians time to cross the street during every signal cycle; in suburban and country areas where there are often fewer people walking today, the county would use creative technologies to prioritize pedestrians and reduce delay.

Key Actions:

B-2a: Make pedestrian recall the default configuration for signalized intersections in Downtowns and Town Centers and adjacent to rail and bus rapid transit stations, schools, parks, major trail crossings, and community centers.

Currently, pedestrian phases at signalized intersections can be configured as push-button actuated or recall. Push-button actuation requires the pedestrian to push a button to receive a walk signal and is not automatically triggered. Recall automatically provides a pedestrian crossing phase every signal cycle and removes the onus from the pedestrian to push a button to request the walk signal. Recall should be the default configuration in urban areas where pedestrian activity is greater. The accessibility features of the Accessible Pedestrian Signal (APS) will remain effective even if the pedestrian phase is in recall.

Goals(s): Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA, County Municipalities

Satisfaction with pedestrian walk signal wait time is 44% countywide.



A pedestrian push button. Photo Credit: Montgomery County Government



B-2b: Continue to evaluate passive detection to eliminate the need for pedestrians to press a button to safely cross the street in areas where pedestrian recall is not desirable.

In Suburban and Country areas of the county where providing a pedestrian crossing phase via pedestrian recall in every signal cycle may have detrimental effects on traffic flow, passive detection provides an option that eliminates the need to push a button while minimizing impacts to traffic. Using sensors, the signal detects an approaching pedestrian and adds a phase to the signal cycle so that pedestrians can safely cross the street. Push buttons may still be provided to assist visually impaired users with navigating crossings.

Precedent: The PUFFIN passive detection approach is used in the United Kingdom.

Goals(s): Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

B-2c: Develop criteria for “Barnes Dance” pedestrian signalization.

A “Barnes Dance” is a traffic signal phase when no motor vehicle traffic can proceed, but pedestrians and bicyclists can travel in any direction through an intersection. The county should consider adopting and publishing implementation criteria about this signalization approach.

Goals(s): Comfortable/Connected Pedestrian Network

Lead: MCDOT

B-2d: Reduce the number of intersections with permissive left turns along Major Highways, Downtown Boulevards, Downtown Streets, Town Center Boulevards, Town Center Streets, and Boulevards to improve safety, in line with findings from the Predictive Safety Analysis.

Left turns can be configured in two main ways: permissive or protected. A permissive left turn is when a left-turning driver must wait for a break in oncoming traffic to execute a left turn. A protected left turn is when a left-turning driver waits for a left turn signal—where oncoming traffic is stopped—to execute a left turn. Permissive left turns can be dangerous for pedestrians because drivers looking to turn left are focused on finding a gap in oncoming traffic and may not be paying attention to pedestrians crossing the street. Protected left turns separate turning vehicles from through traffic and crossing pedestrians, eliminating these conflicts.

Goals(s): Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA



B-3: Create direct and accessible street crossings.

High-quality street crossings connect communities and make it easier to access local destinations like schools, parks, and transit stops. The county PLOC analysis found that while the majority of the pathways in the county are comfortable (61%), only 42% of street crossings are comfortable. Coupled with 46% satisfaction with the number of marked crosswalks and 42% satisfaction with the number of places to safely cross the street in the Countywide Pedestrian Survey, it is clear that street crossings countywide need to be improved. The key actions below achieve the recommendation by encouraging more intuitive curb ramp and crosswalk design, enhancing pedestrian right-of-way while crossing, and supporting the installation of more direct pedestrian crossing locations.

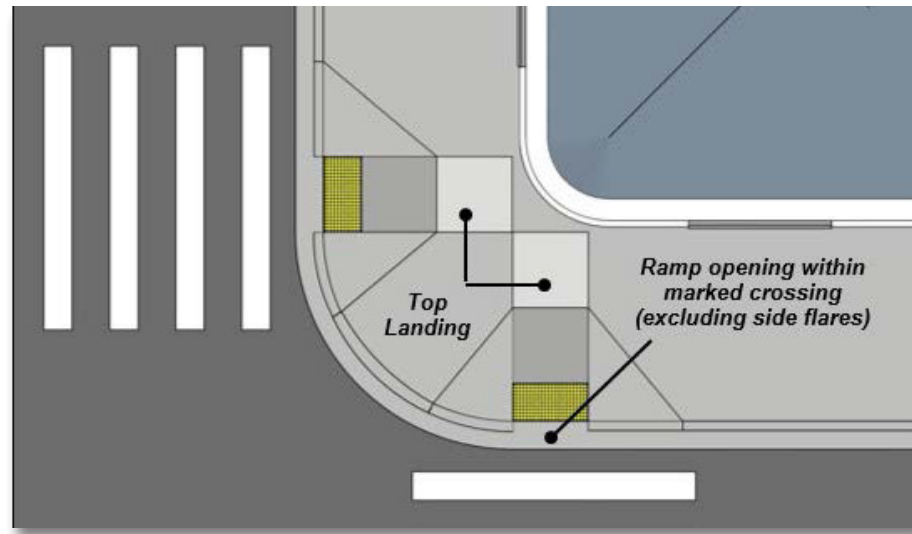
Key Actions:

B-3a: Update state and county design standards to reflect a preference for perpendicular curb ramps aligned with the crosswalk.

When curb ramps are significantly out of alignment with the crosswalk, people with vision disabilities have more difficulty orienting to cross the street safely, and people using wheelchairs are directed into the intersection, where they are more vulnerable to conflict with motor vehicles. Misaligned curb ramps also inconvenience people pushing strollers or using other wheeled devices. Perpendicular curb ramps aligned with the crosswalk can be provided on both straight and curved sections of curb.

Goals(s): Equitable and Just Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA



Perpendicular curb ramps directly aligned with appropriate crosswalks.
Image Credit: U.S. Access Board





The ladder crosswalk markings on the far right can be compared with the continental and standard markings.
Image Credit: SF Better Streets

B-3b: Update the CSDG to establish ladder-style, high-visibility crosswalks as the default crosswalk design in Montgomery County.

The ladder-style crosswalk marking is preferred over the continental-style crosswalk marking—the current standard—because it incorporates the parallel lines of the standard-style crosswalk that pedestrians with low vision find helpful for maintaining the correct heading in the crosswalk. This standard is recommended in MCDOT’s publication *Planning and Designing Streets to be Safer and More Accessible for People with Vision Disabilities* and is supported by national-level research (NCHRP Project 03-78b).

Difficulty crossing streets could be contributing to the 10% disparity in pedestrian satisfaction with the pedestrian environment among people with disabilities.

Precedent: This is the predominant crosswalk marking treatment in Washington, D.C.

Goals(s): Equitable and Just Pedestrian Network, Pedestrian Safety
Lead: MCDOT

B-3c: Construct raised crossings across all driveways and at intersections between residential street types (Neighborhood Streets and Neighborhood Yield Streets) and higher classification streets through capital projects and as a requirement for private development.

Raised crossings (also known as continuous sidewalks) slow turning vehicles, reinforce the primacy of pedestrian spaces, and create a more accessible pedestrian environment—eliminating the need for people using wheelchairs or other mobility devices to use ramps to go down to street level and then climb back to sidewalk level. Implementing raised crossings on existing streets may be challenging when drainage is a concern.

Precedents: Vassar Street and Western Avenue in Cambridge, Massachusetts, use raised crosswalks. This is a very common gateway treatment for vehicles continuing onto neighborhood streets in other countries.

Goals: Equitable and Just Pedestrian Network, Pedestrian Safety
Leads: MCDOT, MDOT SHA, County Municipalities

Support: Montgomery Planning



A raised crossing at sidewalk level across a low-speed, low-volume street. Photo Credit: Vladimir Zlokazov



B-3d: Provide marked crosswalks and Accessible Pedestrian Signals at all legs of an intersection where there are connecting sidewalks or comfortable streets.

Many intersections exclude crosswalks and APS at one or more legs of the intersection to improve traffic flow, but this requires pedestrians who want to cross the street at the missing locations to detour, increasing their travel time and exposure to traffic.

In certain parts of the county, missing crossing locations may encourage pedestrian non-compliance with traffic signals and markings, leading to unsafe outcomes.

Goals: Equitable and Just Pedestrian Network, Comfortable/ Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA, County Municipalities



With the crossing in the red box missing, pedestrians must use the other three crosswalks to get between the upper and lower corners on the right side. Image Credit: Google Maps

B-3e: Consider a modification of Maryland Code §21-502 to indicate that the driver of a vehicle must stop for pedestrians waiting to cross the street, not just those already in the crosswalk.

Currently, state law requires pedestrians to enter the street at a crosswalk at an uncontrolled intersection to gain the right-of-way and cause drivers to stop. In practice, this creates situations where drivers maintain elevated speeds through marked and unmarked crosswalks, frightening pedestrians into waiting until there is a gap in traffic before taking the opportunity to cross the street. To support improved driver yielding, additional signage in advance of crosswalks should be installed across the county, particularly at locations where there may be sight distance issues.

Precedent: Ann Arbor, Michigan and Boulder, Colorado both require drivers to yield to pedestrians “at” a crosswalk, not “in” a crosswalk.

Goals: Equitable and Just Pedestrian Network, Comfortable/ Connected Pedestrian Network, Pedestrian Safety

Lead: State Delegation

B-3f: Crosswalk markings and associated curb ramps should be at least as wide as the sidewalks and trails they connect on either side.

Pedestrian facilities like sidewalks and crosswalks should be designed to comfortably accommodate the anticipated number of users. In commercial areas, near schools, and where major trail crossings are present, wider crosswalk markings are necessary to maintain the pedestrian experience across the intersection and inform drivers that the crossing has significant pedestrian activity.

Goals: Walking Rates, Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA, County Municipalities



B-4: Build more walkable places.

Creating and enhancing places in Montgomery County where people can easily, quickly, and directly access many destinations on foot or using a mobility device is one of the most effective ways to achieve the Pedestrian Master Plan goals. For many people in Montgomery County today, there are few nearby places to walk to, so driving is a logical choice. In fact, pedestrians living in Suburban areas of the county and pedestrians living in Exurban/Rural areas of the county take about 76% and 79% fewer pedestrian trips, respectively, than those living in urban areas. The key actions below recognize that land-use and transportation planning are highly interrelated. Good land-use planning and site design result in shorter and more rewarding trips, making walking a preferred way to travel.

Key Actions:

B-4a: Use master planning processes to focus growth in Downtowns, in Town Centers, and along Growth Corridors to expand walkable places in the county.

To increase walking, plans need to encourage situations where walking is preferable. Creating dense mixed-use clusters and adding density to existing mixed-use clusters is the most effective way to achieve this goal. *Thrive Montgomery 2050* strongly emphasizes this approach. Making it easier to walk to more destinations within the same distance will encourage more people to choose walking over other travel modes, which will reduce vehicle miles traveled and transportation emissions in the county.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning, County Municipalities

B-4b: Locate schools and other public buildings to prioritize providing safe and direct pedestrian access.

The placement and design of pedestrian pathways strongly influences whether walking is the preferred transportation mode for accessing public buildings like schools, community centers, and libraries. To make public buildings as pedestrian friendly as possible, they should be placed adjacent to nearby sidewalks; avoid directing pedestrians through parking lots; provide a welcoming, prominent pedestrian entrance; and incorporate other best practices for safe pedestrian access.

Goal: Walking Rates

Leads: MCDGS, MCPS

Support: Montgomery Planning

B-4c: Encourage MCPS to revise minimum acreage requirements for school sites and consider co-location opportunities to facilitate smaller school footprints that are better integrated into adjacent communities.

Minimum acreage requirements can discourage the use of smaller sites and buildings that are embedded within walkable neighborhoods in favor of larger tracts at the edge of the community that are less conducive for walking. Revising minimum acreage requirements would allow more walkable infill parcels to be considered for schools, making it more likely that future students will walk to school. Increasing the likelihood that students will walk to school has numerous benefits, including operational savings from reduced busing and reduced transportation emissions.

Goal: Walking Rates

Lead: MCPS





B-4d: Update the CSDG to include a Growth Corridor overlay to provide additional context-based guidance on crossings and target speeds.

Montgomery County’s rail and bus rapid transit corridors (**Figure 25**) pass through both Urban and Suburban areas, but existing guidance for the Boulevard street type in the CSDG does not recommend adequate target speeds and protected crossing spacing along existing and planned transitways—features necessary to enhance pedestrian safety, improve pedestrian comfort, and shorten walking trips. As transit corridors such as Georgia Avenue, Veirs Mill Road, and University Boulevard account for 9% of fatalities and severe injuries but only 1.3% of roadway miles, more frequent protected crossings and lower target speeds are needed on these roads to achieve Vision Zero.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, Montgomery Planning

B-4e: Promote redevelopment to create a grid of streets and alleys along transit corridors with block sizes based on the protected crossing spacing standards in the CSDG.

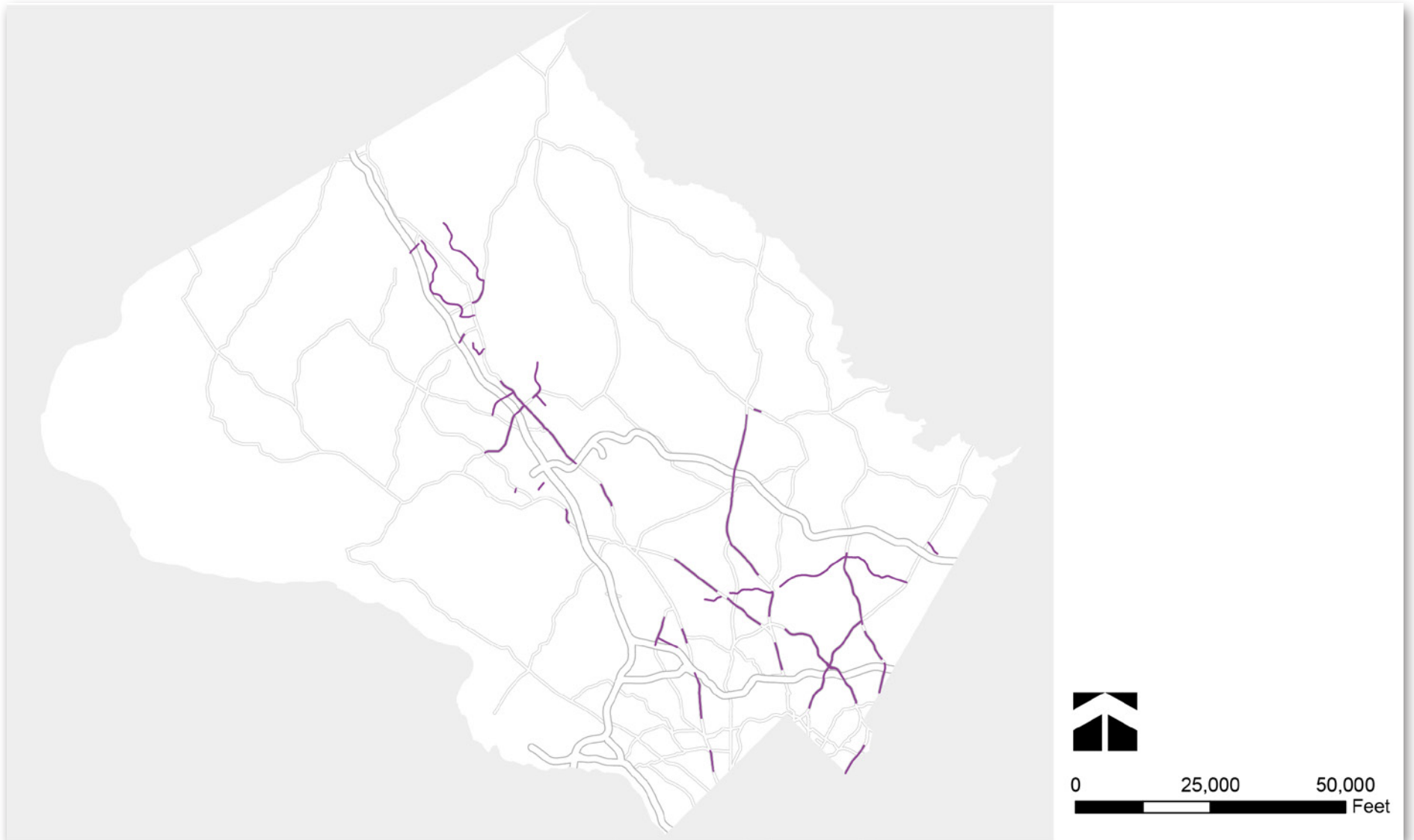
Many of Montgomery County’s rail and bus rapid transit corridors (outside of Downtowns and Town Centers) are characterized by long blocks and are lined with commercial and residential driveways (**Figure 25**). Longer block lengths limit routing options for pedestrians and encourage crossing streets at unsafe places because protected crossing locations are spaced too far apart. Driveways create conflict points between cars and pedestrians. Tools are needed to reduce the size of these blocks where appropriate by expanding the street grid through future redevelopment and capital projects, as well as to consolidate and relocate driveways to side streets and alleys.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: Montgomery Planning, MCDOT, MDOT SHA



FIGURE 25: TRANSIT CORRIDORS ALONG BOULEVARDS



B-4f: Develop and implement a comprehensive pedestrian wayfinding system for the county.

A comprehensive pedestrian wayfinding system—a network of signs providing distance and direction to destinations—will increase walking by helping residents, employees, and visitors understand what is accessible nearby on foot. A similar effort to develop bikeway wayfinding is under development jointly by the Planning Department and MCDOT.

Goal: Walking Rates

Leads: MCDOT, County Municipalities

Support: Montgomery Planning

B-4g: Provide public seating, restrooms, and other pedestrian amenities in Downtowns, Town Centers, and priority park locations and along Boulevards.

Enjoyable walking often requires more than just a sidewalk and a place to safely cross the street. For example, not having a place to rest along a walking route may reduce walking for the elderly, people with disabilities, and others. Providing public seating makes it easier for these individuals to walk in areas of the county with the greatest pedestrian activity. Benches and other seating can be provided along the sidewalk and also set back from the street in pocket parks and other small green spaces. Likewise, access to public restroom facilities is an equity issue that can be a determining factor for some when it comes to the decision about if and how to make a trip. Public restrooms should provide an adult changing table or family bathroom option. Public drinking fountains and trash receptacles make the pedestrian experience better for all by providing hydration (including for four-legged friends) and making it easier for people to keep public spaces clean. All of these amenities should be built as part of public and private projects that interact with the streetscape. Priority park locations are areas within parkland that were determined by Montgomery Parks to be good candidates for these amenities.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

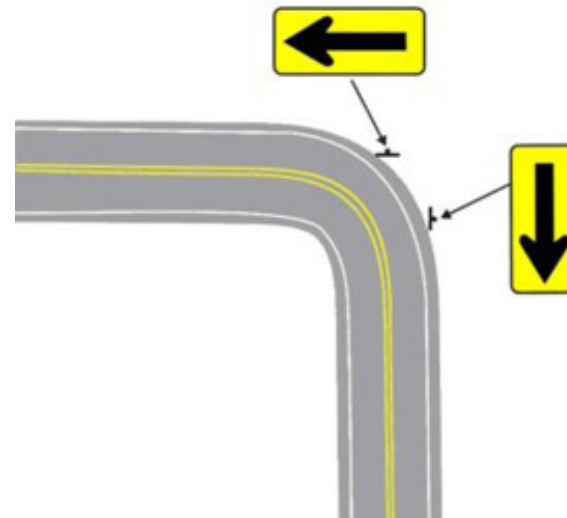
Leads: MCDOT, Montgomery Planning, Urban Districts, Montgomery Parks, County Municipalities

B-4h: Update horizontal alignment standards in Chapter 50 of the County Code.

Horizontal alignment standards define how gradually roadways can change directions. The sweeping curves the standards currently require encourage motor vehicles to travel at high rates of speed and make it more difficult for pedestrians to safely cross the street. Updating these standards to allow tighter horizontal roadway alignment will allow the construction of more urban street grids in subdivisions across the county.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: MCDOT, Montgomery Planning



Horizontal Curve
Image Credit: MoDOT Engineering Policy Guide





B-5: Lighting for Roadways, Intersections, and Pedestrian and Bike Facilities.

Pedestrians should be able to see where they're going when walking at night, feel secure walking in the dark, and feel confident that drivers will see them when crossing the street. However, only 32% of surveyed residents say they are satisfied with the quality of overhead lighting along pathways and at crossings. While Montgomery County requires sidewalks or sidepaths within the right-of-way to be lit, the State Highway Administration does not have a similar requirement along state roadways. The key actions highlight three avenues to achieving improved pedestrian lighting countywide.

Key Actions:

B-5a: Develop lighting standards for each street type and trails.

Improve pedestrian safety at night by developing lighting standards that require specific horizontal and vertical illuminance outputs that are appropriate for the land use context and street classification.

Related Effort: *Vision Zero Action Plan*

Goals: Enhance Pedestrian Safety, Increase Walking Rates

Leads: MCDOT, Montgomery Planning

B-5b: Update the site lighting section of the Zoning Code to encourage pedestrian-scale lighting in context-appropriate areas of the county.

While pedestrian-scale street lighting in the right-of-way is one component of ensuring the pedestrian realm is well-lit, lighting on private property also plays an important role in pedestrian illumination. Updating lighting requirements, standards, and guidance will provide planners and engineers with more tools to achieve appropriate lighting levels in pedestrian spaces.

Goals: Pedestrian Safety, Walking Rates

Lead: Montgomery Planning

Support: MCDOT

B-5c: Conduct a survey of lighting conditions countywide.

In addition to developing lighting standards that will improve the quality of lighting over time (B-5a), it will be helpful to conduct a study to understand where existing lighting conditions are deficient. This study will help guide implementation of the updated lighting standards in a data-driven way.

Goal: Pedestrian Safety

Lead: MCDOT



Only 39% of surveyed residents are satisfied with the amount of shade provided by trees and buildings.

B-6: Reduce pedestrian pathway temperatures.

Cooling the pedestrian environment is essential to mitigating the dangerous effects of climate change. However, only about 25% of sidewalks in the county are shaded by street trees, and along the county's busiest roads, sidewalks in Equity Focus Areas have less shade than those in other areas of the county. The county's Climate Action Plan (CAP) includes a specific recommendation to retain and increase tree canopy. These key actions are supportive of the county's goals by identifying approaches to lower air, surface, and ambient temperatures in pedestrian spaces by planting more trees along sidewalks and trails. The plan also recommends researching the effectiveness of new approaches to sidewalk and other streetscape elements and materials to reduce thermal temperatures.

Key Actions:

B-6a: Develop strategies to improve shading along sidewalks with a focus on adding shade in Equity Focus Areas (EFAs).

Prioritize adding shade along higher classification streets in EFAs. The Planning Department's Reforest Montgomery program currently aims to increase tree canopy with a focus on EFAs, but only plants on private property, not the public right-of-way.

Goals: Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA, Montgomery Planning

B-6b: Reinvigorate the county's street tree planting program to greatly increase native canopy tree planting within the right-of-way, especially in areas like Equity Focus Areas with poor canopy coverage.

Tree canopy is lacking along many sidewalks in Montgomery County. While programs like Tree

Montgomery and Reforest Montgomery exist to plant trees on private property, it can be a challenge to plant, maintain, and replace necessary shade trees within the public right-of-way along sidewalks. Consolidating funding sources and investing more in street tree preservation, maintenance, and planting within the right-of-way—while eliminating barriers to replacing street trees, such as stump removal—will be a significant investment in future pedestrian comfort along the county's sidewalks.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, County Executive, County Council

B-6c: Study and compare how different surface materials, colors, and other streetscape elements can mitigate urban heat island effects, including information on cost, maintenance, and longevity of materials, as well as identifying standards to encourage effective implementation.

Beyond encouraging the planting of more native canopy street trees to cool pedestrian pathways, changing how streetscape elements like sidewalks, roadways and parking lots are designed can also provide cooling benefits for pedestrians. Additional research is necessary to determine what materials can effectively lower thermal temperatures while also providing a high-quality pedestrian experience. This effort will complement the urban heat island efforts underway by the county's Department of Environmental Protection and the *Silver Spring Downtown and Adjacent Communities Plan Design Guidelines* (2023), which contain streetscape material, vegetation, shading and other recommendations to achieve "cool streets."

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT



B-7: Create more pedestrian connections and formalize pedestrian shortcuts.

The county's network of sidewalks, trails, and roadway crossings should make it easy and convenient for people to walk and roll directly between Point A and Point B. Unfortunately, this is often difficult, as cul-de-sacs, missing sidewalks, and poor street connectivity may force people to walk well out of their way to reach destinations. The key actions will help to achieve this recommendation by planning future opportunities for pedestrian connectivity, ensuring appropriate sidewalks and trails are built through private development, and advocating for the dedicated and increased funding needed to close sidewalk gaps and make other important pedestrian connections.

Key Actions:

B-7a: Increase funding for the Annual Sidewalk Program and other related Capital Improvement Program (CIP) efforts, including the Bus Stop Improvement capital funding program, to address missing, broken, or substandard sidewalks and other infrastructure.

Additional funding is needed to address the large demand for sidewalk projects.

Goal: Comfortable/Connected Pedestrian Network

Leads: County Executive, County Council

B-7b: Create a new CIP project to build, reconstruct, and resurface master-planned pedestrian shortcuts, Neighborhood Connector pedestrian/bike paths, and other pedestrian connections.

While existing capital improvement program projects are authorized to build, reconstruct, and resurface pedestrian shortcuts—informal pedestrian connections not along a street that provide a more direct pedestrian route

than the sidewalk and trail network—in practice these projects are used to build more substantial pedestrian connections. Therefore, a distinct program focused on building, reconstructing, and resurfacing pedestrian shortcuts and master-planned Neighborhood Connector paths is needed.

A separate section of the Pedestrian Master Plan identifies many of these pedestrian shortcuts as master-planned pedestrian connections to be constructed through public projects or private development.

Goal: Comfortable/Connected Pedestrian Network

Leads: County Executive, County Council



▶ Pedestrian shortcuts (or people's choice paths) are informal and unpaved pathways that people develop to shorten their trips.



B-7c: Create a new CIP project to build pedestrian and bicycle connections to parkland.

Montgomery Parks will identify additional access points and other opportunities on park property to increase pedestrian and bicycle connections ([Key Action B-8a](#)). This CIP project would provide dedicated funding to complete projects that connect from parkland to the existing pedestrian and bicycle network.

Goal: Comfortable/Connected Pedestrian Network

Leads: County Executive, County Council

B-7d: Preserve paper streets and other rights-of-way if they could potentially provide future pedestrian connectivity benefits, like pedestrian shortcuts.

A “paper street” is a public right-of-way that is not developed with a street or other transportation facility. Private property owners often seek the abandonment of these rights-of-way adjacent to their property for various reasons. Because an abandonment dissolves the public

right-of-way, making future pedestrian connections difficult, this recommendation provides clarity about when abandonments are inappropriate.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT, County Council

B-7e: Update development standards to require or incentivize new developments to connect to nearby sidewalks and trails that exist or may be built in the future.

New development projects must fully connect to existing and future land uses on their periphery by providing a fine-grained pedestrian network. This network, including valuable interparcel connections, makes pedestrian trips easier, safer, and more direct. Without these connections, pedestrian trips are likely to become motor vehicle trips or end up not happening at all.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT, County Municipalities



A grassy “paper street” connects two streets between houses.



B-7f: Consider a program with financial and technical support to Homeowners Associations, Condominium Associations, and commercial properties for providing pedestrian connections through their property and reconfiguring existing parking lots to be more pedestrian friendly.

Many residential communities and commercial areas were constructed at a time when pedestrians were not prioritized. While today, pedestrians are a larger priority and Montgomery Planning and county agencies work with those pursuing private development projects on pedestrian-friendly site and frontage design, there are not many opportunities to encourage property owners who are not pursuing redevelopment to make pedestrian-friendly changes. This key action would provide a sum of money annually to support two types of important projects:

1. The provision of pedestrian shortcut connections and through-block connections across common areas of Homeowners Association and Condominium Association property—where these connections would improve pedestrian access to local businesses, transit, and community destinations.
2. The reconfiguration of parking lots to be more pedestrian friendly—reducing the number and severity of conflicts between motor vehicles and pedestrians

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety

Leads: DHCA, CCOC, County Executive, County Council

Support: MCDOT

B-7g: Include off-site pedestrian and bicycle access improvements to transit stations as part of the main capital project or through a parallel effort.

While existing CIP projects are authorized to build, reconstruct, and resurface pedestrian shortcuts—informal pedestrian connections not along a street that provide a more direct pedestrian route than the sidewalk and trail network—in practice these projects are used to build more substantial pedestrian connections. Therefore, a distinct program focused on building, reconstructing, and resurfacing pedestrian shortcuts and master-planned Neighborhood Connector paths is needed.

A separate section of the Pedestrian Master Plan identifies many of these pedestrian shortcuts as master-planned pedestrian connections to be constructed through public projects or private development.

Goal: Comfortable/Connected Pedestrian Network

Leads: County Executive, County Council



B-8: Reduce natural barriers to walking and rolling.

Parks and other green spaces should facilitate connections between adjacent communities, but they often serve as a barrier to direct pedestrian movement, leading people to drive instead of walk. The key actions below identify approaches to make it easier to connect neighborhoods with nearby destinations, connect neighborhoods with each other, and encourage more walking and rolling through natural areas.

Key Actions:

B-8a: Develop a park access study to identify new pedestrian connections to and through parkland.

Direct and accessible pedestrian connections to and through parks are limited in some locations. This study will increase hard surface park access points so neighboring communities can more directly access park resources and travel through parkland to connect to local destinations. [Key Action B-7c](#) recommends funding in the capital budget to construct these connections.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates

Lead: Montgomery Parks

Support: Montgomery Planning

B-8b: Use environmentally sensitive trail materials and construction approaches to provide pedestrian connections through parkland.

Parks provide immeasurable benefits to their surrounding communities, but they can also act as barriers between adjacent neighborhoods. With a context-sensitive approach to providing trail connections, parkland can be an even greater force for connecting

communities by making it easier to build new, more direct paths and shorten walking distances.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network

Lead: Montgomery Parks



A metal boardwalk snakes through parkland. Image Credit: Marco Specialty Steel



B-8c: Write Forest Conservation Plans to allow accessible pedestrian pathways to make important connections and rewrite existing Forest Conservation Plans when opportunities arise to allow pathways where it would be beneficial for pedestrian connectivity.

Forest conservation areas and their restrictions on disturbance can act as barriers to pedestrian connectivity, leading to more circuitous pedestrian trips or pedestrian trips that become car trips — to the detriment of public safety and the environment. Ensuring accessible pedestrian travel through forest conservation areas is one way to improve pedestrian connectivity. Discussions should occur early on when Forest Conservation Plans are being developed to identify pathway locations and codify their inclusion in the ultimate plan. Montgomery Planning staff should also work to revise existing Forest Conservation Plans where appropriate to allow for accessible pedestrian connections.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates

Leads: Montgomery Planning, MD DNR

B-8d: Study lowering impervious surface caps in relevant Special Protection Areas (and other areas with impervious surface restrictions) to account for the perviousness of planned pedestrian pathways and bikeways.

In Special Protection Areas and other areas with impervious regulations, sidewalks and other pedestrian amenities along public streets often cannot be constructed without removing impervious surfaces from other locations in the same general area. Sometimes, this tradeoff cannot feasibly be made, so the pedestrian amenities are not constructed. As a result, pedestrian connectivity in these areas suffers. The Planning Department should conduct a study with

MCDOT to understand the total impervious impact of planned pedestrian and bicycle infrastructure and adjust the relevant impervious caps to take these pathways and bikeways into account—allowing them to be built in these areas, while maintaining water quality.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT, County Council

B-8e: Prioritize construction of all required sidewalks and bikeways to standard dimensions for development projects in areas with impervious surface caps or other similar limitations.

Certain parts of the county have limits on the amount of impervious surface that can be built to maintain local and regional water quality. In these parts of the county, development projects have moved forward with internal sidewalk networks on only one side of streets to stay under the area’s respective impervious surface cap. This makes it more difficult for pedestrians to travel through these communities and encourages driving for walkable trips, increasing the county’s transportation emissions and the climate impact of development. Pedestrian pathways and bikeways required by applicable master plans, the CSDG, the Zoning Code, and county regulations need to be prioritized in all communities.

Goal: Comfortable/Connected Pedestrian Network

Leads: Montgomery Planning, MCDOT



B-9: Make traffic calming easier to implement.

Managing vehicle speed is an essential element in creating a high-quality pedestrian environment. Traffic calming measures should be installed wherever target speeds as defined in the CSDG or relevant master plans are not being met. The key actions for this recommendation encourage the continued evaluation of the county's traffic calming approach and an increased reliance on engineering judgement when it comes to making decisions about the installation of traffic calming, crosswalk markings, and other treatments.

Key Actions:

B-9a: Increase funding for traffic calming countywide to encourage a more proactive traffic calming installation approach.

The CSDG increases the type and location of potential traffic calming infrastructure in Montgomery County, but additional funding is needed to install additional traffic calming, especially in a proactive way in the locations where it is most needed.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Leads: County Executive, County Council

B-9b: Use potential pedestrian demand instead of observed pedestrian volumes to decide whether or where to install pedestrian connectivity improvements.

Through the Traffic Engineering Study process, community members can identify safety and connectivity issues and request MCDOT address them with the appropriate treatments. Frequently, the rationale for not installing a safety/connectivity treatment is that the volume of pedestrians who would utilize the

improvement is too low. A location with low pedestrian volumes could be a result of many factors, including inadequate pedestrian facilities or high vehicle speeds. The observed demand is not indicative of potential demand when current conditions are not safe.

Goal: Comfortable/Connected Pedestrian Network

Lead: MCDOT

B-10: Facilitate the transformation of state highways to support Montgomery County's transportation and land use priorities as articulated in adopted plans, guidelines, and policies.

Thrive Montgomery 2050, the county's General Plan, envisions transforming activity centers and growth corridors into safe, comfortable, and irresistible multi-modal environments. Although serious injury and fatal pedestrian collisions are more frequent in suburban areas, Montgomery Planning's Predictive Safety Analysis study found that Downtown Boulevards and Town Center Boulevards have the highest rate of crashes involving pedestrians.

Improving the safety, attractiveness, and walkability in these locations is critical to the success of these centers. State highways account for about 45 miles of road in Downtowns and Town Centers, as well as about 55 miles along master-planned BRT corridors (review **Table 33** and associated maps of Downtown and Town Center areas). Along these roadways and all other state highways countywide, it is recommended that the State Highway Administration:

- 1) Incorporate local master plan recommendations, local design standards, and local policies into SHA's funding allocations as well as planning and design for roadway maintenance, reconstruction, new construction, and operations; and



2) Expedite review and facilitate implementation of infrastructure changes to state highways being implemented through county and municipal projects and/or implemented as part of land development or redevelopment projects.

Key Actions:

B-10a: Explore ways to formalize State Highway Administration incorporation of local master plans, policies, and standards for the design and operation of state highways in Montgomery County.

Differing design standards, policies, and priorities at the State Highway Administration are a potential obstacle to achieving the goals for Montgomery County articulated in *Thrive Montgomery 2050*, area and functional master plans, the adopted Montgomery County Complete Streets Design Guide, the Vision Zero Action Plan and the Climate Action Plan. These documents express local priorities for the design and function of state highways, particularly for bus rapid transit corridors and in Downtowns and Town Centers.

Aligning SHA's design standards, policies and priorities for activities within Montgomery County with these County-adopted local plans, policies, and standards will support the implementation of *Thrive Montgomery 2050* and facilitate implementation of the Pedestrian Master Plan. There are many avenues through which this can be achieved, including updates to SHA program, policies and standards; changes to the state code to bring state and local practices into alignment; or establishing a written agreement about relevant plans, policies and design standards between the county and the state.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: State Delegation, County Executive

B-10b: Explore ways to formalize State Highway Administration incorporation of local master plans, policies, and standards for the design and operation of state highways in Montgomery County.

The State Highway Administration reviews design plans for public and private projects that affect the state rights of way. For these projects to proceed to construction, SHA comments must be addressed, the design drawings must be approved, and an SHA Access Permit must be provided. However, the current SHA review process has no time limits within which SHA must approve or reject a permit application. Uncertain review timelines can lead to project delays, slowing the construction of important pedestrian, bicycle and transit improvements.

Expediting SHA's review process by establishing reasonable deadlines, similar to those required of Montgomery County agencies for regulatory review, will likely reduce delay and more quickly advance needed safety and accessibility improvements.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: State Delegation, County Executive



B-11: Address curbside management to prioritize pedestrian safety and rethink how curb space is used.

There is a need to think strategically about how curbside space is used. Demand for this space has risen sharply with increased use of delivery services and transportation network companies like Lyft and Uber as well as conventional taxi service and on-street parking. These demands affect pedestrians in a variety of ways, including at crosswalks, which are sometimes blocked by delivery trucks and transportation-network company drivers loading and unloading. The key action encourages the development of a plan to manage this space more effectively.

Key Action:

B-11a: Develop a curbside management plan and pilot innovative approaches to curbside management.

Related Effort: *Vision Zero Action Plan*

Goal: Enhance Pedestrian Safety

Leads: Montgomery Planning, MCDOT





Maintain

The pedestrian experience in Montgomery County can vary greatly based on how diligently vegetation is trimmed, snow is shoveled, and sidewalks are kept smooth and level. It is not enough to invest in building more pedestrian spaces. This section lays out recommendations that clarify existing regulations and propose changes to how the county and private property owners care for sidewalks, pathways, and other pedestrian spaces so that these investments can provide a high quality of service for everyone for years to come.

MA-1: Fix sidewalks proactively.

Sidewalks throughout the county should be maintained equitably. Currently, MCDOT largely relies on requests through the county's 311 system to identify sidewalks in need of repair. However, relying on 311 reporting likely results in inequities, as communities with limited access to technology, available time, and trust in government are less likely to report issues. The key action encourages being more proactive about sidewalk maintenance.

Key Action:

MA-1a: Create a plan for proactively inspecting and repairing Montgomery County sidewalks and pathways equitably across the county and track implementation.

Developing a proactive approach that includes a clear set of criteria for when and how to repair a sidewalk or pathway will lead to better, more equitable outcomes while likely saving money in the long run by addressing issues before they become more costly. Tree protection should be considered in the sidewalk inspection process.

Related Effort: *Vision Zero Action Plan*

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Lead: MCDOT

MA-2: Keep sidewalks and curb ramps clear.

Pedestrian spaces should be clear of vegetation, snow, and other elements that narrow the sidewalk and limit accessibility. While roadway maintenance is largely centralized within local and state governments, maintenance of pedestrian spaces is fragmented, relying on property owners to keep their adjacent sidewalks accessible and in good condition. Recent high-profile and tragic events along Old Georgetown Road and similar roadways serve to highlight that this fragmented approach is not just inequitable—emphasizing the primacy of motor vehicle travel over people walking and biking—it can be deadly as well. These key actions identify opportunities to address these inequities and help property owners understand their responsibilities.

Key Actions:

MA-2a: Audit major county and state roadways seasonally for vegetation overgrowth and erosion that reduces the effective width of sidewalks, restricts sidewalk accessibility, and limits visibility. Any identified issues should be immediately addressed and monitored so they do not reoccur.

Like snow in the winter, vegetation can intrude into the sidewalk, narrowing its effective width or making it impassable, degrading accessibility and safety. MCDOT should develop a plan for how often streets and pathways will be audited.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Lead: MCDOT

Support: MDOT SHA



MA-2b: Amend Montgomery County’s snow clearance requirement to specify that property owners are required to clear a path at least five feet wide on pathways in the public right-of-way adjacent to their property.

Chapter 49, Section 17 of the County Code requires property owners to clear a path that is wide enough for safe pedestrian and wheelchair use. However, the lack of a specified snow clearance width makes this requirement difficult to enforce as well as difficult to interpret for those unfamiliar with wheelchair operational requirements. This is an equity issue because poorly shoveled sidewalks may keep some members of the community homebound while others can more easily continue traveling unbothered by snow obstacles. If a sidewalk is narrower than five feet (the Americans with Disabilities Act (ADA) preferred sidewalk width), the entire sidewalk width should be cleared. Adjacent property owners are responsible for clearing curb ramps and crosswalks under existing county regulations.

Goal: Equitable and Just Pedestrian Network

Lead: County Council

MA-2c: Conduct outreach to property owners regarding their responsibility to keep sidewalks clear of parked cars, trash receptacles, overhanging vegetation, snow, and other obstructions.

Property owners are generally more aware of snow clearance requirements than of other sidewalk maintenance responsibilities. The Department of Housing and Community Affairs (DHCA) currently conducts public outreach on snow clearance, so this outreach should be extended to other sidewalk maintenance issues like vegetation removal and trash receptacle placement. For those members of the community unable to maintain their sidewalks, consider the creation of a volunteer

sidewalk maintenance team to do so. For documented ongoing non-compliance, consider enforcement action.

Precedent: Washington, D.C., has a Volunteer Snow Team.

Goals: Equitable and Just Pedestrian Network, Walking Rates

Lead: DHCA

MA-2d: Study the benefits and costs of assuming county responsibility for snow clearance along all Downtown Boulevards, Town Center Boulevards, Downtown Streets, Town Center Streets, and Bus Rapid Transit Corridors.

Sidewalks that are not cleared of snow are inaccessible to people with disabilities and can present a safety hazard, particularly on arterial roadways (e.g., to access a bus stop, a person might choose to walk in the roadway rather than on the sidewalk). The county already clears 60 miles of sidewalks along arterial roadways, and the Shovel Our Sidewalks Act has added sidewalks along 19 similar roads in Equity Emphasis Areas (a similar geography to EFAs) to this list.

The recommendation builds on the county’s commitment in the Shovel Our Sidewalks Act and recognizes that even with rigorous enforcement of the county requirement that property owners clear snow from sidewalks within 24 hours, uncleared sidewalks within the 24-hour window would present a significant safety hazard. These sidewalks along major roads are too important for pedestrian connectivity to rely on individual property owners to ensure they are shoveled.

Related Effort: *Vision Zero Action Plan*

Goals: Equitable and Just Pedestrian Network, Walking Rates, Pedestrian Safety

Lead: MCDOT



MA-3: Incorporate roadway maintenance into utility projects.

Utility work often involves cutting into the roadway surface and repaving when utility work is complete. As part of this process, there is an opportunity for utility workers to repaint crosswalk markings and update crosswalk markings to high-visibility markings. This would be beneficial because it does not require mobilizing MCDOT staff or contractors to conduct this crosswalk maintenance.

Key Action:

MA-3a: Use repaving after utility work as a mechanism for upgrading crosswalks to a high-visibility design and the maintenance of other pavement markings as needed.

Related Effort: *Vision Zero Action Plan*

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, MCDPS

Support: Utilities

MA-4: Minimize streetlight repair time.

Lighting is an essential element of public safety. Currently, the average repair time for a broken MCDOT streetlight is seven days. Minimizing the amount of time a streetlight is broken will ensure that Montgomery County pedestrians continue to comfortably travel in their communities at night.

Key Action:

MA-4a: Streetlighting owners should publicize response improvement plans and track their progress.

MCDOT and the utility companies responsible for maintaining the county's street lighting should publicize the length of time it takes to bring streetlights back to service after different types of outages. These entities should endeavor to continue reducing lighting outages.

Goals: Pedestrian Safety, Walking Rates

Leads: MCDOT, Utilities





Montgomery County has adopted Vision Zero, a commitment to eliminate severe injuries and fatalities in the transportation system by 2030. While the recommendations related to construction and maintenance of pedestrian spaces highlighted above will also improve safety, the recommendations that follow are systemic policy changes and programming that will speed proactive Vision Zero implementation and ensure pedestrians are safe while traveling through Montgomery County.

P-1: Reduce impacts of vehicle design and operation on pedestrian safety.

The design, weight, and speed of motor vehicles are all critical factors in the likelihood of a pedestrian crash and its resulting severity. Vehicles today are significantly larger than those from prior decades and are designed with inherent visibility issues like elevated hoods, creating massive front blind spots that hide children and many other pedestrians from view. As the increased mass combines with higher speeds, more energy is created, and collisions with pedestrians are much more likely to result in severe or fatal injury. In addition, the size of emergency vehicles like fire trucks is often a limiting factor in achieving safe designs for streets. These key actions identify approaches to mitigate these pedestrian safety issues and reduce barriers to redesigning streets to help achieve Vision Zero.

Key Actions:

P-1a: Install speed governors or intelligent speed control devices in county and public agency vehicles to ensure their drivers adhere to the speed limit.

The county and public agencies should set an example when it comes to driving safely by setting an upper limit for how fast vehicles can go using speed governor technologies. Emergency vehicles should be exempt from this policy.

Related Effort: *Vision Zero Action Plan*

Goal: Pedestrian Safety

Leads: County Executive, Montgomery Parks, MCPS

P-1b: Develop a strategy to purchase emergency vehicles that can navigate narrower streets and tighter curb radii while maintaining appropriate performance standards.

The size and design of fire and emergency vehicles often dictates street design to the detriment of pedestrian safety and comfort; these vehicles require wider streets and larger curb radii dimensions than other vehicles. Wider streets increase pedestrians' exposure to traffic when crossing the street, and larger curb radii enable vehicles to make faster turns which results in less-convenient and less-direct curb ramp placement and reduces motorists' ability to see pedestrians crossing the street. Other communities across the country and around the world have created fleets of emergency vehicles that can operate on narrower streets and make tighter turns than Montgomery County's fleet.

Precedents: The Los Angeles Fire Department purchased their first electric fire truck—the Rosenbauer RTX—in 2022. It is quieter, narrower, and has a tighter turning radius than other fire trucks. San Francisco has been purchasing smaller fire trucks to support pedestrian safety efforts since 2017.

Goal: Pedestrian Safety

Lead: Fire & Rescue Service





A truck and its front blind spot.
Image Credit: Consumer Reports

P-1c: Consider developing legislation to create a new class of commercial driver’s license required to operate vehicles with identified pedestrian safety and visibility issues.

A vehicle’s height, length, and width, as well as the length of its hood, all contribute to how well drivers can see pedestrians, how quickly the vehicles can slow down, and how much damage they can do to a pedestrian (or another road user) in the event of a crash. Drivers of taller, larger vehicles would benefit from increased education and training, but today, a commercial driver’s license typically is not required in Maryland for vehicles lighter than 26,000 pounds (a tractor trailer). Requiring a specialized license and associated education to operate these more dangerous vehicles will improve pedestrian safety statewide because drivers will have targeted training on how to safely operate large vehicles.

Goal: Pedestrian Safety

Lead: State Delegation

P-1d: Develop legislation to improve pedestrian and bicycle safety by implementing a knowledge test requirement as part of the driver’s license renewal process.

Over time, rules and regulations governing the transportation system change, and new roadway striping, signage, facilities, and signalization approaches are implemented. However, unless a Maryland driver’s license has expired for a year or more, there is no requirement to retake either the driving skills or knowledge tests upon license renewal. A knowledge testing requirement, with the option to retake as many times as necessary to pass, would provide an opportunity to bring drivers up to date on changes to the transportation system and relevant laws and regulations since their last license renewal between five and eight years earlier. This would result in better driving and increased safety for all road users. Efforts should be taken to ensure this new requirement does not place an undue burden on the Motor Vehicle Administration.

Goal: Pedestrian Safety

Lead: State Delegation

P-1e: Annually notify all county households of changes to traffic rules and regulations that have taken effect over the past year.

Over time, rules and regulations governing the transportation system change, and new roadway striping, signage, facilities, and signalization approaches are implemented. To help ensure county residents are aware of these changes, and to improve safety for everyone using the transportation system, annual notice of these changes should be provided.

Goal: Pedestrian Safety

Lead: County Executive



P-1f: Study requiring or incentivizing the use of pedestrian detection systems in vehicles registered in Montgomery County.

Pedestrian detection systems are becoming increasingly common in new motor vehicles. These systems inform drivers about pedestrians in their vicinity and may perform automatic braking to avert a pedestrian crash. The county should study whether requiring or incentivizing the use of these technologies would be a cost-effective approach to reducing pedestrian injuries and fatalities.

Goal: Pedestrian Safety

Lead: County Executive, County Council

P-2: Improve and expand protected crossings.

The county's CSDG recommends maximum protected crossing spacing for each street type in the county. However, many streets do not meet these recommendations, resulting in frequent unsafe crossings. Providing protected crossing spacing that is consistent with the CSDG and upgrading existing protected crossings will improve safety and pedestrian satisfaction by reducing midblock crossing outside crosswalks, better separating pedestrians and drivers, reducing pedestrian delay, creating more direct pedestrian routes, and providing more spaces to stop mid-crossing between directions of traffic. Key actions address the lack of protected crossings and identify signalization changes that would improve pedestrian comfort.

Key Actions:

P-2a: Develop a methodology for identifying and prioritizing implementation of new protected crossings at midblock or uncontrolled locations based on roadway characteristics, motor vehicle speeds and volumes, proximity to bus stops, proximity to pedestrian attractors including parks and schools, pedestrian crash history, and other relevant criteria.

In many parts of the county, the distance between protected crossing locations exceeds the recommended spacing identified in the CSDG. Indeed, **Table 24** in the Existing Conditions chapter highlights that 21% of severe and fatal pedestrian crashes take place at uncontrolled intersections and 38% of severe and fatal pedestrian crashes take place midblock. Integrating protected intersection design features consistent with the CSDG can greatly improve pedestrian safety across the county, but with crossings needed in so many places, there is a need to prioritize which locations should be addressed first.

Related Effort: *Vision Zero Action Plan*

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA



P-2b: Establish standards for the distance between bus stops and the nearest protected crossing to encourage pedestrians to cross the street at safe locations.

When either boarding a bus or alighting from one, typically passengers must cross a street. Locating bus stops within a short distance of protected crossings will encourage pedestrians to cross the street at safer locations. Generally, these standards should lead to more protected crossings being constructed (with some exceptions where bus stop consolidation may make sense for operational purposes).

Related Effort: *Vision Zero Action Plan*

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA, WMATA

P-2c: Make No Turn on Red (NTOR) the default in Downtowns and Town Centers and evaluated elsewhere on a case-by-case basis. Enforce NTOR using automated enforcement approaches and additional traffic control devices as needed.

Right Turn on Red policies are intended to reduce motor vehicle queues and congestion, and increase driver satisfaction. However, they create safety and discomfort for pedestrians crossing the street, especially the most vulnerable. Safety issues exist because drivers may look left to avoid oncoming vehicles and might not see pedestrians in the crosswalk. Additionally, while sighted pedestrians may be able to navigate around drivers entering into pedestrian space as pedestrians legally cross, pedestrians with low or no vision will have more

difficulty. As a result, 80% of Countywide Pedestrian Survey respondents are dissatisfied with drivers cutting through the crosswalk. Therefore, in areas of the county with higher pedestrian activity such as Downtowns and Town Centers, NTOR should be the default. In other parts of the county, NTOR should be evaluated on a case-by-case basis.

Precedent: Washington, D.C., ended Right Turn on Red at 100 locations in 2019.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA, County Municipalities



▶ A sign next to a traffic signal indicates that no vehicles may turn right on a red signal between 7 AM and 7 PM.





P-2d: Prioritize pedestrian crossings using Leading Pedestrian Intervals (LPIs) (or Leading Through Intervals) at signalized intersections along Downtown Boulevards, Downtown Streets, Town Center Boulevards, and Town Center Streets. Everywhere else, implement LPIs within a certain distance of schools, parks, and community centers along those roadways. Ensure that Accessible Pedestrian Signals at locations with LPIs provide an audible signal to indicate when the pedestrian phase has commenced.

An LPI is an approach to traffic signalization that provides pedestrians a head start to enter the intersection before all parallel motor vehicle traffic. Similarly, Leading Through Intervals allow pedestrians and parallel motor vehicles traveling straight to proceed, while delaying turning vehicles to reduce conflicts with pedestrians. LPIs are a proven Federal Highway Administration safety countermeasure because they provide pedestrians an opportunity to establish themselves in the crosswalk in advance of turning vehicles, making them more visible and limiting potential for conflict. Providing LPIs near locations with more vulnerable populations and in areas with more pedestrian activity will improve safety.

Precedents: More than 30% of Seattle traffic signals have an LPI. They recently identified a 50% reduction in pedestrian turning collisions and 35% reduction in serious and fatal injury collisions at locations with LPIs. LPIs are also a common treatment in Washington, D.C.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

P-2e: Reduce pedestrian wait times by developing a policy on target and maximum traffic signal cycle lengths by street type.

Longer signal cycle lengths result in increased pedestrian delay and non-compliance with signals and make pedestrian travel less convenient. As a result, satisfaction with pedestrian signal wait time is 44% countywide. Establishing target signal cycle lengths by street function and land-use context will more safely and efficiently accommodate pedestrians.

Note: Key Action P-2e and Key Action EA-3a may somewhat work at cross purposes, as providing more time for pedestrians to cross the street may require a longer signal cycle length. There may not be an opportunity to implement both key actions at the same intersection.

Precedents: Seattle established maximum and target signal cycle lengths for different types of streets. London is actively working to shorten signal cycles to reduce pedestrian delay with a goal of “pedestrian time saved.”

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: MCDOT

▶ Pedestrians begin crossing the street while adjacent cars have a red signal.



P-2f: Update the CSDG and Executive Regulations to make pedestrian median refuges a high priority for intersections with six or more lanes, including through lanes, turning lanes, and auxiliary lanes.

Only 16% of pedestrian crossings across six or more lanes in the county have a median refuge—a place to safely stand between directions of traffic—and as a result, satisfaction with places to stop partway while crossing a street is 33% countywide. Installing more refuges would improve safety by allowing pedestrians to negotiate crossing only one direction of traffic at a time.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network

Lead: MCDOT

P-2g: Remove free-flow channelized right turn lanes where roadway geometry allows and improve their design where it does not.

Free-flowing channelized right turn lanes allow motor vehicles to travel at high speed through an intersection. Drivers using these lanes tend to be focused more on yielding to motor vehicle traffic on the road into which they are merging, than to pedestrians who may be crossing the channelized right-turn lane to travel through the intersection. High rates of motor vehicle speed reduce visibility and reaction time for drivers and pedestrians alike, increasing the risk of a severe or fatal collision. Channelized right-turn lanes are also difficult for people with vision disabilities to navigate. Altering these lanes by changing roadway geometry, eliminating the “porkchop” island, or adding traffic control will improve pedestrian safety and intersection accessibility.

Goals: Pedestrian Safety, Comfortable/Connected Pedestrian Network, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA



▶ A channelized right turn lane with porkchop island at Bel Pre Road and Georgia Avenue is difficult to navigate.



Ten percent of serious and fatal crashes involving pedestrians occur in parking lots.

P-3: Design pedestrian-safe parking lots.

Parking lot design should separate pedestrians from motor vehicles as much as possible and reduce conflict points between pedestrians and motor vehicles. However, parking lots in Montgomery County typically do not prioritize a safe pedestrian experience and discourage pedestrian access. The key action will help ensure parking lots in new development are designed in accordance with best practices for pedestrians.

Key Action:

P-3a: Develop parking lot design standards that improve safety and reduce conflicts between pedestrians and motor vehicles.

Updates to the county's parking lot design guidance are also recommended in the *Vision Zero 2030 Plan* for fiscal years 2022 and 2023. Design standards would guide new and retrofit public and private parking lot development, providing additional support to county efforts to ensure parking lot safety.

Goal: Pedestrian Safety

Lead: Montgomery Planning

Support: MCDOT, MCDPS

P-4: Educate and encourage pedestrians of all ages to walk safely.

To create a pedestrian-friendly Montgomery County, it is essential that community members of all ages understand how to safely travel around on foot or using wheels and are supported in doing so. The key actions aim to identify new venues and agencies to carry out education and encouragement programming.

Key Actions:

P-4a: Conduct pedestrian and bicycle safety educational programs in partnership with agencies such as MCPL, MCPS, and MCR.

Collaborating with other agencies on pedestrian safety education would allow Montgomery County to educate new audiences on pedestrian safety. This pedestrian safety education should be offered in the many languages prevalent across the county.

Goal: Pedestrian Safety

Leads: MCDOT, MCPL, MCR, MCPS

P-4b: Develop “traffic gardens” in several convenient locations across the county.

“Traffic gardens” are simulated street grids where children can learn the rules of the road for pedestrians, bicyclists, and drivers in an environment away from motor vehicles. Developing “traffic gardens” at several locations across the county, potentially co-located with schools or parks, would provide opportunities for school groups, parents, and others to engage in hands-on traffic safety education.

Goal: Pedestrian Safety

Leads: MCDOT, MCPL, MCR, MCPS, Montgomery Parks, County Municipalities



P-4c: Integrate Safe Routes to School into the MCPS curriculum and day-to-day activities.

Encouraging and supporting students walking to school can be most effectively undertaken by MCPS. The MCPS system is so large that a successful SRTS program requires higher staffing levels and closer attention. Creating SRTS initiatives at MCPS schools using teacher coordinators and parent volunteers, in concert with complementary recommendations to encourage walking, will put MCPS in the best position to increase the number of students walking.

Related Effort: *Vision Zero Action Plan*

Goals: Walking Rates, Pedestrian Safety

Lead: MCPS

Support: MCDOT

P-5: Make the walk to school safer and more direct.

Students in Montgomery County should be able to walk to school safely and directly. However, in many parts of the county, MCPS provides busing for students within a walkable distance because the school district has identified the walk route as too hazardous. The key actions that follow are targeted to safety enhancements within a short distance of school.

Key Actions:

P-5a: Prioritize locations for additional school crossing guards and advocate for additional funding.

Increasing the number of crossing locations staffed with crossing guards would allow more students to walk to school and reduce hazard busing, improving student health and safety while reducing the school district's vehicle miles traveled and operating costs.

Goals: Pedestrian Safety, Walking Rates

Lead: MCPD

Support: MCPS



Crossing guards guide students across Veirs Mill Road.

P-5b: Fund Walking School Buses to reduce the number of students being driven to school.

A Walking School Bus is a group of students walking to/from school with the guidance of adults. They help students get to school in the same way that school buses do, but in a more active, independent, and healthful way. Funding could be used to incentivize participation, provide promotional materials, and offer other general support. Reducing vehicular trips to schools lowers the likelihood of pedestrian crashes that involve students at arrival and dismissal and minimizes the transportation emissions associated with the public school system. The success of this effort would be measured by the number of students walking to school as part of Walking School Buses.

Goal: Walking Rates

Lead: MCPS





P-5c: Develop and implement School Streets—partial roadway closures immediately adjacent to schools during arrival and dismissal—at several schools as a pilot.

A School Streets program would reduce the likelihood of students being injured by cars on their walk to or from school by eliminating the space with the most pedestrian conflict points—the area immediately around a school during pick-up/drop-off. While this is not necessarily appropriate at all schools, MCPS should work with MCDOT to explore several pilot sites at schools across the county before ultimately expanding the program countywide. School Streets can vary based on context, but the main element is the closure of school arrival and dismissal streets to all but pedestrians, bicyclists, emergency vehicles, and vehicles of local residents.

Precedent: School Streets are common in London and other parts of the United Kingdom.

Goals: Pedestrian Safety, Walking Rates

Leads: MCDOT, MCPS

P-5d: Develop and implement a countywide transportation demand management plan for schools addressing all school-related travel, including travel by students, parents, and staff members.

Concerns about school-related traffic can limit the county’s ability to expand existing schools or build new schools on sites in existing neighborhoods. One way to address these concerns is through the development and implementation of a transportation demand management plan that discourages travel in a private car and encourages the use of safer and more sustainable modes,

including walking by all users of MCPS facilities, including teachers, administrators, staff, students, and local residents. Similar plans already exist for private schools. Reducing vehicular trips to schools lowers the likelihood of pedestrian crashes that involve students at arrival and dismissal and minimizes the transportation emissions associated with the public school system.

Goal: Walking Rates

Lead: MCPS

P-5e: Identify walking and bicycling routes to school within each MCPS school catchment area and ensure all students within the area can safely walk and bicycle to school.

Walking and bicycling should be the preferred travel mode for students within one mile of elementary schools, one and a half miles of middle schools, and two miles of high schools. MCPS should coordinate with MCDOT to identify specific walking and bicycling routes for each school that allow all students living within these walk and bicycle boundaries to safely walk and bicycle to school using sidewalks, pathways, and crossings that have a PLOC score no worse than Somewhat Comfortable. If a Somewhat Comfortable or Very Comfortable score cannot be achieved using the identified routes, MCPS should coordinate with MCDOT to provide new or improved connections that are more comfortable. Observed pedestrian demand, as discussed in [Key Action B-9b](#), should not be a determining factor in where improvements are made.

Related Effort: *Vision Zero Action Plan*

Goals: Walking Rates, Pedestrian Safety

Leads: MCPS, MCDOT

A sign announcing restrictions on through driving along a street by a school. Photo Credit: Wikimedia/Secretlondon



P-6: Address access management to reduce pedestrian/vehicle conflicts.

On non-residential streets, sidewalk interruptions should be limited as driveways and other curb cuts create conflict points between motor vehicles and pedestrians.

Key Action:

P-6a: Implement the recommendations in the Access Management Study.

Montgomery Planning's Access Management Study, completed in 2022, examined existing access management practices in Montgomery County and developed recommendations to improve access management practices and incorporate new access management strategies that are consistent with Vision Zero, a Complete Streets framework, and a desire to enable decision-making with a multi-modal perspective. The study identified over 30 recommendations for Montgomery Planning, MCDOT, MCDPS and MDOT SHA. This key action reiterates the importance of implementing the recommendations in the Access Management Study.

Related Effort: *Vision Zero Action Plan*

Goal: Pedestrian Safety

Leads: Montgomery Planning, MCDOT, MCDPS, MDOT SHA

P-7: Ensure pavement markings and street furniture are installed in pedestrian-safe locations.

The presence and location of pavement markings, light poles, and guardrails can have a positive or negative effect on the pedestrian experience. These key actions are opportunities to ensure they are beneficial.

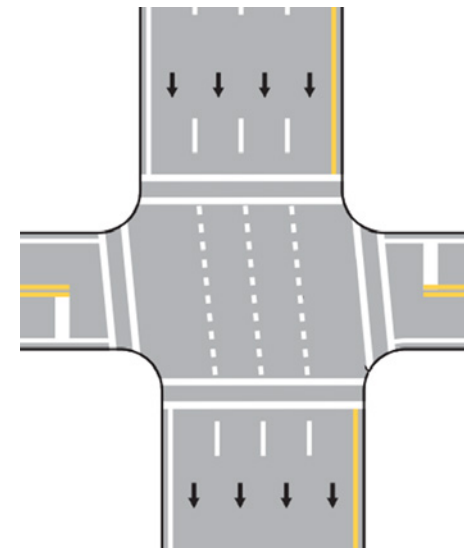
Key Actions:

P-7a: Paint lane markings to indicate the presence of minor streets along state highways in line with Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) guidance.

At intersections along state highways like Georgia Avenue and Colesville Road where no traffic signal is required, it is a common practice to continue the main roadway's lane lines through minor street intersections. Drivers along the main roads have no indication that these minor intersections are present. This is challenging for drivers trying to cross or turn onto the main road, but it is an even bigger safety issue for pedestrians attempting to cross the street. Without pavement markings delineating the intersection, pedestrians with the legal right of way to cross the street appear to be crossing midblock in an unsafe manner. These intersections should be delineated with dotted line extension markings in line with optional guidance provided in MdMUTCD Section 3B.08 and shown in the illustration on this page.

Goal: Pedestrian Safety

Lead: MDOT SHA



Dotted lane extension markings
Image Credit: MdMUTCD



P-7b: Ensure vehicular stop bars are located at least four feet behind the crosswalk.

Stop bars indicate where motor vehicles are supposed to stop when approaching a stop or signal-controlled intersection. They should be installed at least four feet behind the crosswalk—greater than four feet if required by roadway conditions. There are many locations across the county where stop bars are missing completely, either because they have worn away or because they were never installed in the first place. If this marking is missing, installed too close to a marked crosswalk, or installed within an unmarked crosswalk, there will be conflict between pedestrians and motor vehicles. Properly installed stop bars effectively delineate pedestrian crossing space.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

P-7c: Where guardrails are installed next to sidewalks or trails, ensure they are located between the pedestrian space and the roadway.

Guardrails are installed to deflect motor vehicles away from roadside hazards back into the roadway. However, in many locations across the county, these guardrails are located behind the sidewalk. In the event of a crash, the guardrail encourages the motor vehicle to travel along the sidewalk before it reenters the roadway, potentially colliding with pedestrians. For this reason, the American Association of State Highway and Transportation Officials Roadway Design Guide indicates that guardrails should be installed between the roadway and pedestrian space if a guardrail is needed. When installed in this manner, the guardrail deflects the motor vehicle back into the roadway without entering pedestrian space.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA

P-8: Increase traffic enforcement activities.

Enforcement is an important strategy to help achieve Vision Zero and make the county a better place to walk. Engineering and education both provide substantial benefits, but ensuring that traffic laws are followed is essential. The following key actions identify approaches to increasing the depth and breadth of traffic enforcement countywide.

Key Actions:

P-8a: Increase the number of Automated Traffic Enforcement (ATE) locations.

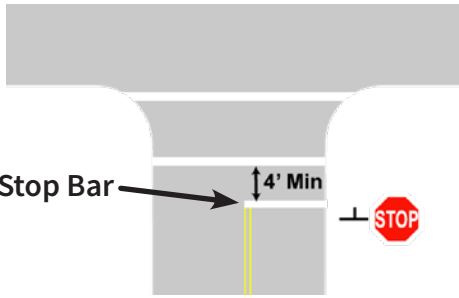
The goal of the county's ATE program of speeding cameras and other similar devices is to eliminate dangerous driving behaviors and make the transportation system safer. An Insurance Institute of Highway Safety study from 2016 found that on Montgomery County roads where ATE was present, the likelihood of speeding was reduced by 62% and the likelihood of severe/fatal crashes was reduced by 39%. To extend these benefits countywide, the network of ATE devices needs to be much more extensive. A plan should be developed to increase the number of these devices to address as many different kinds of traffic violations as are permitted by state law. If a driver breaks traffic laws in the county, that driver should invariably receive a ticket. As the likelihood of a pedestrian being killed in a traffic crash dramatically increases with vehicle speed, improving compliance with speed limits will save pedestrian lives.

Equity should be a significant consideration in ATE implementation.

Related Effort: *Vision Zero Action Plan*

Goal: Pedestrian Safety

Leads: County Executive, MCPD, County Council, State Delegation



Stop bar 4' behind the crosswalk
Image Credit: U.S. Army Transportation Engineering Agency



Guardrail behind sidewalk along Connecticut Avenue in Aspen Hill
Photo Credit: Google Maps



P-8b: Consider developing strategies for equitable in-person traffic enforcement activities.

While there are many benefits to automated enforcement, it is not present everywhere traffic infractions take place and cannot detect certain types of infractions. Of particular relevance to this master plan are violations of the pedestrian right-of-way, stop sign compliance, and other pedestrian-vehicle conflicts. Strategies should be developed to ensure this life-saving enforcement activity takes place and occurs in a fair and equitable fashion.

Goal: Pedestrian Safety

Leads: County Executive, MCPD, County Council, Montgomery Parks

P-9: Comprehensively lower speed limits countywide.

Higher traffic speeds are directly linked to crash severity. In pursuit of Vision Zero, the county should continue efforts to lower speed limits in neighborhoods and along major roadways, with a goal of having the roadway's posted speed limit match the target speed outlined in the CSDG.

Key Actions:

P-9a: Support state legislation to allow jurisdiction-wide speed limit reduction.

Montgomery County's ability to lower the posted and statutory speed limit along residential streets is limited by state law. A recent legislative effort to allow jurisdictions to lower speed limits to no less than 15 miles per hour failed (HB 404 in 2022). The county should support all legislation that offers local agencies more flexibility in setting speed limits in line with county goals.

Precedent: Washington, D.C. lowered speed limits on residential streets across the city to 20 mph.

Goal: Pedestrian Safety

Lead: State Delegation

P-9b: Ensure that speed limits and observed speeds along county roads are in line with target speeds identified in the CSDG.

This key action seeks to reduce the discrepancy between the roadway's intended speed (target speed) and the actual speed of travel by motor vehicles (observed speed). In addition to changing posted speed limits, achieving this key action will require changes to roadway geometry and other factors to make the roadway design speed compatible with the target speed.

Goal: Pedestrian Safety

Leads: MCDOT, MDOT SHA



Expand Access

The pedestrian environment has been constructed in a way that can make it difficult or impossible for some members of the community to walk or roll. Pedestrians with disabilities in Montgomery County are 10% less satisfied with the pedestrian experience than pedestrians overall. Pedestrians with disabilities outside of urban areas expressed an even greater dissatisfaction with the pedestrian experience. These recommendations aim to make the pedestrian system more accessible to all pedestrians, whether they walk or roll.

EA-1: Reduce tripping hazards.

Sidewalks and trails should be smooth and comfortable for all users. An uneven sidewalk or trail can make walking or rolling uncomfortable and unsafe. The key actions that follow identify ways to create and maintain smoother walking and rolling surfaces.

Key Actions:

EA-1a: Prioritize the repair of brick sidewalks that have identified accessibility challenges. Require new or rehabilitated brick sidewalks to be constructed using non-slip materials and with patterns, spacing, and installation methods designed to minimize disturbance for wheeled vehicles.

Bricks and pavers are challenging surfaces to walk or roll on if they are poorly maintained. Addressing these accessibility issues by repairing these sidewalks with like material in line with best practices and then ensuring continued accessibility is essential to the ongoing use of brick and other non-concrete paving treatments.

Goal: Equitable and Just Pedestrian Network, Walking Rates

Leads: Urban Districts, Montgomery Planning

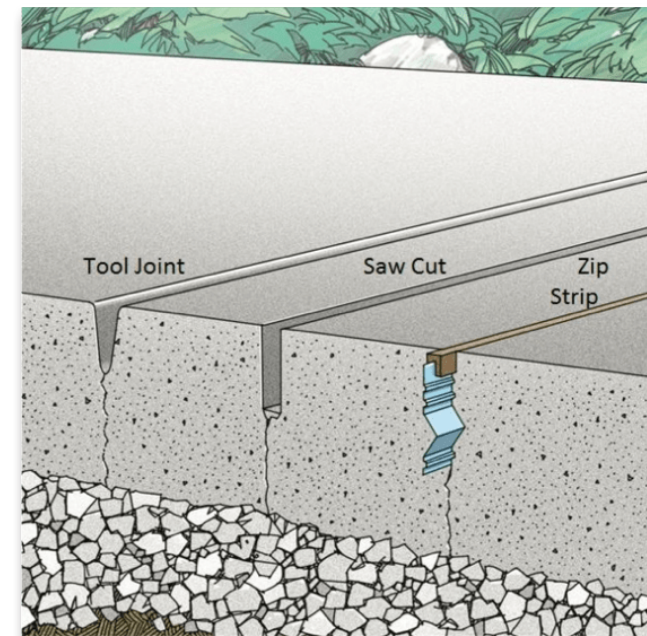
EA-1b: Saw cut sidewalk joints to minimize vibrations for pedestrians using mobility devices or pushing strollers.

Sidewalk joints are necessary to allow sidewalks to expand and contract over time in a controlled way. However, traditional tooled joints can be jarring for pedestrians using mobility devices and pushing strollers. A saw cut joint provides the least disturbance for wheeled sidewalk users.

Precedent: Saw-cut contraction joints are required when a sidewalk is a designated or shared bicycle path in Portland, Oregon.

Goals: Equitable and Just Pedestrian Network, Walking Rates

Leads: MCDOT, MDOT SHA, MCDPS, County Municipalities



▶ Tooled joints are less clean and a bit wider than saw cut joints. Image Credit: StrongholdFloors





A poorly filled utility cut in the sidewalk. Shoe for scale.

EA-1c: Strengthen existing regulations and the permitting process to ensure that utility cuts in sidewalks and legal crossings are quickly and appropriately repaired.

Temporary patches and poor repair work create tripping hazards and other accessibility challenges. To improve accessibility, these utility cuts should be successfully repaired more quickly.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MCDPS

EA-1d: Construct the pedestrian clear zone using materials approved by MCDOT's Design Standards and Specifications.

Brick sidewalks present more tripping and slippage hazards than Portland cement, concrete pavers, and some other materials. All future sidewalks should use MCDOT-approved materials in the pedestrian clear zone, which is a portion of the area within the streetscape's active zone between the street buffer and the frontage zone. The pedestrian clear zone should be free of obstructions of any kind. Other paving materials may be used outside the pedestrian clear zone and in historic districts, as appropriate.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MCDPS, Montgomery Planning

EA-2: Remove sidewalk obstructions.

There should not be poles or other objects obstructing the sidewalk. These key actions identify ways to remove existing obstructions and minimize the number of obstructions moving forward.

Key Actions:

EA-2a: Identify and relocate permanent vertical obstructions (like utility poles) that result in pedestrian clear zone widths that are not ADA compliant.

Vertical obstructions present accessibility issues by narrowing sidewalks, limiting equal access to the transportation system. At the same time, these obstructions can be very expensive to move. To address this challenge, it is important to prioritize relocating vertical obstructions that present the greatest barrier to pedestrian travel, and then systematically move them over time. This can be accomplished in two ways: 1) create a capital improvement program project to address the highest priority locations, and 2) incentivize or require undergrounding or utility relocation as part of development applications by updating zoning regulations or using other tools.

Goals: Equitable and Just Pedestrian Network, Pedestrian Safety

Leads: MCDOT, MDOT SHA, Utilities

Support: Montgomery Planning



EA-2b: Move existing utility boxes and traffic signal control cabinets out of the sidewalk into the street buffer or underground. Ensure that new utility boxes and traffic signal control cabinets are not installed in the sidewalk.

Across Montgomery County, utility boxes and traffic signal control cabinets are frequently installed in the sidewalk, narrowing the space available for pedestrian travel, particularly at intersections. These obstructions can be particularly challenging for pedestrians with vision or mobility disabilities to navigate. Moving utility boxes and traffic signal control cabinets into the street buffer will improve the quality of the pedestrian experience.

Note: While Recommendation EA-2a focuses on ensuring minimum ADA requirements, this recommendation aims to create a higher quality experience.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA, Utilities

Support: Montgomery Planning



Traffic signal control cabinet in the sidewalk in downtown Silver Spring

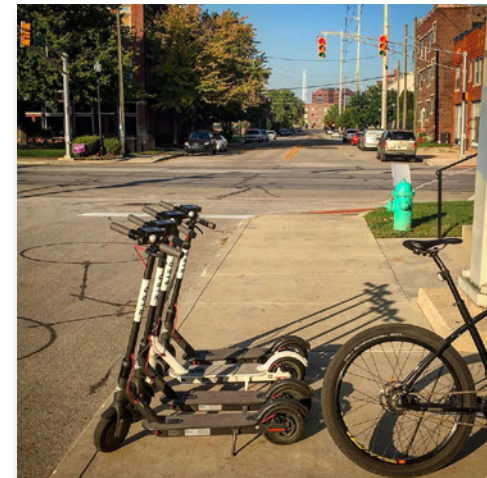
EA-2c: Provide additional on-street parking corrals for dockless vehicles in high-use areas and coordinate with operators to provide incentives to encourage their use.

Dockless vehicles are often left in the middle of the sidewalk where they can pose tripping hazards to pedestrians, especially older pedestrians and pedestrians with vision disabilities. A corral is an on-street location where bicycles, scooters, and other similar devices can be securely parked. Providing more places to park these vehicles outside of the pedestrian clear zone is key to taking advantage of the mobility benefits these devices provide while mitigating some of the accessibility challenges they present.

Related Effort: *Vision Zero Action Plan*

Goals: Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: MCDOT, County Municipalities



Scooters blocking the sidewalk



EA-3: Provide pedestrians more time to cross the street.

Pedestrians should be confident they can cross the street in the allotted walk time. However, older pedestrians, younger pedestrians, and pedestrians with mobility disabilities often walk or roll slower than the population as a whole. In some places, these pedestrians may not have enough time to safely cross the street, leading to a stressful experience that puts them in conflict with motor vehicles and may result in potentially dangerous interactions or fewer pedestrian trips. These key actions identify policy changes that would provide more time for pedestrians to cross the street.

Key Actions:

EA-3a: Lower the pedestrian walking speed standard at signalized intersections frequented by older pedestrians, younger pedestrians, and those with disabilities.

An assumed pedestrian walking speed is used to calculate how much time is necessary to allot for pedestrians to cross the street. The current maximum pedestrian walking speed is 3.5 feet per second in the MdMUTCD, but the county uses a slower walking speed in certain situations. The county should use a pedestrian walking speed of 2.5 feet per second to calculate pedestrian crossing time in locations frequented by older pedestrians, younger pedestrians, and those with disabilities.

Note: Key Action P-2e and Key Action EA-3a may somewhat work at cross purposes, as providing more time for pedestrians to cross the street may require a longer signal cycle length. There may not be an opportunity to implement both key actions at the same intersection.

Precedent: Seattle lowers assumed walking speed to 2.5 feet per second in certain circumstances.

Goals: Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

EA-3b: Exclude the pedestrian crossing signal buffer interval when calculating pedestrian clearance times so pedestrians have more time to safely cross the street.

The MdMUTCD requires that “a buffer interval consisting of a steady UPRAISED HAND (symbolizing DON’T WALK) signal indication shall be displayed for at least three seconds prior to the release of any conflicting vehicular movement.” The MdMUTCD also provides an option for using the buffer interval when calculating pedestrian clearance times, which can lead to insufficient crossing time for slower pedestrians.

To illustrate the benefits of this policy change to exclude the buffer interval, consider a 42-foot crossing. Such a crossing would require a minimum pedestrian clearance time of 12 seconds based on the 3.5-feet-per-second maximum walking speed standard established in the MdMUTCD ($42 \div 3.5 = 12$). If the minimum three-second buffer is incorporated into the pedestrian clearance time calculation, it means that a person who walks at a pace of 3.5 feet per second and leaves the curb or shoulder at the end of the WALKING PERSON indication would get the steady UPRAISED HAND (symbolizing DONT WALK) signal indication after 9 seconds when they are still 10.5 feet away from the opposite curb and they would reach it just as opposing traffic is released. If the buffer interval is not included in the calculation, it means that the same person can travel the entire length of the crosswalk before they get the steady UPRAISED HAND (symbolizing DONT WALK) signal indication.

Goals: Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA





This pedestrian is unable to reach an APS in Downtown Silver Spring because the push button is located on a raised surface that her mobility device cannot navigate.

EA-4: Make pedestrian signals more accessible.

Accessible Pedestrian Signals serve several purposes in Montgomery County, including activating a walk signal and providing information to blind/low vision pedestrians to assist them in safely crossing streets. The key actions highlight opportunities to improve how these valuable tools function.

Key Actions:

EA-4a: Identify and modify APS/Pedestrian Push Buttons in the county that are incorrectly installed or are inaccessible to wheelchair users.

APS provide many benefits to pedestrians traveling through Montgomery County, but in many instances they are not installed correctly.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MDOT SHA

EA-4b: Ensure that every pedestrian push button has a light that informs pedestrians when the pedestrian phase has been triggered.

Currently, many traffic signals in Montgomery County do not provide feedback to pedestrians that the push button has been actuated. Providing a confirmation light reduces confusion about whether pedestrians will have a crossing phase by confirming that a request for a pedestrian phase has been made, reducing the likelihood that pedestrians will cross the street without the pedestrian signal. Likewise, intersections with passive detection ([Key Action B-2b](#)) should also provide some form of notification that a walk signal has been triggered.

Goal: Comfortable/Connected Pedestrian Network

Leads: MCDOT, MDOT SHA



EA-5: Improve guidance for pedestrians with low or no vision.

It should be easy to travel through Montgomery County with low or no vision. However, today, routine errands can require pedestrians with vision disabilities to memorize how many steps are required between two places or to construct mental maps connecting destinations. They may experience stress due to construction detours and other obstructions. The key actions below can make travel simpler by providing directional guidance in line with international best practices and supportive education for those with low or no vision learning to travel independently.

Key Actions:

EA-5a: Develop standards on the use of tactile walking surface indicators (TWSIs) in the pedestrian and transit networks.

Many countries have adopted TWSIs to help pedestrians with vision disabilities navigate the built environment. TWSIs (including the truncated domes found on curb ramps) can have a variety of different tactile patterns, which are applied to the walking surface of a pedestrian access route to help pedestrians with vision disabilities identify hazards, avoid obstacles, follow an accessible pathway, find crosswalks and amenities, and distinguish between parallel pedestrian and bicycle facilities.

A comprehensive TWSI network would allow pedestrians with vision disabilities to navigate more safely and directly, become more confident in orientation, and successfully complete a wider range of trips.

Precedents: Tactile treatments are standard in many parts of the world, including Australia, New Zealand, and Japan, among others. Montgomery County has used these treatments along and across separate bike lanes, but there are more opportunities for their use in other places in the pedestrian network.

Goal: Equitable and Just Pedestrian Network

Lead: MCDOT

Support: MDOT SHA, Montgomery Planning, WMATA

EA-5b: Provide subsidized orientation and mobility specialist and/or travel training sessions for those who may not be able to afford them.

Orientation and mobility and travel training assistance help people with disabilities learn how to navigate their environment so they can run daily errands and maintain their independence. Subsidized training is needed so that financial obstacles do not limit a person's ability to learn how to move around their community.

Goal: Equitable and Just Pedestrian Network

Lead: County Executive



Example of a TWSI used in Montgomery County to direct people with vision disabilities to a floating bus stop



EA-6: Provide more opportunities for accessible park experiences.

Park trails across the county should be accessible to as many people as possible. In the past 10 years, Montgomery Parks has made significant progress in making parks more accessible to people with disabilities, including installing accessible walkways, exercise equipment, and site furniture such as benches, drinking fountains, and other amenities. The key actions identify additional ways Montgomery Parks can build on these accessibility successes.

Key Actions:

EA-6a: Create a framework for natural surface trail accessibility to ensure that as many natural surface trails as possible are accessible to people with disabilities.

The framework will clarify details about trail surface characteristics, width, grade, and cross slope and will categorize existing natural surface trails based on their attributes. Over time, Montgomery Parks will work to upgrade less accessible trails to become more accessible.

Goals: Equitable and Just Pedestrian Network, Walking Rates

Lead: Montgomery Parks

EA-6b: Develop Accessible Sensory Trails in parks across Montgomery County.

Accessible Sensory Trails are trails designed to provide access to nature for everyone, including people with low or no vision, those with emotional and intellectual disabilities, and wheelchair users.

They generally include different activities designed to encourage interaction with nature, as well as interpretive signage in large print and Braille.

Goal: Equitable and Just Pedestrian Network

Lead: Montgomery Parks

EA-7: Exceed existing accessibility requirements.

While existing accessibility requirements, like the Maryland Accessibility Code, are focused on addressing barriers to people with mobility disabilities, there is little or no guidance for building and space design to accommodate people with vision, hearing, cognitive, or other types of disabilities.

Key Action:

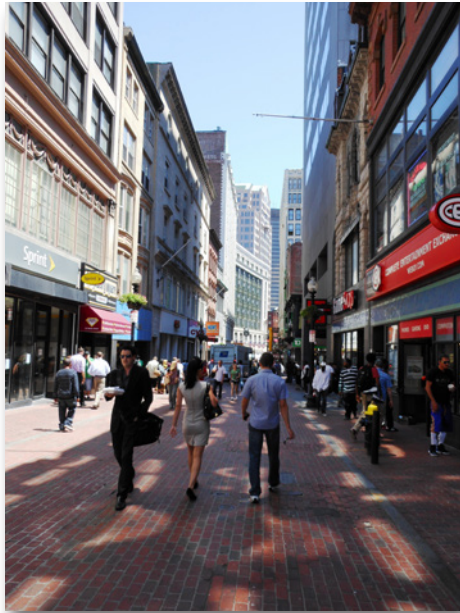
EA-7a: Modify the County Code and associated regulations to include additional accessibility requirements that address barriers to traveling to and through all commercial, residential, and institutional buildings for people with vision, hearing, cognitive, and other types of disabilities.

Goal: Equitable and Just Pedestrian Network

Lead: County Council

Supports: Montgomery Planning, MCDPS





People walking in the middle of a shared street with cars in the background
Photo Credit: Toole Design

EA-8: Regulate shared spaces.

Shared spaces where people using different travel modes intermingle can add to the vitality of communities by encouraging pedestrian activity and allowing the reimagining of important civic spaces.

At the same time, it is necessary for these spaces to be better regulated to ensure pedestrians, and especially pedestrians with disabilities, can safely and directly travel between Points A and B. These key actions identify two ways to improve these spaces through changes to law and the development of regulations.

Key Actions:

EA-8a: Pursue a modification to the Maryland Code clarifying that drivers, bicyclists, and scooter riders are required to yield the right of way to pedestrians on shared streets and that drivers are also required to yield to bicyclists and scooter riders.

Montgomery County is pursuing shared streets in multiple locations, but a pedestrian hit by a driver or bicyclist at a non-intersection location on a shared street would be at fault under current law. As the most vulnerable user in a shared street environment, pedestrians should have the right of way on these streets, followed by bicyclists and scooter users.

Related Effort: *Vision Zero Action Plan*

Goal: Pedestrian Safety

Lead: State Delegation

EA-8b: Develop streetery guidance that identifies appropriate locations, seating requirements, accessibility requirements, and other issues. Conduct periodic inspections to verify compliance with this guidance.

Streeteries—seating for restaurants that spills into the street—add to the vibrancy of Montgomery County public space and benefit local businesses, but their design can create challenges for pedestrians with disabilities. Guidance should help formalize streeteries that exist today and create a path for more streeteries to be created in the future, ensuring accessibility is prioritized for access to the streetery seating itself and for pedestrians traveling through the streetery area to another destination. The 2030 *Vision Zero Action Plan* includes a similar recommendation.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MCDPS

Support: Montgomery Planning



Pedestrian space is made inaccessible by a table and a tree.



EA-9: Make work zones more accessible.

Construction work should minimize obstructions to accessible pedestrian routes, and where obstructions are unavoidable, accessible alternatives—like temporary sidewalks and covered walkways—should be provided. In some instances, contractors are placing signage and other equipment in the accessible pedestrian route. Contractors need to be better trained on accessible construction detour requirements.

Key Actions:

EA-9a: Consider requiring any construction worker who works in the public right-of-way to take ADA training and maintain ADA certification. Consider implementing penalties for observed ADA non-compliance during construction or maintenance that deviates from what was approved on right-of-way permits. Approved right-of-way permits should be easily accessible so members of the public can understand what has been approved.

Precedent: Minnesota DOT has an ADA Certification Course.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MCDPS

EA-9b: Publish approved Maintenance of Traffic plans in an easily accessible format.

Maintenance of Traffic plans explain how different travel modes will be handled through construction zones. These plans are developed so that travel can continue safely and with minimal detour through these areas. However, the approved plans are not readily available for public review, and it is not clear whom community members should contact about potential violations. Making the plans accessible and providing points of contact will make it easier to maintain pedestrian access appropriately.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, MCDPS





Achieving the Pedestrian Master Plan vision is going to require resources that exceed current spending on pedestrian and safety efforts. For decades, the county has invested heavily in expanding roads, but investments in pedestrian pathways and crossings have not kept pace. The following recommendations identify additional revenue sources to support the county's commitment to improving pedestrian conditions.

F-1: Identify new revenue sources to fund pedestrian improvements.

More revenue is needed so faster progress can be made on addressing the county's pedestrian infrastructure deficit. The key action for this recommendation identifies one potential approach to raising additional revenue.

Key Action:

F-1a: Consider potential legislation to tie vehicle registration fees to safe vehicle design.

As described in Recommendation P-1, vehicle design is closely connected to pedestrian safety. Acknowledging that vehicle design regulation is a federal issue, the state should develop legislation to modify its existing two-tiered vehicle registration fee structure, which is based on weight, to lower registration fees for vehicles that are safer for pedestrians and higher fees for vehicles that are more dangerous for pedestrians, incentivizing the purchase of smaller vehicles. The net increase in registration fee proceeds could fund additional pedestrian and bicycle projects statewide.

Precedent: In 2022, Washington, D.C. updated its vehicle registration fee structure so heavier vehicles pay higher fees.

Goals: Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: State Delegation



Bicycle and Pedestrian Priority Area Prioritization

It is important to prioritize locations for improved pedestrian facilities because demand for these investments far exceeds the county's current resources dedicated to these projects.



Identifying priority areas and ensuring projects are built in those places is a data-driven approach that makes sure limited resources are put to use where the need is highest.

The Bicycle and Pedestrian Priority Areas (BiPPA) funding program is one of the primary ways that the county funds pedestrian and bicycle improvements. It was established by the County Council in 2014 to make comprehensive pedestrian and bicycle improvements around existing or future transit stations. Typical pedestrian improvements undertaken by this program include new sidewalks and sidepaths (10-foot-wide paths that are shared by pedestrians and bicyclists), Americans with Disabilities Act (ADA) improvements to sidewalks and curb ramps, crosswalks, and roadway changes to reduce motor vehicle travel speeds.

When the BiPPA program was initially developed, BiPPA areas tended to be nodes of pedestrian and bicycle activity around transit stations. Over time, new BiPPA areas have been created to address the pedestrian and bicycle challenges along some of the county's major roadways, such as Veirs Mill Road and New Hampshire Avenue, and in some neighborhoods. However, prioritizing roadways and neighborhoods was undertaken based on the master plan schedule, not a comprehensive evaluation.



The plan's BiPPA prioritization approach takes this evolution to the next step by comprehensively evaluating and prioritizing three different BiPPA types in a data-driven way:

1. Downtowns and Town Centers

These are the traditional BiPPA areas with land use and intensity of use supportive of significant pedestrian and bicycle activity. They match the proposed Complete Streets Design Guide area types identified in the following section.

2. Major Roads

These are corridors throughout the county that tend to be the most problematic for pedestrians and bicyclists to navigate.

3. Neighborhoods

These are the areas of the county outside of the Downtowns, Town Centers, or major roadways. They tend to be more residential in nature and typically have roadways that are more locally oriented, have slower speeds, and carry less motor vehicle traffic.

The approach detailed in the Prioritization Methodology appendix ensures that the areas with the greatest need for pedestrian and bicycle improvements receive that investment by prioritizing areas of the county:

- with low levels of pedestrian and bicycle comfort
- near schools and transit stations
- with high pedestrian and bicycle demand
- with more pedestrian and bicycle crashes

Additional emphasis is given to those parts of the county that are EFAs to reflect the county's commitment to investing in communities that have been historically disadvantaged. This emphasis is especially appropriate given that these areas are disproportionately where pedestrians are severely injured or killed, and people living in these areas are more likely to walk and bike, in addition to being less likely to own a motor vehicle.

The Pedestrian Master Plan recommends using this prioritization approach for all new Capital Improvement Program (CIP) projects that address pedestrian and bicycle safety and connectivity challenges, as well as a potential tool to guide annual funding programs that provide new pedestrian and bicycle infrastructure, including new:

- sidewalks
- sidepaths
- bikeways
- median refuges
- curb ramps
- signalized intersections
- traffic calming

This approach is not intended to influence the construction of maintenance projects, especially those addressing imminent safety and accessibility issues.

The prioritization in this plan is a guideline based on the best available information at the time the plan was approved by the Montgomery County Council. This prioritization should be reassessed as part of the Pedestrian Master Plan Biennial Monitoring Report based on available resources and lessons learned and to ensure consistency with the goals of the plan. In addition, the implementation of pedestrian and bicycle improvements in areas identified as lower priority in this plan should still be pursued as opportunities to implement them arise, such as through redevelopment projects and state and local capital projects.

Table 29, Table 30, Table 31, Table 32 and the associated maps identify the BiPPA areas within the top four BiPPA tiers. BiPPA areas that are currently funded (more than 50% funded through construction in the six-year CIP are identified as Funded in Capital Budget—the highest tier. The relevant CIP project numbers are provided in **Table 29**. Other BiPPA areas are broken into tiers based on their Prioritization Methodology score. They are sorted into lower tiers according to their Prioritization Methodology score in tables and maps in the Prioritization Methodology appendix.



Table 29. Funded in Capital Budget BiPPAs as of January 2023 (listed alphabetically)

BiPPA Name	CIP Project Number	Map Reference #
Bowie Mill Rd: Cashell Rd to Olney-Laytonsville Rd	P502108	1
Bowie Mill Rd: Muncaster Mill Rd to Cashell Rd	P502108	2
Bradley Blvd: Huntington Pkwy to Downtown Bethesda	P501733	3
Burnt Mills Town Center	P502304	4
Chevy Chase Lake Town Center	P501316, P502004	5
Colesville Rd: Downtown Silver Spring to Four Corners Town Center	P502304	6
Colesville Rd: Four Corners Town Center to Burnt Mills Town Center	P502304	7
Columbia Blvd/Dale Dr: Montgomery Hills Town Center to Colesville Rd	P502304	8
Columbia Pk: Burnt Mills Town Center to New Hampshire Ave	P502304	9
Columbia Pk: I-200 to Cherry Hill Rd	P502304	10
Columbia Pk: New Hampshire Ave to Cherry Hill Rd	P502304	11
Columbia Pk: Sandy Spring Rd to I-200	P502304	12
Downtown Bethesda	P500929, P501316, P502004, P500119	13
Downtown Silver Spring	P509975, P502004, P502001, P501110	14
Downtown Wheaton	P502002	15
Four Corners Town Center	P502304	16
Frederick Rd: Clarksburg Town Center to Little Seneca Pkwy	P502309, P501118, P501744	17
Glenmont Town Center	P501532	18
Grosvenor Town Center	P501532	19
Long Branch Town Center	P502004	20
Lyttonsville Town Center	P502004	21
Seven Locks Rd: City of Rockville to Tuckerman Ln	P501303	22
Takoma Langley Crossroads Town Center	P502004	23
Tuckerman Ln: Falls Rd to Seven Locks Rd	P502302	24
Veirs Mill-Randolph Town Center	P502003, P501913	25
Veirs Mill Rd: Twinbrook Town Center to Veirs Mill-Randolph Town Center	P502003, P501913	26
Wayne Ave: Downtown Silver Spring to Flower Ave	P502004	27



FUNDED IN CAPITAL BUDGET BiPPAs

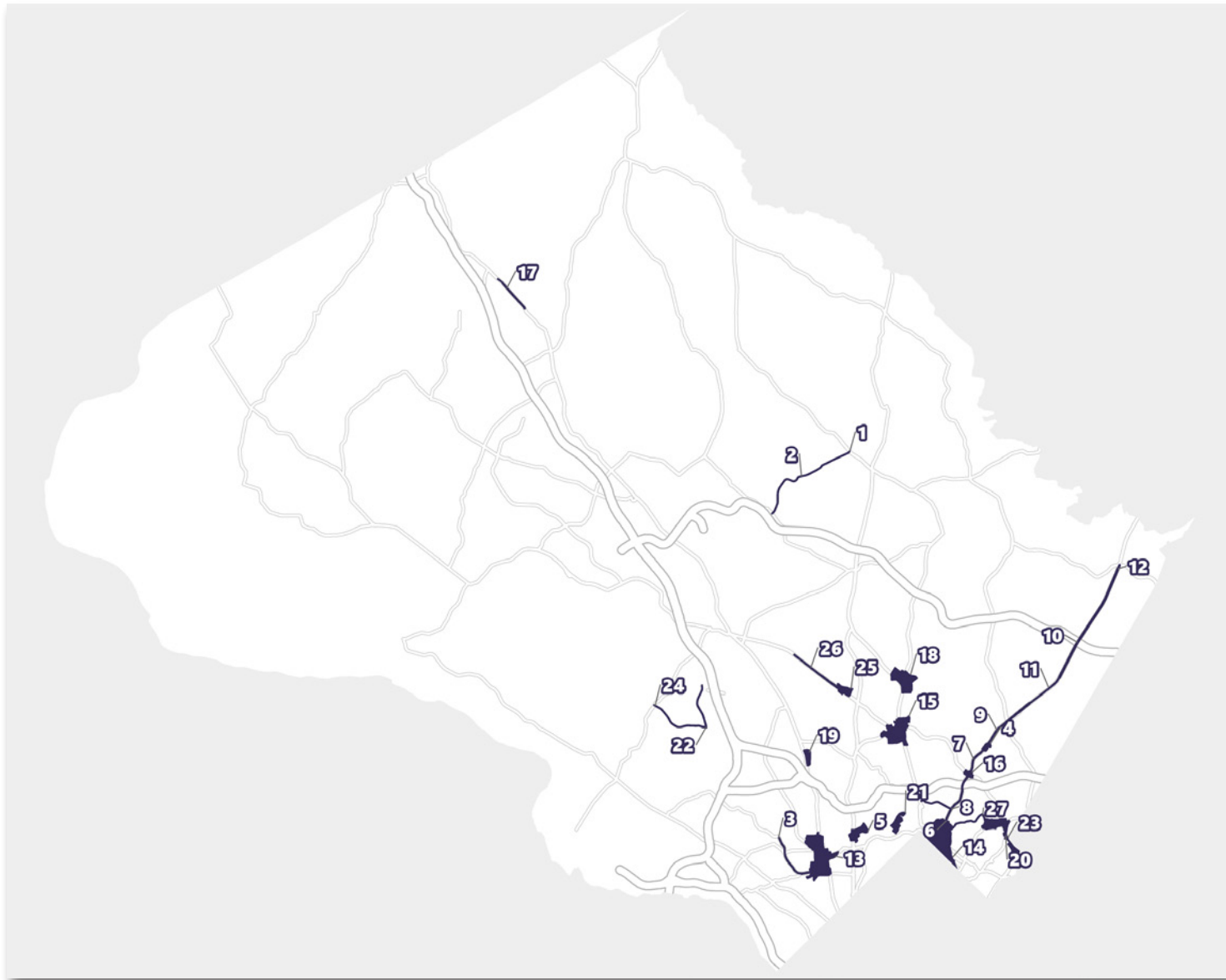
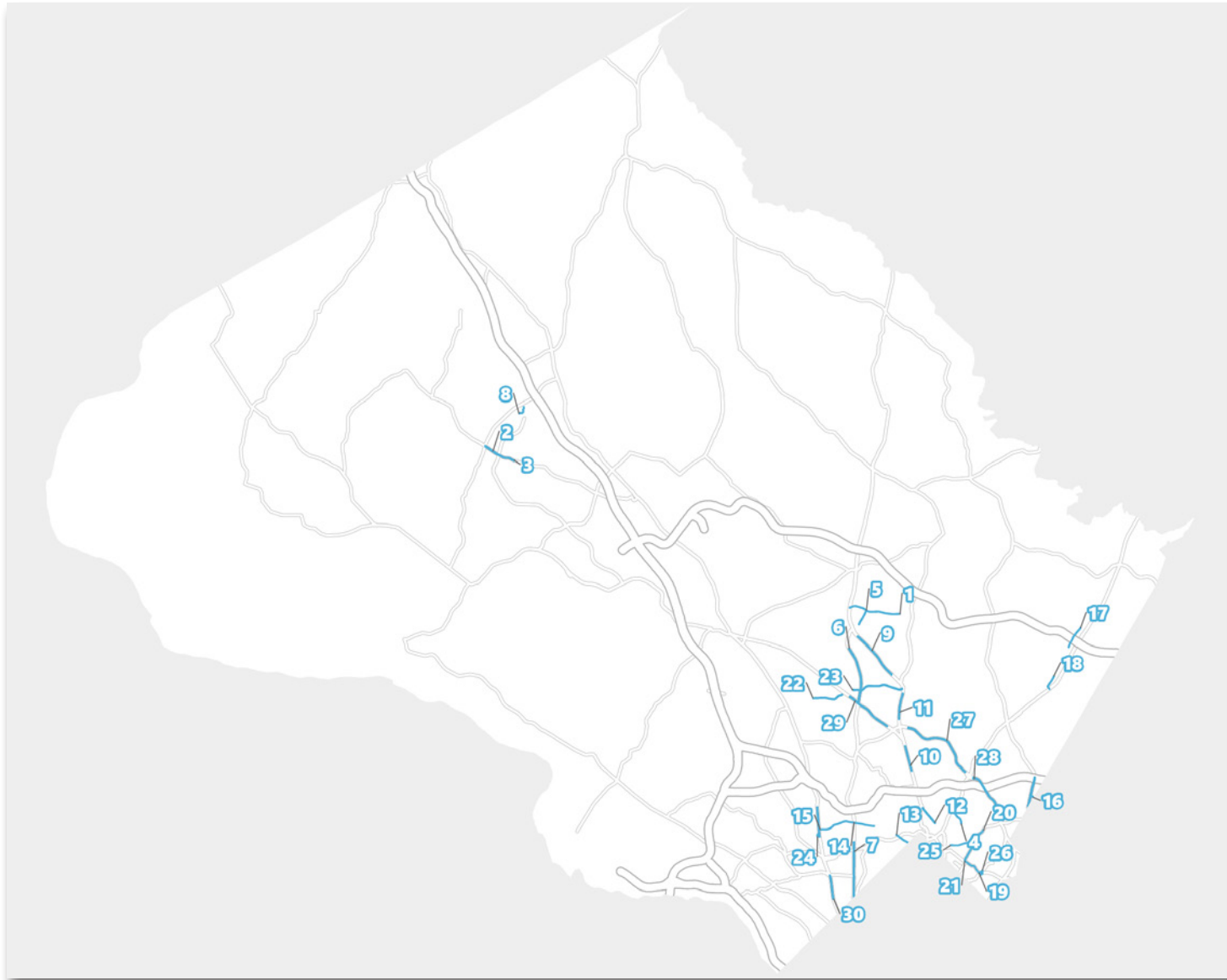


Table 30. Tier 1 BiPPAs (listed alphabetically)

BiPPA Name	Map Reference #
Bel Pre Rd: Georgia Ave to Layhill Town Center	1
Clopper Rd: Germantown Rd to Great Seneca Hwy	2
Clopper Rd: Great Seneca Hwy to Mateny Rd	3
Columbia Blvd/Dale Dr: Colesville Rd to Wayne Ave	4
Connecticut Ave: Aspen Hill Town Center to Bel Pre Rd	5
Connecticut Ave: Aspen Hill Town Center to Veirs Mill Rd	6
Connecticut Ave: Chevy Chase Lake Town Center to District of Columbia	7
Crystal Rock Dr: Germantown Town Center to Germantown Town Center	8
Georgia Ave: Aspen Hill Town Center to Glenmont Town Center	9
Georgia Ave: Downtown Wheaton to Forest Glen Town Center	10
Georgia Ave: Glenmont Town Center to Downtown Wheaton	11
Georgia Ave: Montgomery Hills Town Center to Downtown Silver Spring	12
Grubb Rd: Lyttonsville Town Center to District of Columbia	13
Jones Bridge Rd: Connecticut Ave to Jones Mill Rd	14
Jones Bridge Rd: Rockville Pike to Connecticut Ave	15
New Hampshire Ave: Prince George's County to Hillandale Town Center, Adelphi Rd	16
Old Columbia Pk/Tech Rd: Fairland Rd to Briggs Chaney Rd	17
Old Columbia Pk: Columbia Pk to East Randolph Rd	18
Philadelphia Ave: Piney Branch Rd to Takoma Junction Town Center	19
Piney Branch Rd: Sligo Rd to Long Branch Town Center	20
Piney Branch Rd: Sligo Rd to Philadelphia Ave	21
Randolph Rd: Randolph Hills Town Center to Veirs Mill-Randolph Town Center	22
Randolph Rd: Veirs Mill-Randolph Town Center to Glenmont Town Center	23
Rockville Pike: Cedar Ln to Downtown Bethesda, Woodmont Ave	24
Sligo Ave: Downtown Silver Spring to Piney Branch Rd	25
Takoma Junction Town Center	26
University Blvd: Downtown Wheaton to Four Corners Town Center	27
University Blvd: Four Corners Town Center to Long Branch Town Center	28
Veirs Mill Rd: Veirs Mill-Randolph Town Center to Downtown Wheaton	29
Wisconsin Ave: Downtown Bethesda to Downtown Friendship Heights	30



TIER 1 BiPPAs



BiPPAs (##)

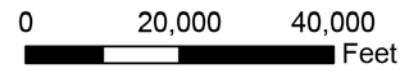
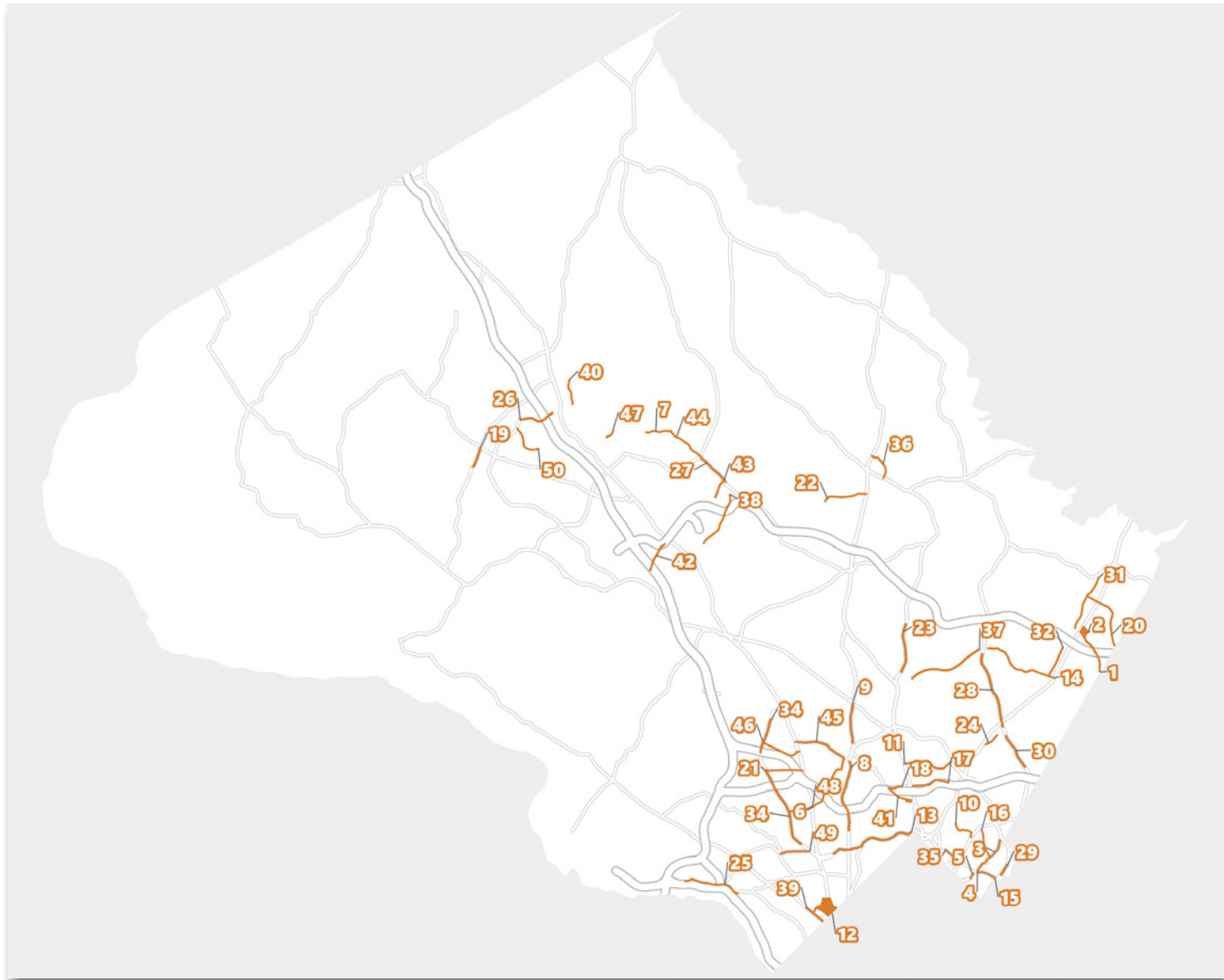


Table 31. Tier 2 BiPPAs (listed alphabetically)

BiPPA Name	Map Reference #	BiPPA Name	Map Reference #
Briggs Chaney Rd: Briggs Chaney Town Center to Prince George's County	1	Middlebrook Rd: Germantown Town Center to Foxchapel Town Center	26
Briggs Chaney Town Center	2	Muncaster Mill Rd: Woodfield Rd to Redland Town Center	27
Carroll Ave: Flower Ave to Takoma Langley Crossroads Town Center	3	New Hampshire Ave: Colesville Town Center to White Oak Town Center	28
Carroll Ave: Takoma Junction Town Center to Flower Ave	4	New Hampshire Ave: Ethan Allen Avenue Gateway Town Center to Takoma Langley Crossroads Town Center	29
Carroll Ave: Takoma Old Town Town Center to Takoma Junction Town Center	5	New Hampshire Ave: White Oak Town Center to Hillandale Town Center	30
Cedar Ln/Summit Ave: Rockville Pk to Kensington Town Center	6	Old Columbia Pk: Briggs Chaney Rd to Burtonsville Town Center	31
Centerway Rd: Goshen Rd to Snouffer School Rd	7	Old Columbia Pk: East Randolph Rd to Fairland Rd	32
Connecticut Ave: Kensington Town Center to Chevy Chase Lake Town Center	8	Old Georgetown Rd: Downtown Rock Spring to Downtown Bethesda	33
Connecticut Ave: Veirs Mill Rd to Kensington Town Center	9	Old Georgetown Rd: Downtown White Flint to Downtown Rock Spring	34
Dale Dr: Wayne Ave to Piney Branch Rd	10	Philadelphia Ave: Downtown Silver Spring to Piney Branch Rd	35
Dennis Ave: Georgia Ave to University Blvd	11	Prince Phillip Dr: Georgia Ave to Olney-Sandy Spring Rd	36
Downtown Friendship Heights	12	Randolph Rd: Glenmont Town Center to Colesville Town Center	37
East-West Hwy: Downtown Bethesda to 16th Street Station Town Center	13	Redland Rd: Shady Grove Town Center to Redland Town Center	38
East Randolph Rd: Colesville Town Center to Downtown Life Sciences/FDA Village	14	River Rd: Westbard Town Center to District of Columbia	39
Ethan Allen Ave: Takoma Junction Town Center to Ethan Allen Ave Gateway Town Center	15	Scenery Dr: Germantown Rd to Middlebrook Rd	40
Flower Ave: Long Branch Town Center to Carroll Ave	16	Seminary Rd/Seminary Ln/Second Ave/Linden Ln	41
Forest Glen Rd: Forest Glen Town Center to Brunett Ave	17	Shady Grove Rd: Downtown Life Sciences Center to Shady Grove Town Center	42
Forest Glen Rd: Forest Glen Town Center to Seminary Rd	18	Shady Grove Rd: Midcounty Hwy to Muncaster Mill Rd	43
Germantown Rd: Clopper Rd to Richter Farm Rd	19	Snouffer School Rd: Centerway Rd to Woodfield Rd	44
Greencastle Rd: Old Columbia Pk to Prince George's County	20	Strathmore Ave/Knowles Ave: Rockville Pk to Kensington Town Center	45
Grosvenor Ln, Cheshire Dr: Old Georgetown Rd to Rockville Pk	21	Tuckerman Ln: Old Georgetown Rd to Rockville Pk	46
Hines Rd: Cashell Rd to Georgia Ave	22	Watkins Mill Rd: City of Gaithersburg to Montgomery Village Town Center	47
Layhill Rd: Layhill Town Center to Glenmont Town Center	23	West Cedar Ln: Old Georgetown Rd to Rockville Pk	48
Lockwood Dr: Burnt Mills Town Center to White Oak Town Center	24	Wilson Ln: Bradley Blvd to Downtown Bethesda	49
Macarthur Blvd: Persimmon Tree Rd to Goldsboro Rd	25	Wisteria Dr: Germantown Town Center to Waring Station Rd	50



TIER 2 BiPPAs



BiPPAs (##)



Table 32. Tier 3 BiPPAs (listed alphabetically)

BiPPA Name	Map Reference #
Arcola Ave: Georgia Ave to University Blvd	1
Aspen Hill Rd: Aspen Hill Town Center to Veirs Mill Rd	2
Barnesville Rd: Bucklodge Rd to Clarksburg Rd	3
Bonifant Rd: Layhill Town Center to New Hampshire Ave	4
Bradley Blvd: River Rd to Seven Locks Rd	5
Bradley Blvd: Seven Locks Rd to Huntington Pkwy	6
Briggs Chaney Rd: Columbia Pk to Cloverly Town Center	7
Brink Rd: Frederick Rd to Goshen Rd	8
Brooke Rd: Sandy Spring Town Center to New Hampshire Ave	9
Calverton Blvd: Downtown Life Sciences/FDA Village to Prince George's County	10
Cashell Rd: Bowie Mill Rd to Hines Rd	11
Cashell Rd: Hines Rd to Emory Ln	12
Centerway Rd: Montgomery Village Town Center to Goshen Rd	13
Clopper Rd: Clarksburg Rd to Richter Farm Rd	14
Clopper Rd: Richter Farm Rd to Germantown Rd	15
Crabbs Branch Way: Shady Grove Town Center to E Gude Dr	16
Dairymaid Dr: Great Seneca Hwy to Mateny Rd	17
Darnestown Rd: Downtown Life Sciences Center to City of Gaithersburg	18
Dawson Farm Rd: Germantown Rd to Great Seneca Hwy	19
Democracy Blvd: Falls Rd to Seven Locks Rd	20
Dufief Mill Rd: Downtown Life Sciences Center to Travilah Rd	21
E Gude Dr: Frederick Rd to City of Rockville	22
Ednor Rd: Layhill Rd to New Hampshire Ave	23
Ednor Rd: New Hampshire Ave to Howard County	24
Emory Ln: Muncaster Mill Rd to Georgia Ave	25
Ethan Allen Avenue Gateway Town Center	26
Fairland Rd: East Randolph Rd to Columbia Pk	27
Falls Rd: Oaklyn Dr to Potomac Town Center	28
Falls Rd: Tuckerman Ln to City of Rockville	29
Father Hurley Blvd: Germantown Town Center to Germantown Rd	30
Father Hurley Blvd: Middlebrook Rd to Crystal Rock Dr	31
Forest Glen Town Center	32
Frederick Rd: Foxchapel Town Center to City of Gaithersburg	33



Table 32. Tier 3 BiPPAs (listed alphabetically)

BiPPA Name	Map Reference #
Frederick Rd: Milestone Town Center to Foxchapel Town Center	34
Georgia Ave: Howard County to New Hampshire Ave	35
Georgia Ave: Norbeck Rd to Aspen Hill Town Center	36
Germantown Rd/Watkins Mill Rd: Frederick Rd to Montgomery Village Town Center	37
Germantown Rd/Watkins Mill Rd: Germantown Town Center to Frederick Rd	38
Germantown Rd: Clopper Rd to Germantown Town Center	39
Goldenrod Ln/Observation Dr: Germantown Rd to Foxchapel Town Center	40
Goldsboro Rd: Macarthur Blvd to River Rd	41
Goshen Rd: Centerway Rd to Wightman Rd	42
Goshen Rd: Snouffer School Rd to Brink Rd	43
Great Seneca Hwy: Clopper Rd to Germantown Town Center	44
Great Seneca Hwy: Clopper Rd to Richter Farm Rd	45
Huntington Pkwy: Bradley Blvd to Old Georgetown Rd	46
Jones Ln: Turkey Foot Rd to Darnestown Rd	47
Jones Mill Rd: I-495 to East-West Hwy	48
Kemp Mill Rd: Randolph Rd to Arcola Ave	49
Kensington Town Center	50
Leaman Farm Rd: Germantown Rd to Great Seneca Hwy	51
Little Seneca Pkwy: Ridge Rd to Fair Garden Ln	52
Longdraft Rd: Longdraft Ct to City of Gaithersburg	53
Lyttonsville Pl/Brookville Rd: Lyttonsville Town Center to Linden Ln	54
Maryland Gateway Town Center	55
Massachusetts Ave: Goldsboro Rd to District of Columbia	56
Mateny Rd: Clopper Rd to Great Seneca Hwy	57
Mateny Rd: Great Seneca Hwy to Clopper Rd	58
Montgomery Hills Town Center	59
Montgomery Village Ave: Montgomery Village Town Center to Lower Village Town Center	60
Montgomery Village Ave: Montgomery Village Town Center to Wightman Rd	61
Muncaster Mill Rd: Avery Rd to Norbeck Rd	62
Musgrove Rd: Old Columbia Pk to Fairland Rd	63
New Hampshire Ave: Colesville Town Center to Cloverly Town Center	64
Norwood Rd: Doctor Bird Rd to Sandy Spring Town Center	65
Norwood Rd: Layhill Rd to New Hampshire Ave	66

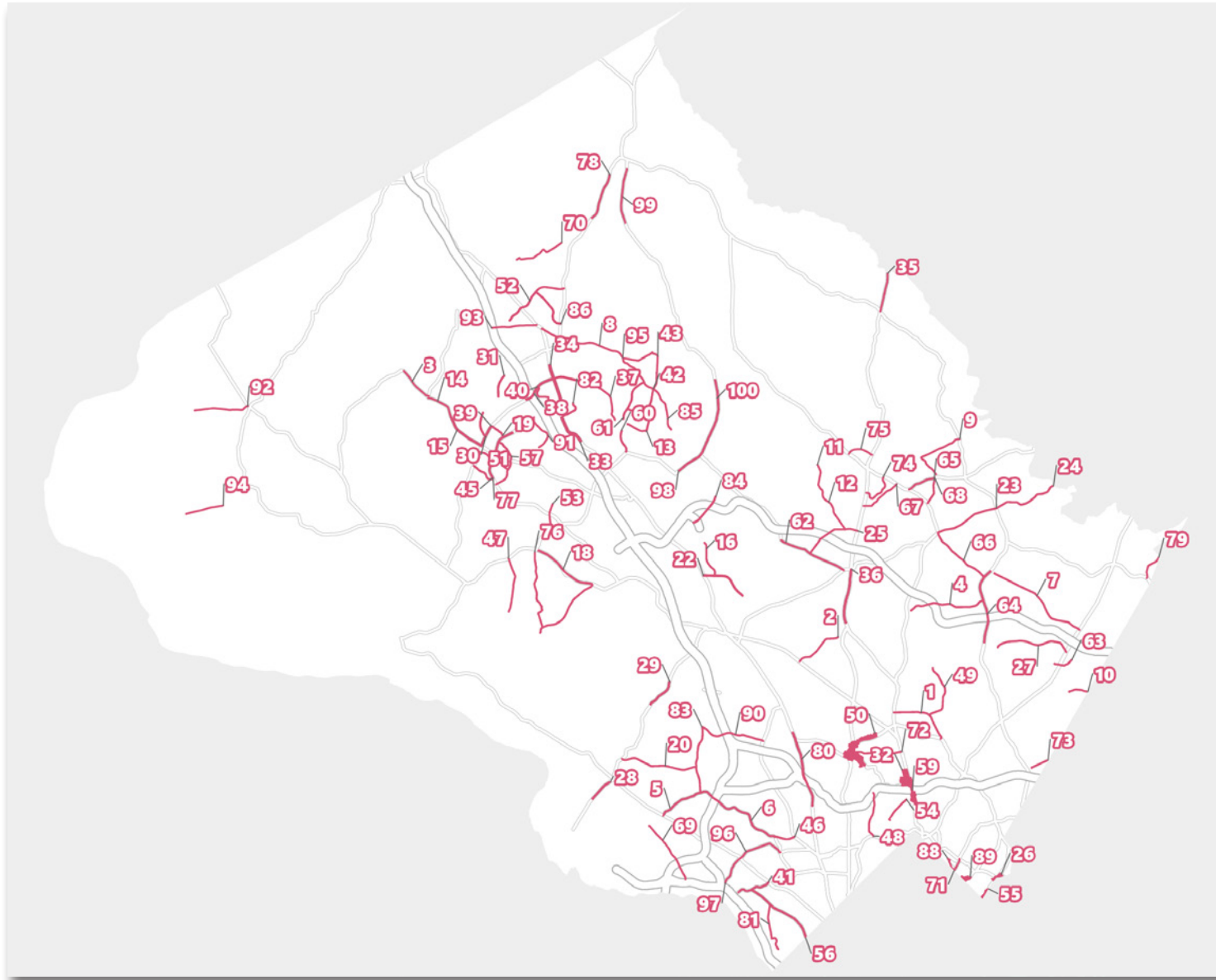


Table 32. Tier 3 BiPPAs (listed alphabetically)

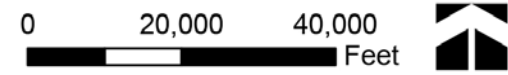
BiPPA Name	Map Reference #
Old Baltimore Rd: Georgia Ave to Olney-Sandy Spring Rd	67
Olney-Sandy Spring Rd: Doctor Bird Rd to Sandy Spring Town Center	68
Persimmon Tree Rd: Oaklyn Dr to Macarthur Blvd	69
Piedmont Rd: Snowden Farm Pkwy to Hawkes Rd	70
Piney Branch Rd: District of Columbia to Philadelphia Ave	71
Plyers Mill Rd: Kensington Town Center to Georgia Ave	72
Powder Mill Rd: Hillandale Town Center to Prince George's County	73
Prince Phillip Dr: Georgia Ave to Olney-Sandy Spring Rd	74
Queen Elizabeth Dr: Olney-Laytonsville Rd to Georgia Ave	75
Quince Orchard Rd: City of Gaithersburg to Dufief Mill Rd	76
Richter Farm Rd: Germantown Rd to Great Seneca Hwy	77
Ridge Rd: Damascus Town Center to Sweepstakes Rd	78
Riding Stable Rd: Sandy Spring Rd to Prince George's County	79
Rockville Pk: Downtown White Flint to Cedar Ln	80
Sangamore Rd: Massachusetts Ave to Macarthur Blvd	81
Scenery Dr: Foxchapel Town Center to Middlebrook Rd	82
Seven Locks Rd: Tuckerman Ln to Bradley Blvd	83
Shady Grove Rd: Shady Grove Town Center to Midcounty Hwy	84
Snouffer School Rd: Goshen Rd to Centerway Rd	85
Snowden Farm Pkwy: Little Seneca Pkwy to Ridge Rd	86
Stewartown Rd: Montgomery Village Ave to Goshen Rd	87
Takoma Ave/Fenton St: Downtown Silver Spring to Piney Branch Rd	88
Takoma Old Town Town Center	89
Tuckerman Ln: Seven Locks Rd to Old Georgetown Rd	90
Waring Station Rd: Wisteria Dr to Middlebrook Rd	91
West Hunter Rd: Wasche Rd to Darnestown Rd	92
West Old Baltimore Rd: Cabin Branch Town Center to Frederick Rd	93
Westerly Rd: Edwards Ferry Rd to Town of Poolesville	94
Wightman Rd: Brink Rd to Goshen Rd	95
Wilson Ln: Bradley Blvd to River Rd	96
Wilson Ln: Macarthur Rd to River Rd	97
Woodfield Rd: City of Gaithersburg to Snouffer School Rd	98
Woodfield Rd: Damascus Town Center to Sweepstakes Rd	99
Woodfield Rd: Snouffer School Rd to East Village Ave	100



TIER 3 BiPPAs



BiPPAs (##)



Complete Streets Design Guide Area Type Designations

Montgomery County's CSDG introduced a new "Complete Streets" street classification system, replacing the old "Road Code" classification system with one that reflects both the transportation function of a street for all travel modes and the envisioned land use character. In doing so, the guide more holistically reflects the many functions of a street, such as property access; stormwater management; pedestrian, bicycle and transit access; goods movement; vehicle throughput; and others. Roadway function is organized by the amount of travel, including major highways (highest amount of travel), boulevards (high amount of travel), connectors (moderate amount of travel) and streets (least amount of travel). Land use context is organized by five area types, including:

DOWNTOWNS

Downtowns are envisioned as Montgomery County's highest intensity areas including central business districts and urban centers. They are envisioned to have dense, transit-oriented development and a walkable street grid (existing or planned), as well as significant areas of Commercial-Residential and Employment zoning.

TOWN CENTERS

Town Centers are similar to Downtowns but generally feature less intense development and cover a smaller geographic area. While the Town Center area type includes a mixture of uses, it is commonly envisioned as high-to-moderate intensity residential development, including multi-family buildings and townhouses as well as retail (existing or planned).

SUBURBAN

Suburban areas are intended to be places with low-to-moderate intensity residential development.

INDUSTRIAL

Industrial areas are envisioned as places where employment and industrial uses are the primary activities. These areas often have higher densities of development but maintain lower to moderate levels of bicycle and pedestrian activity.

COUNTRY

Country areas are the least dense portions of the county, with land uses of low-intensity residential and agriculture.





Transitioning from the previous street classification system to the CSDG street classification system is a three-step process:

- **Phase 1: Enactment of Bill 24-22 and Bill 34-22.** With the enactment of Bill 24-22 on November 7, 2022 and Bill 34-22 on December 27, 2022, the County Council established interim translations for CSDG street types (Downtown Boulevard, Downtown Street, Town Center Boulevard, etc.) that are based on both the CSDG area types (Downtown, Town Center, Suburban, Industrial, and Country) and the previous street classification system. These interim street designations are estimated to be 90% accurate, reflecting that not all roads fit neatly into the 12 street types and that additional master planning review may be needed to refine some street classifications.
- **Phase 2: Master Plan Area Types in the Pedestrian Master Plan.** To address some of the main deficiencies in the Phase 1 translation, and because the Pedestrian Master Plan includes recommendations that rely on CSDG area types, this plan replaces the interim area type designations in the county code with permanent area type designations throughout the county.
- **Phase 3: Master Plan Street Types in a Technical Update to the Master Plan of Highways and Transitways.** This plan update would reevaluate the classifications of all roads to fully ensure that each road is accurately and contextually classified.





As part of the Phase 2 transition, the following table and maps identify the county's Downtowns, Town Center, Suburban, Industrial and Country areas. Future master plans, sector plans and functional plans are encouraged to modify these boundaries based on the definitions in the CSDG.

The Area Type Designations govern the location, relative priority, and dimension of the streetscape elements identified in the Complete Streets Design Guide. The designation of these areas through the Pedestrian Master Plan does not supersede land use or site design requirements identified through existing area master or sector plans or existing county policies.



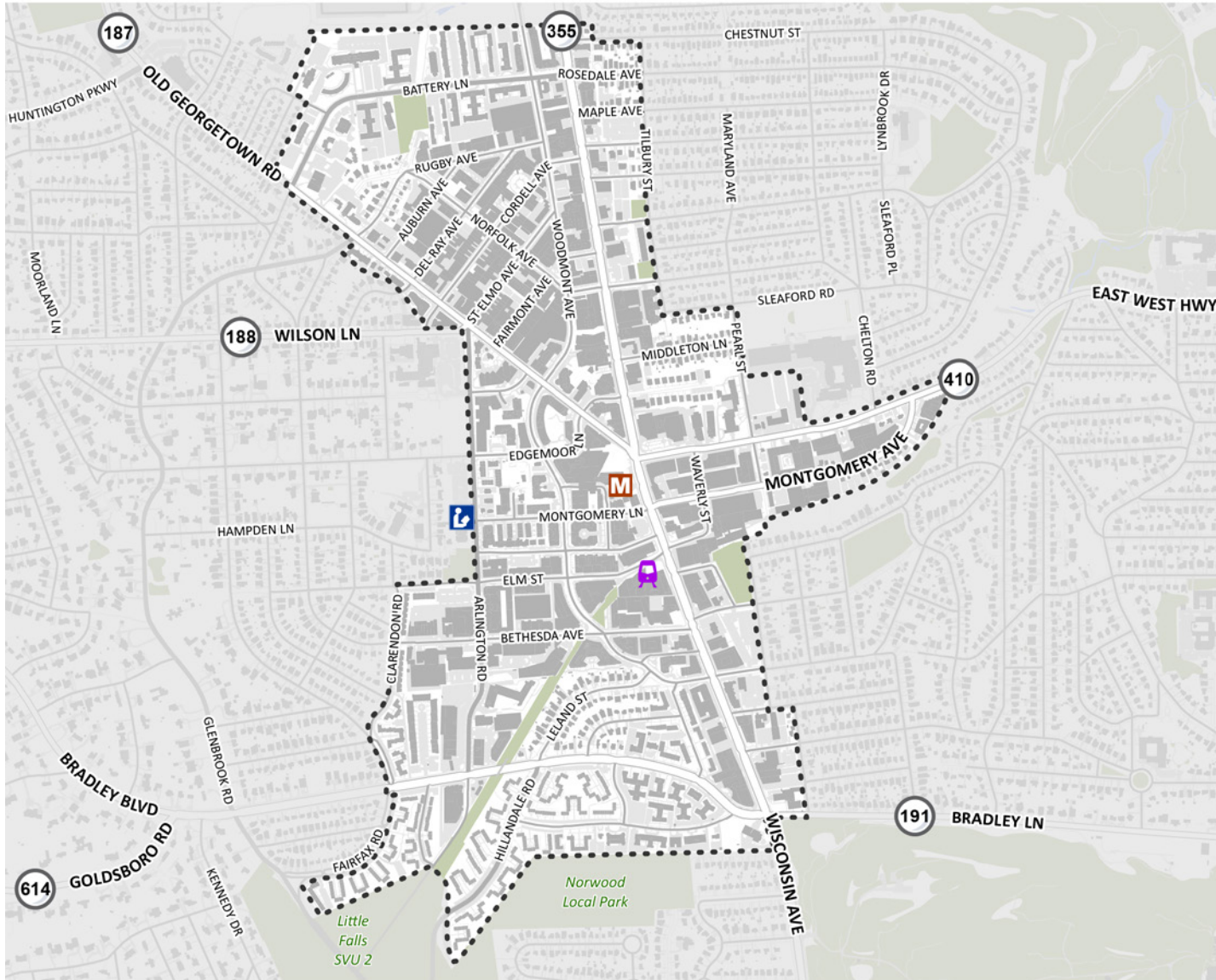
Table 33. Complete Streets Design Guide Area Type Designations

DOWNTOWNS	Bethesda	TOWN CENTERS	Hyattstown	SUBURBAN	Suburban
	Friendship Heights		Kensington		INDUSTRIAL
	Life Sciences Center		Layhill	Briggs Chaney	
	Life Sciences / FDA Village		Long Branch	Burtonsville	
	Rock Spring		Lower Village	Germantown	
	Silver Spring		Lyttonsville	Gude Drive	
	Wheaton		Maryland Gateway	Kensington	
	White Flint		Milestone	Lyttonsville	
TOWN CENTERS	16th Street Station		Montgomery Hills	COUNTRY	
	Ashton		Montgomery Village		
	Aspen Hill		Olney		
	Briggs Chaney		Park Potomac		
	Burnt Mills		Potomac		
	Burtonsville		Randolph Hills		
	Cabin Branch		Redland		
	Chevy Chase Lake		Rock Creek Village		
	Clarksburg		Sandy Spring		
	Cloverly		Shady Grove		
	Colesville		Takoma Junction		
	Damascus		Takoma Langley Crossroads		
	Ethan Allen Avenue Gateway		Takoma Old Town		
	Forest Glen		Traville / USG		
	Four Corners		Twinbrook		
	Foxchapel		Veirs Mill – Randolph		
	Germantown		Washingtonian		
	Glenmont		Westbard		
	Grosvenor		White Oak		
	Hillandale				

The Downtown interim designation and boundary for the Life Sciences (Great Seneca) area and the designation and boundary for the Traville/USG Town Center will be reviewed when the County Council takes up the Great Seneca Plan: Connecting Life and Science



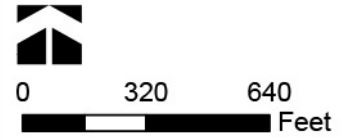
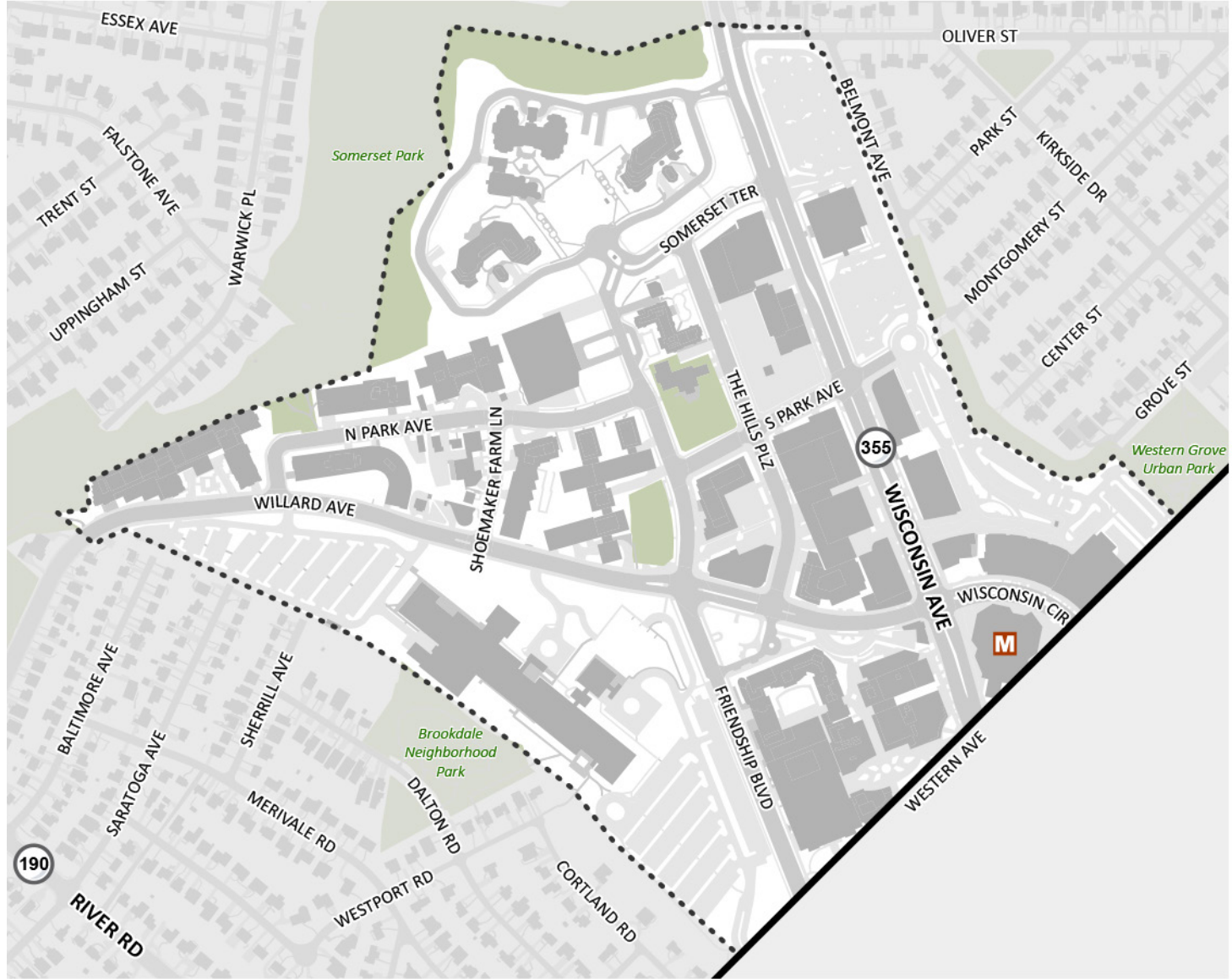
Downtown Bethesda



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Purple Line Station
-  Metro Stations
-  Libraries



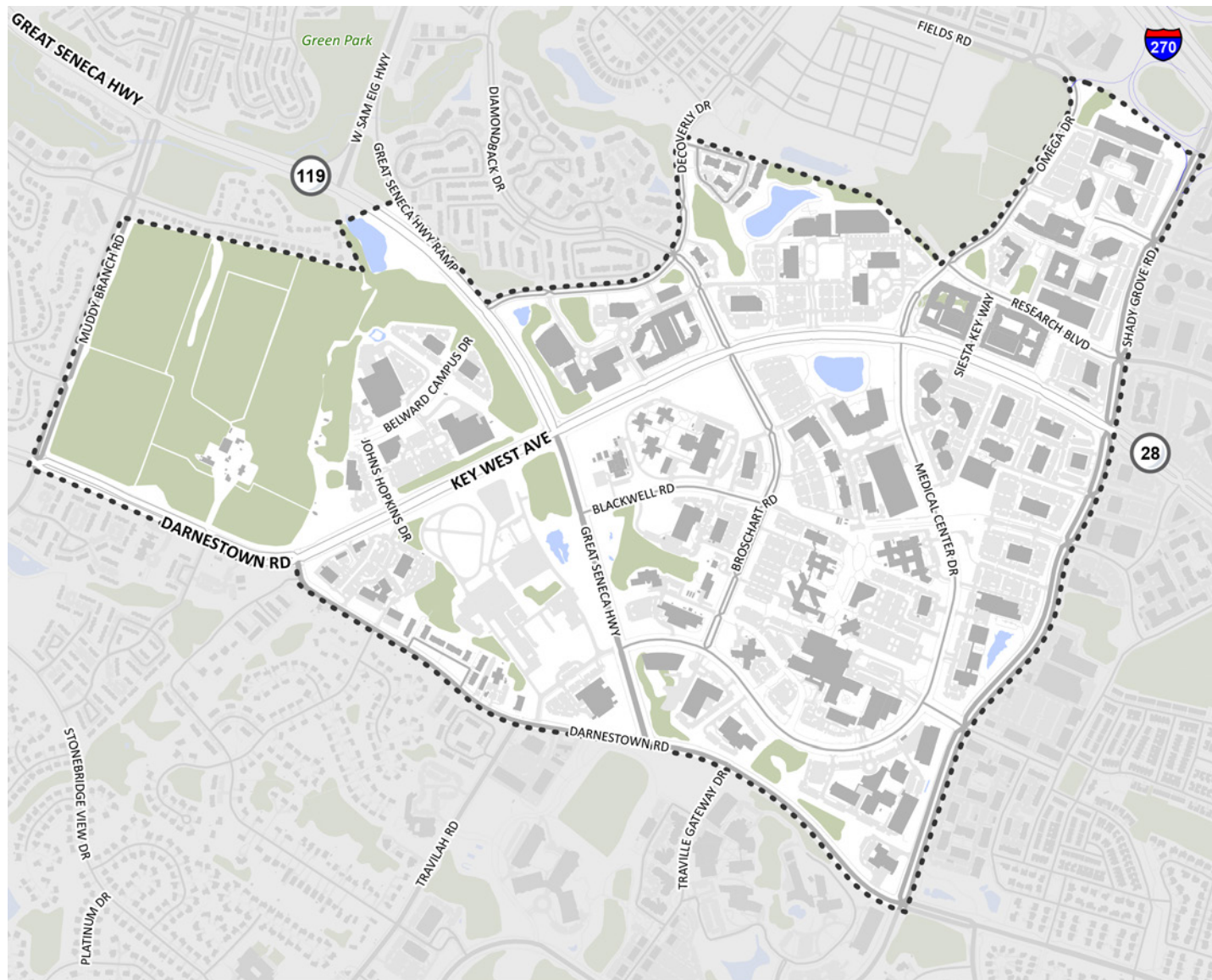
Downtown Friendship Heights



- Complete Streets Design Guide Area Boundary
- County Boundary
- Metro Stations



Downtown Life Sciences Center



The Downtown interim designation and boundary for the Life Sciences (Great Seneca) area and the designation and boundary for the Traville/USG Town Center will be reviewed when the County Council takes up the Great Seneca Plan: Connecting Life and Science.

-  Complete Streets Design Guide Area Boundary
-  County Boundary



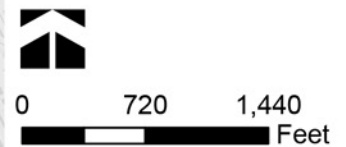
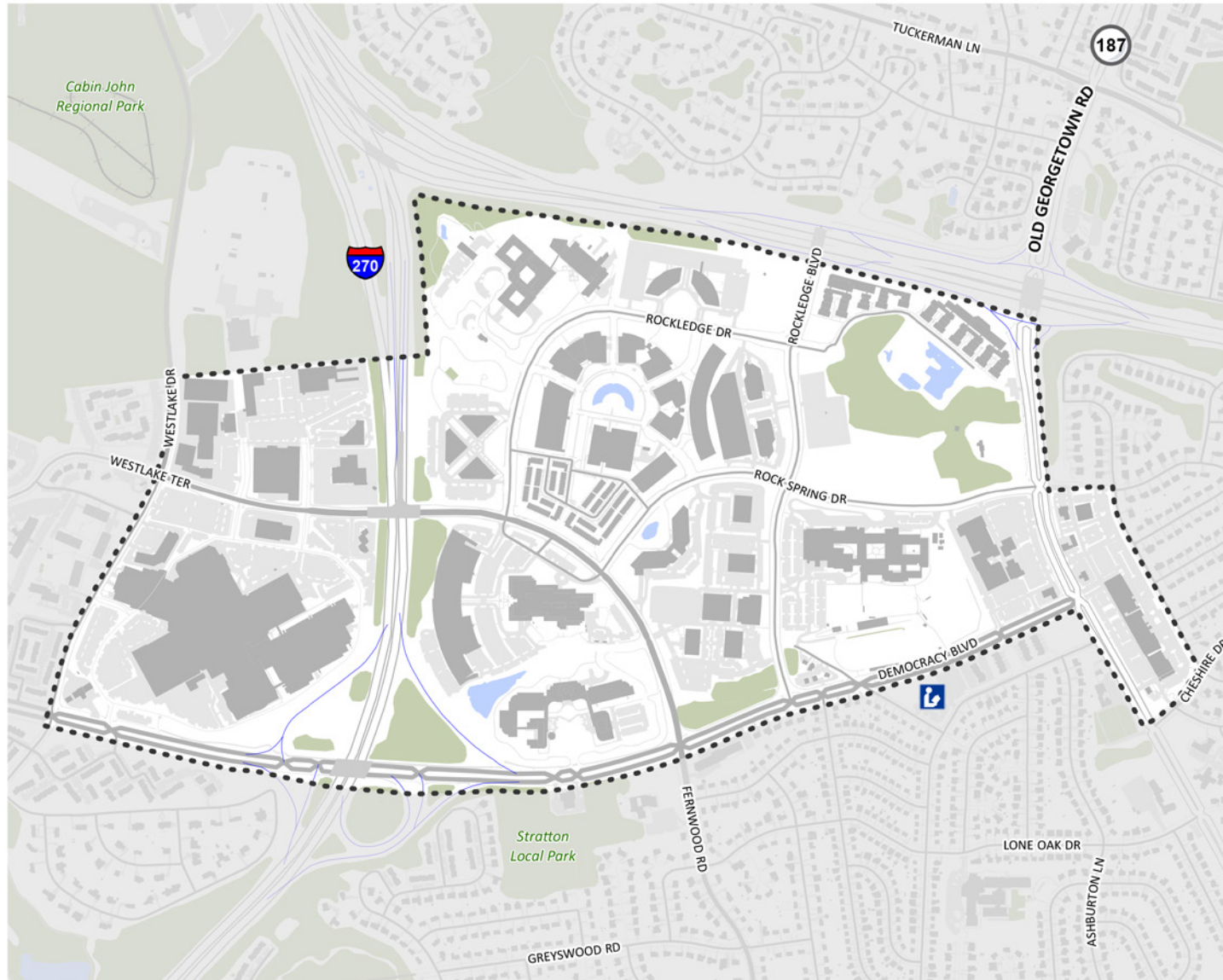
Downtown Life Sciences / FDA Village



Complete Streets Design Guide Area Boundary
 County Boundary



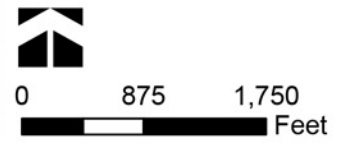
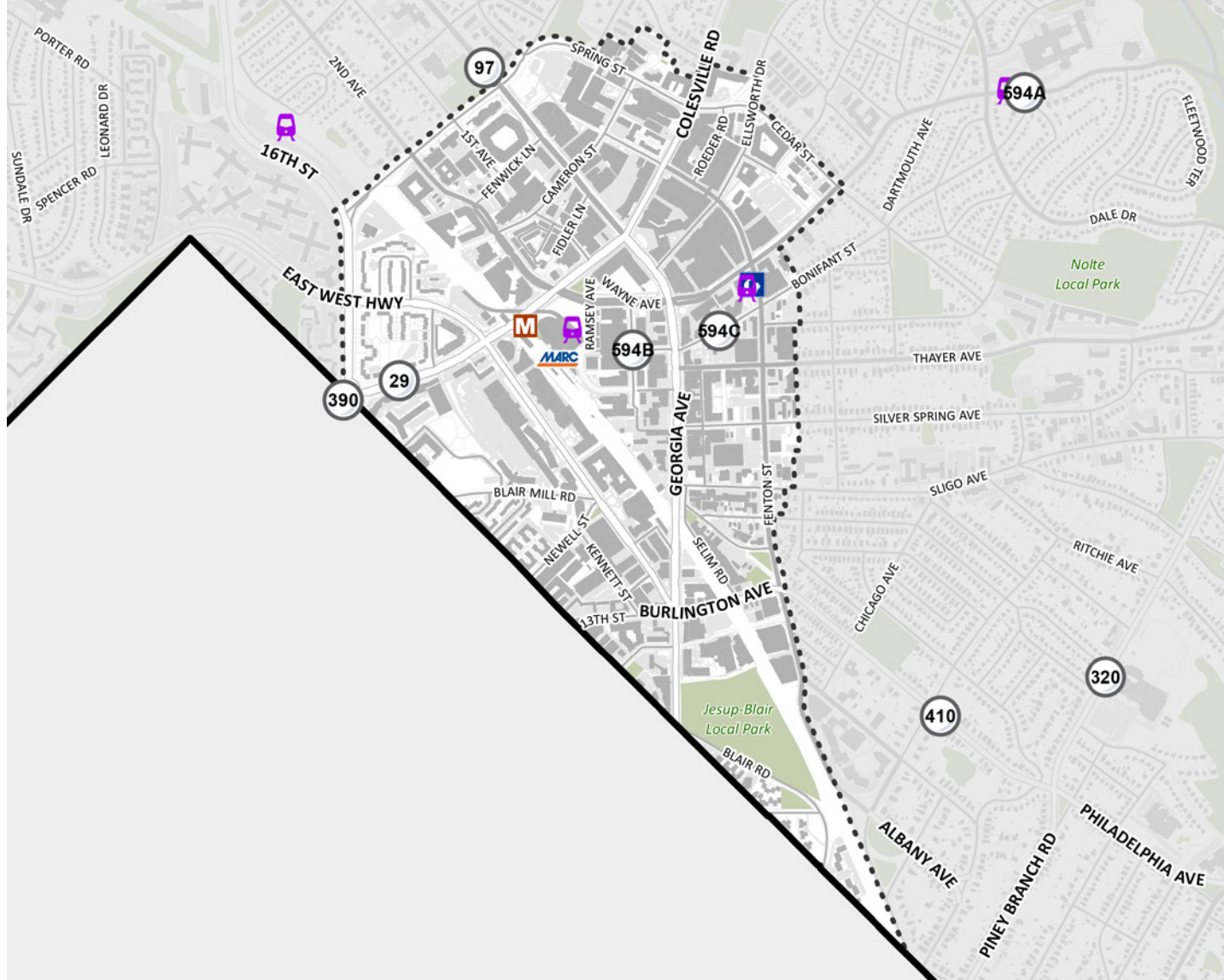
Downtown Rock Spring



- Complete Streets Design Guide Area Boundary
- County Boundary
- L Libraries



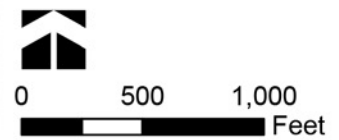
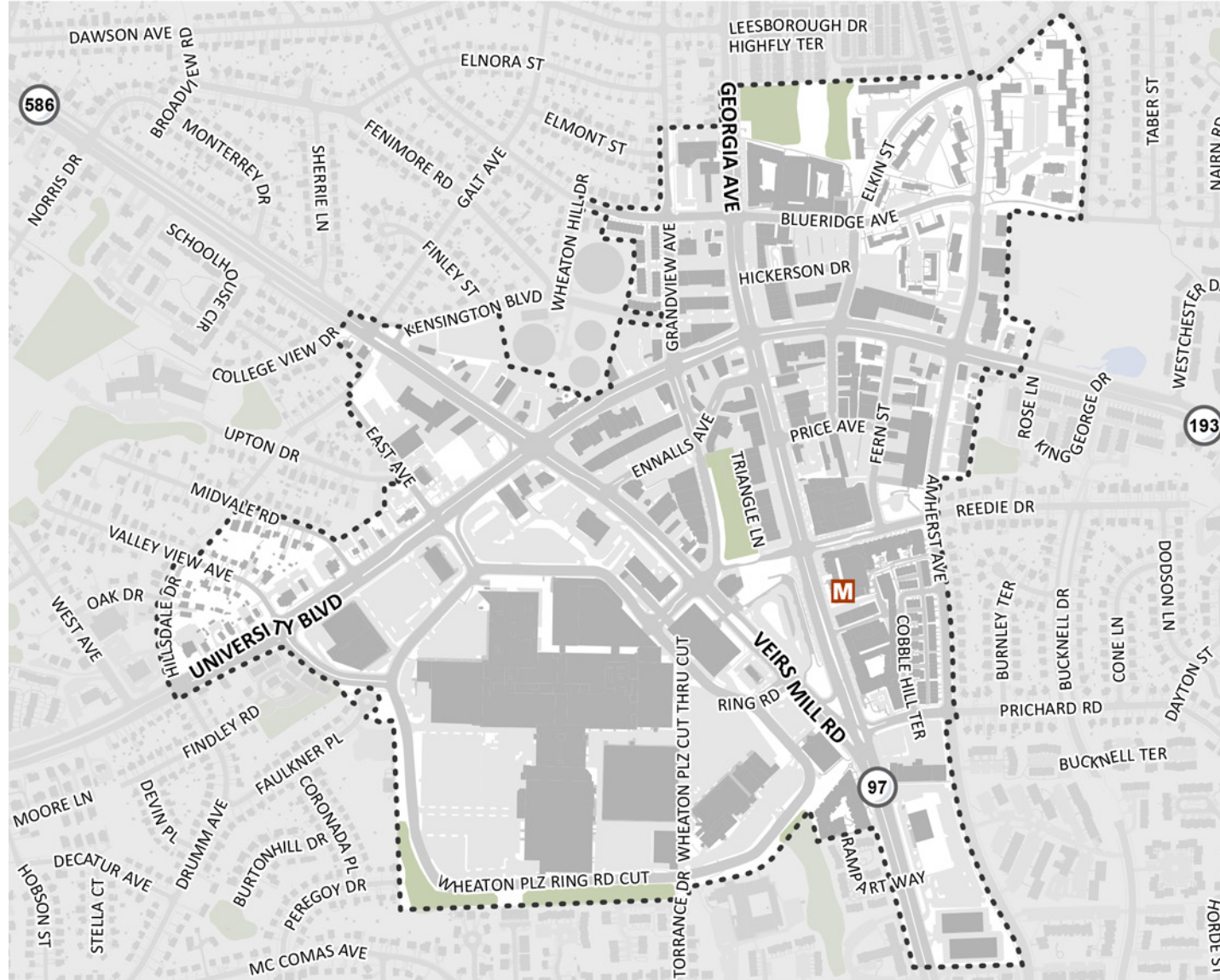
Downtown Silver Spring



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  MARC Station
-  Purple Line Stations
-  Metro Stations
-  Libraries



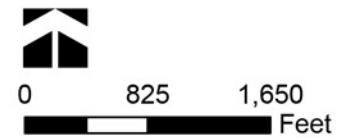
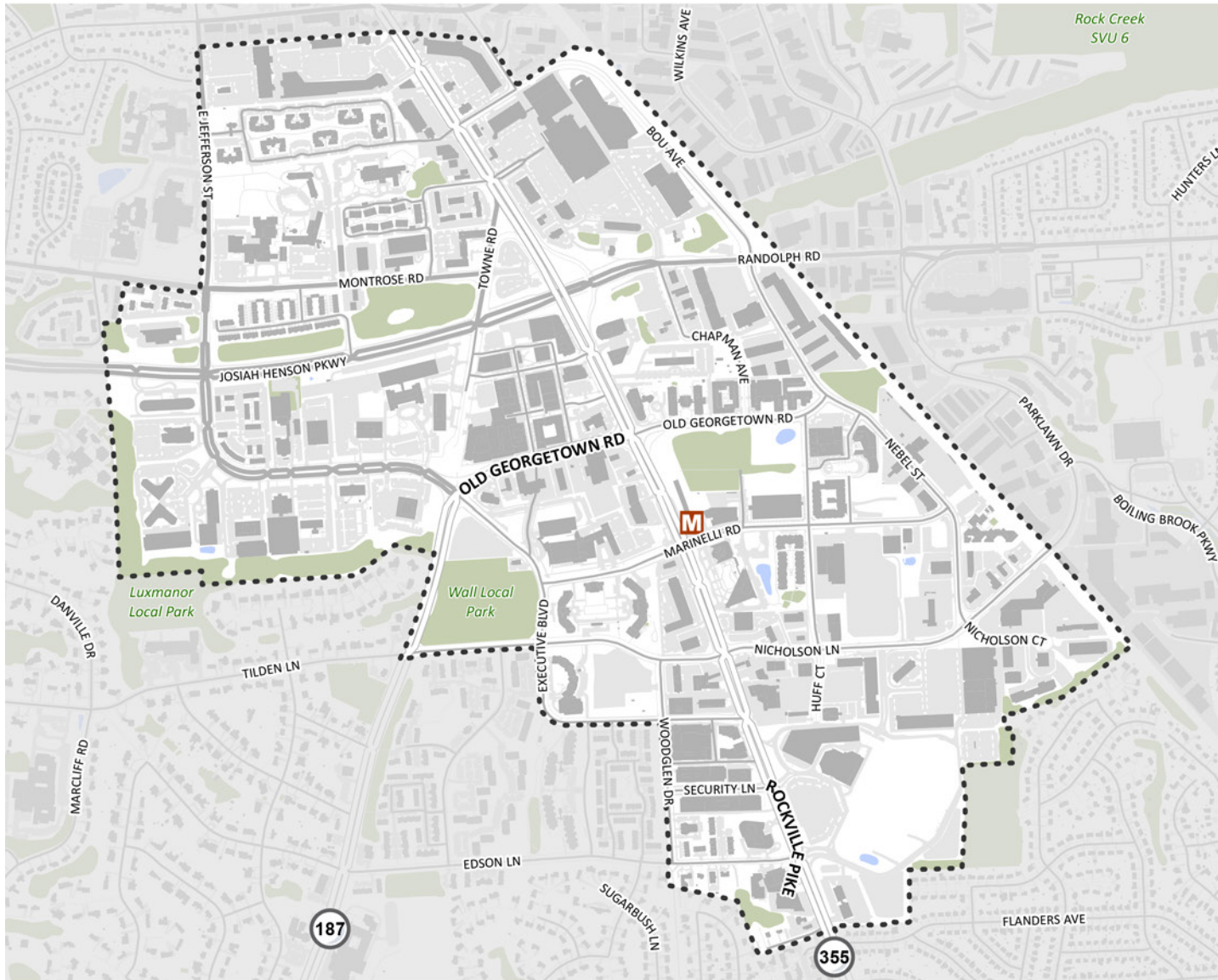
Downtown Wheaton



- Complete Streets Design Guide Area Boundary
- County Boundary
- M Metro Stations



Downtown White Flint



- Complete Streets Design Guide Area Boundary
- County Boundary
- M Metro Stations



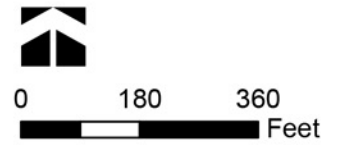
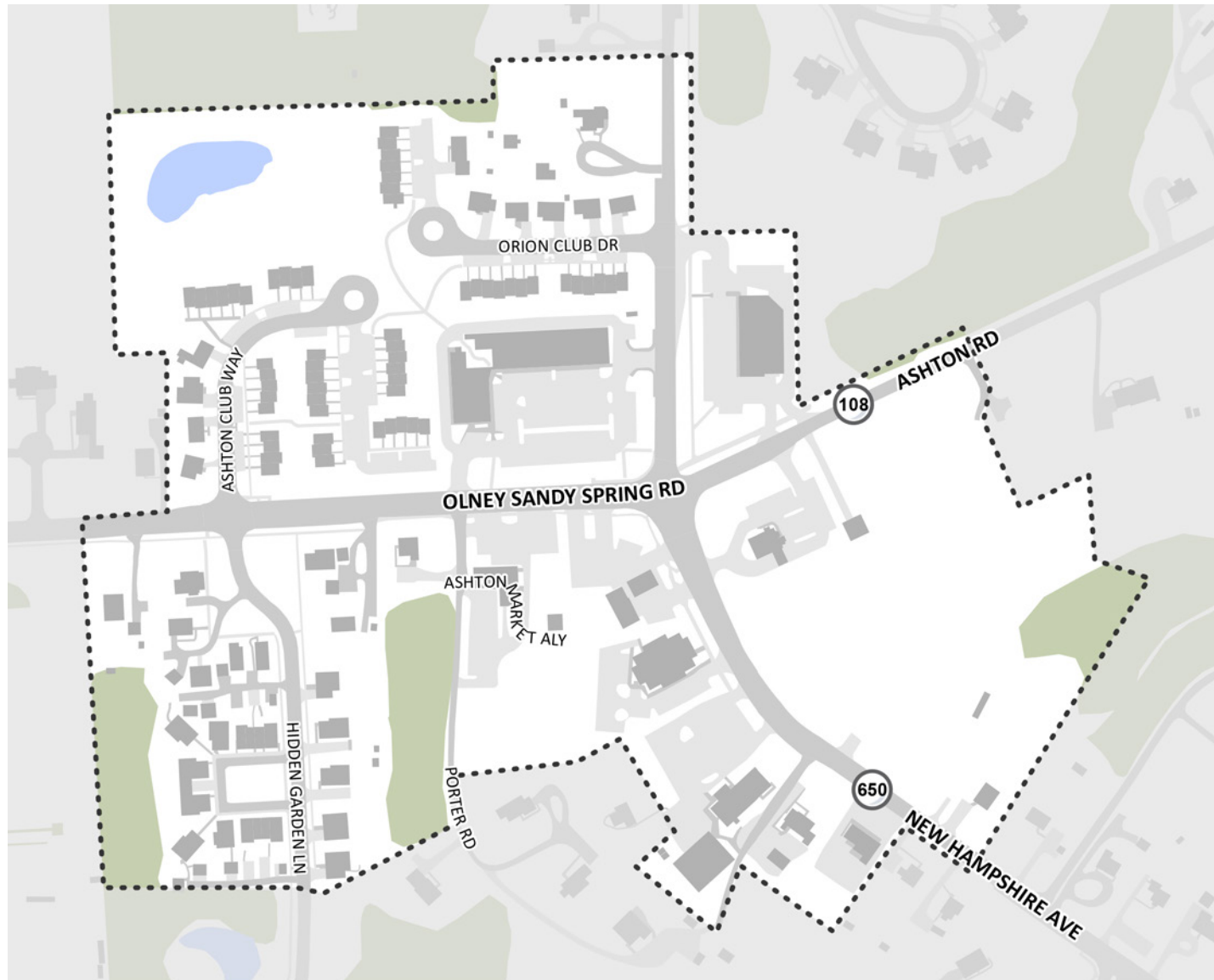
16th Street Station Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- Purple Line Station



Ashton Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary



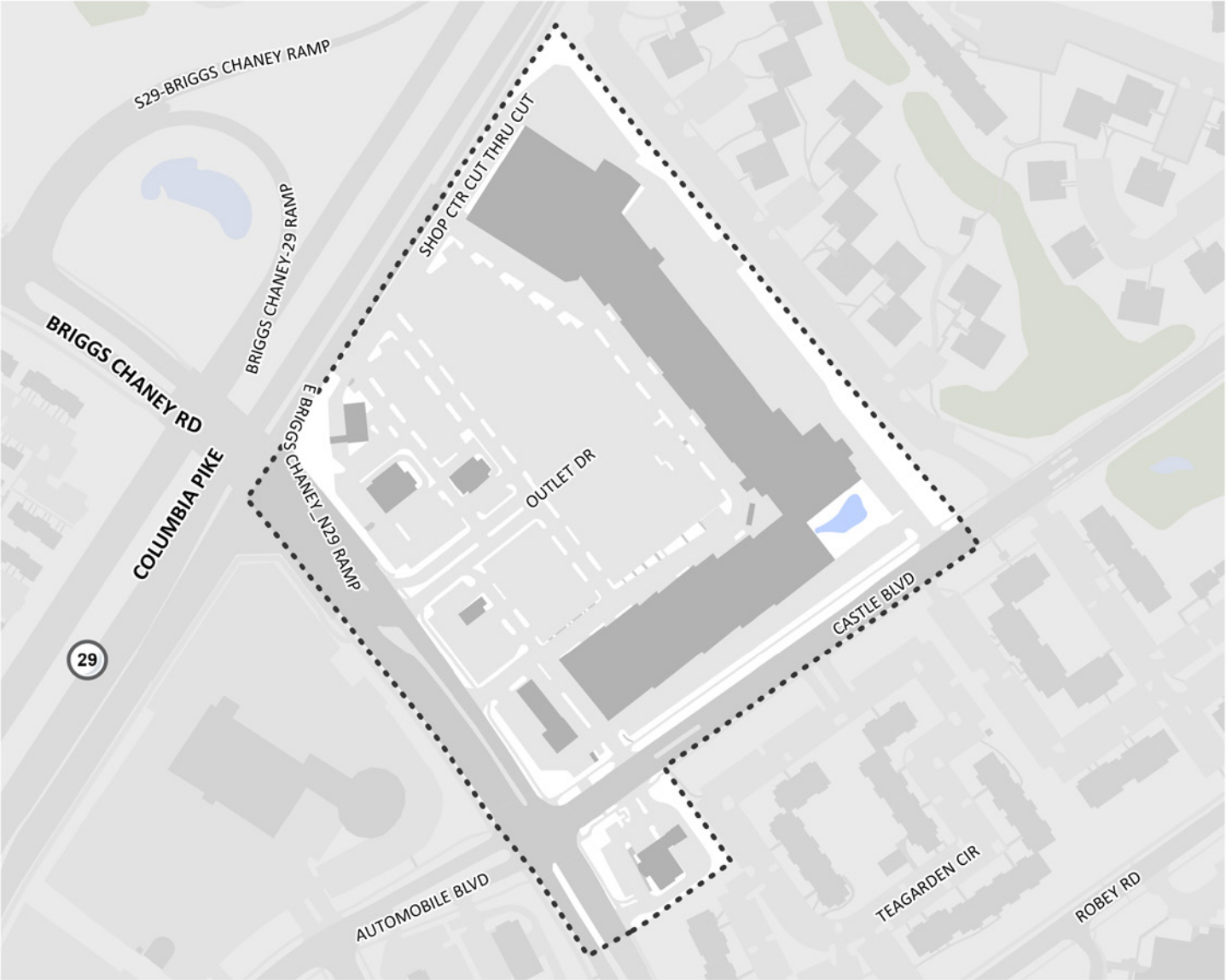
Aspen Hill Town Center



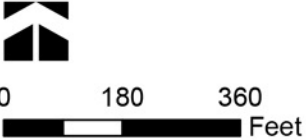
- Complete Streets Design Guide Area Boundary
- County Boundary
- 📖 Libraries





Briggs Chaney Town Center



The designation and area boundary for Briggs Chaney Town Center will be reviewed when the County Council takes up the Fairland and Briggs Chaney Master Plan.

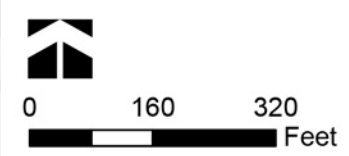


 Complete Streets Design Guide Area Boundary

 County Boundary



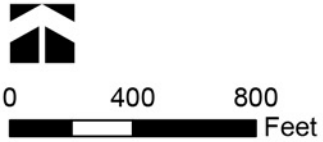
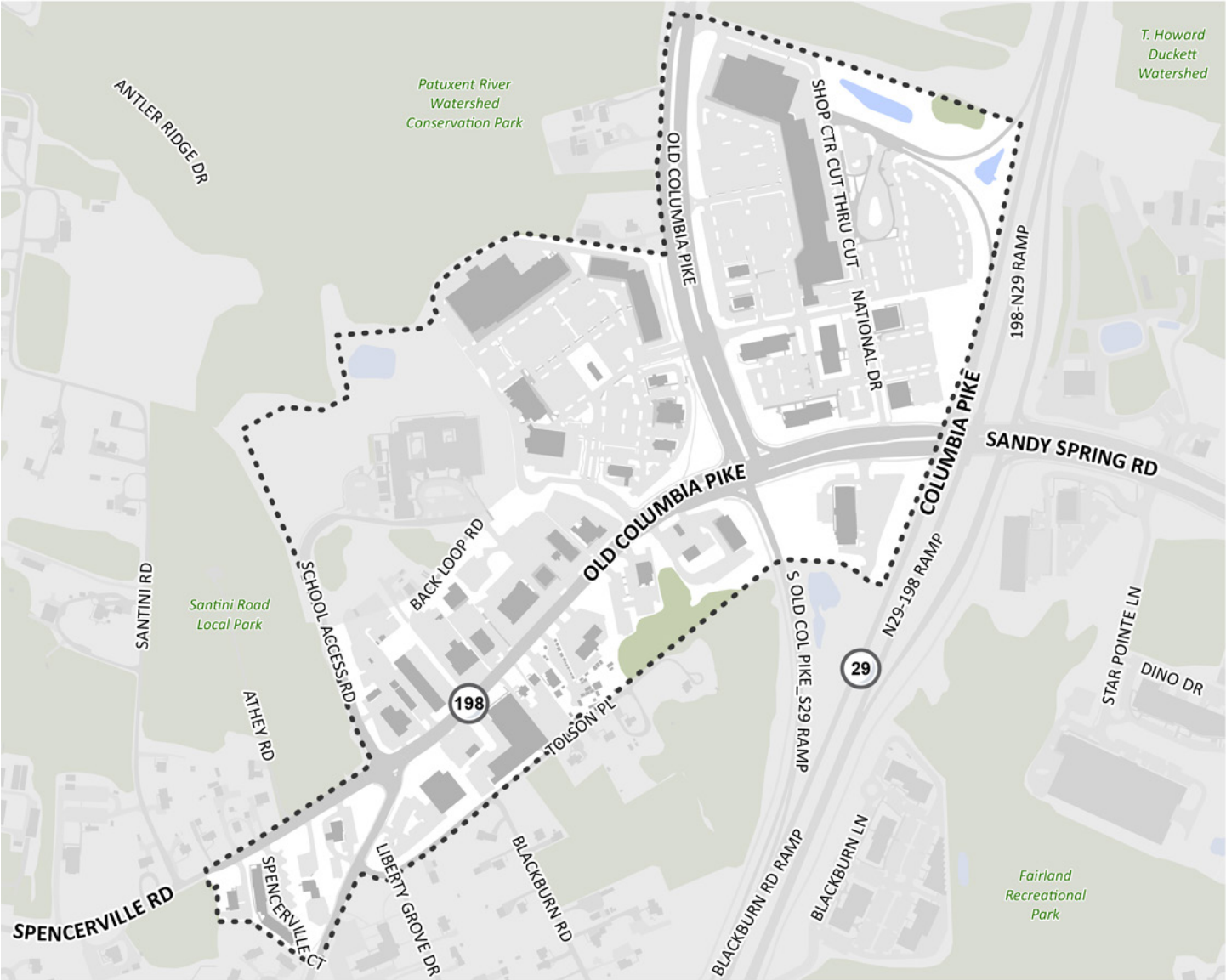
Burnt Mills Town Center



Complete Streets Design Guide Area Boundary
 County Boundary

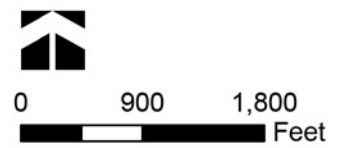
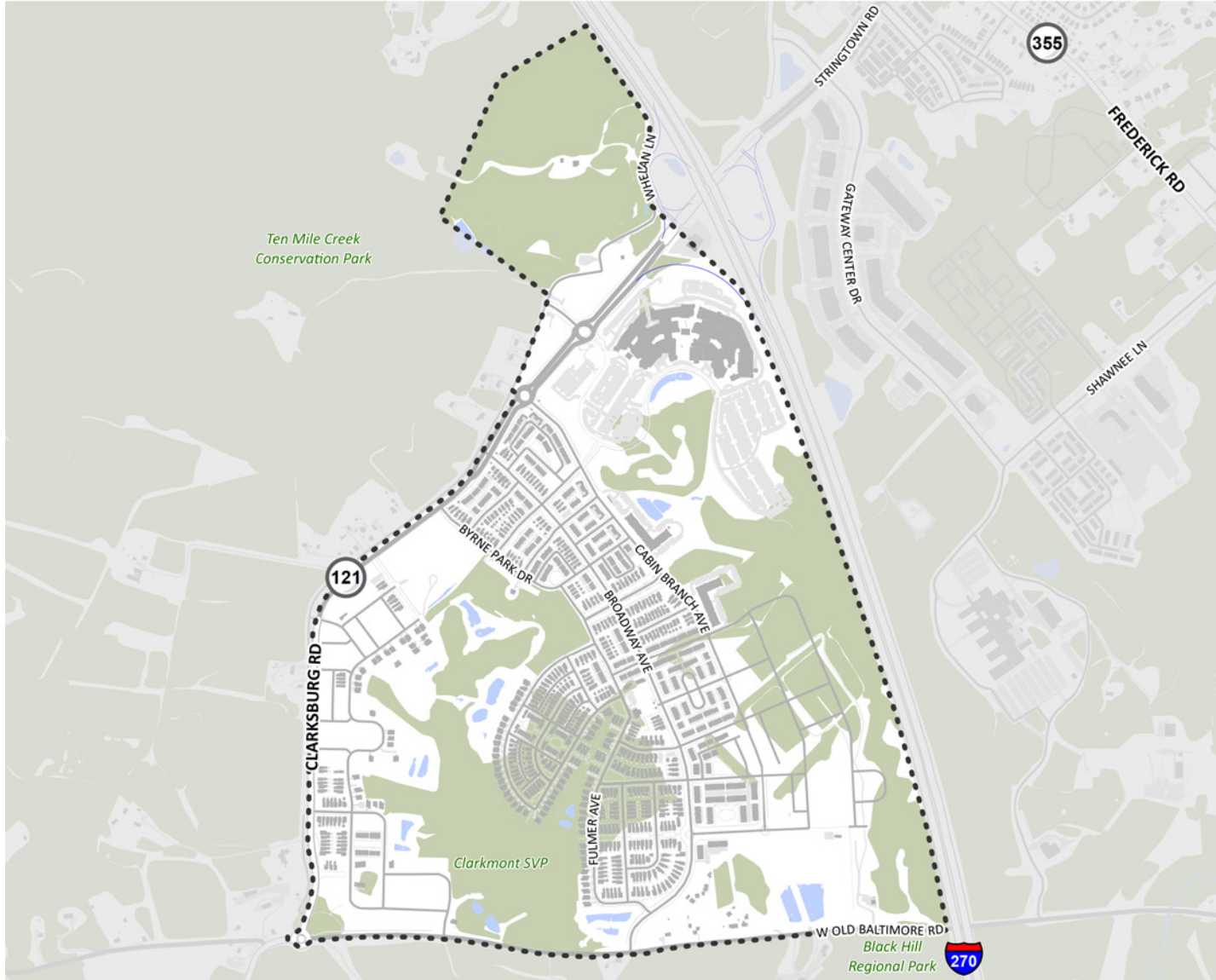


Burtonsville Town Center



- Complete Streets Design
- County Boundary

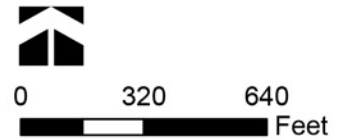
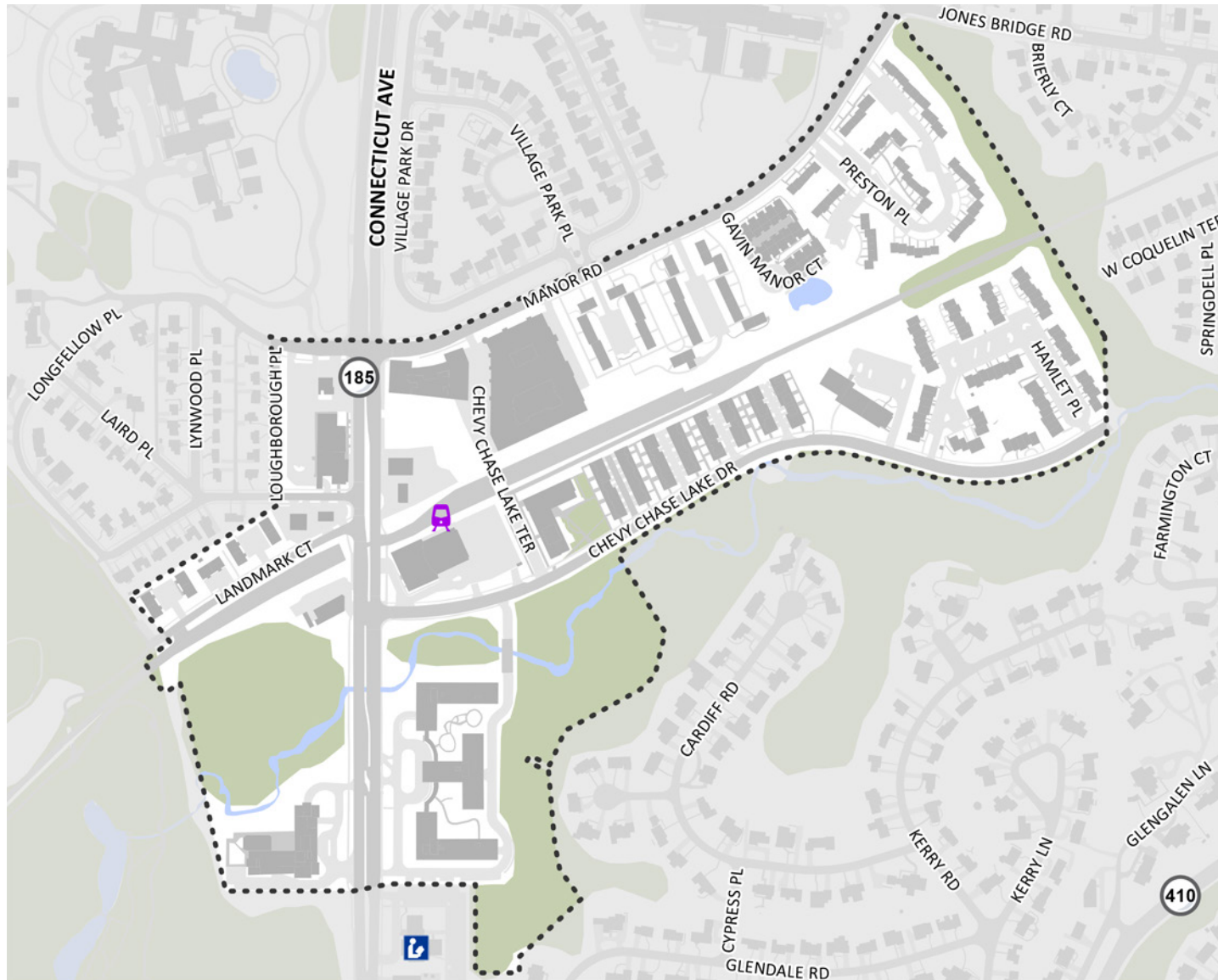
Cabin Branch Town Center







-  Complete Streets Design Guide Area Boundary
-  County Boundary



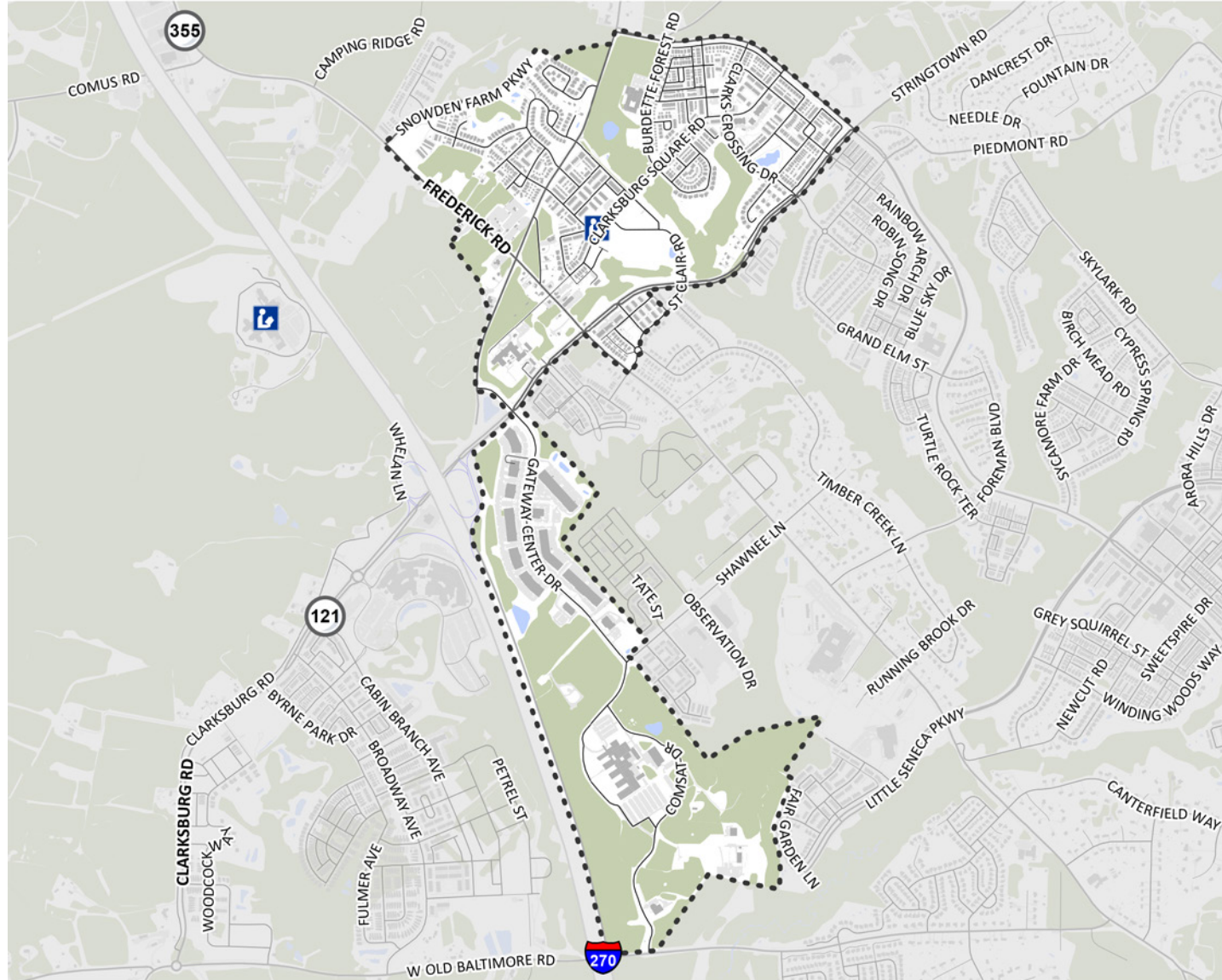
Chevy Chase Lake Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Purple Line Station
-  Libraries



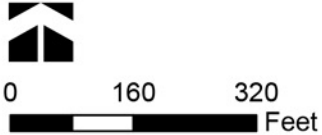
Clarksburg Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- Libraries



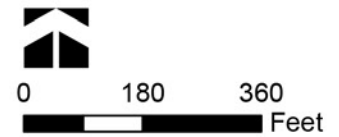
Cloverly Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary



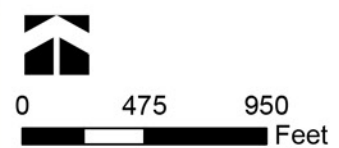
Colesville Town Center



 Complete Streets Design Guide Area Boundary  County Boundary



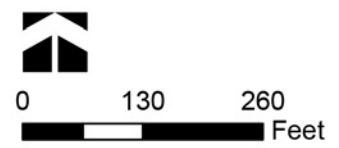
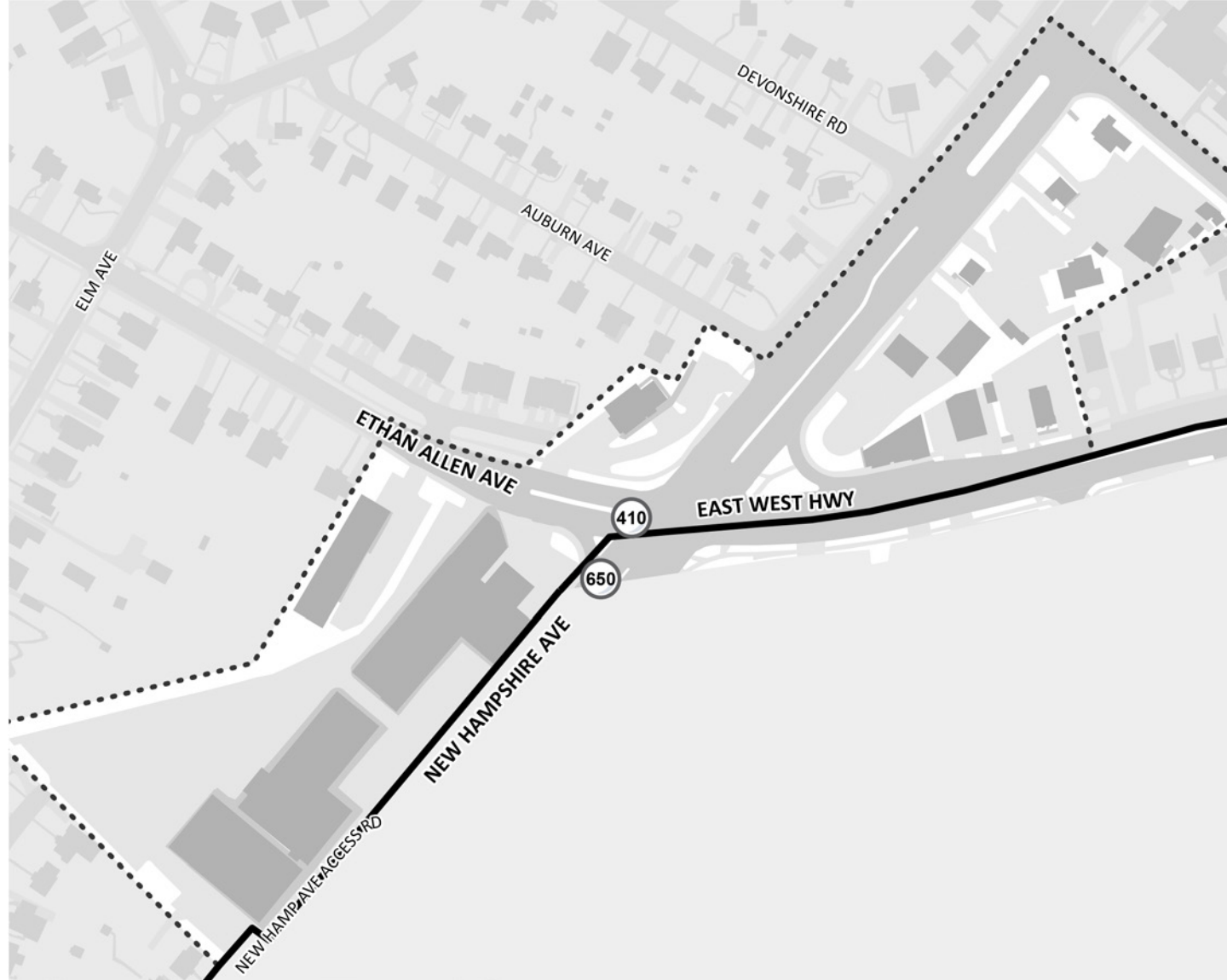
Damascus Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Libraries



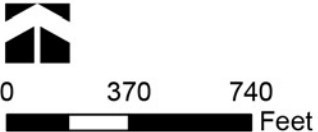
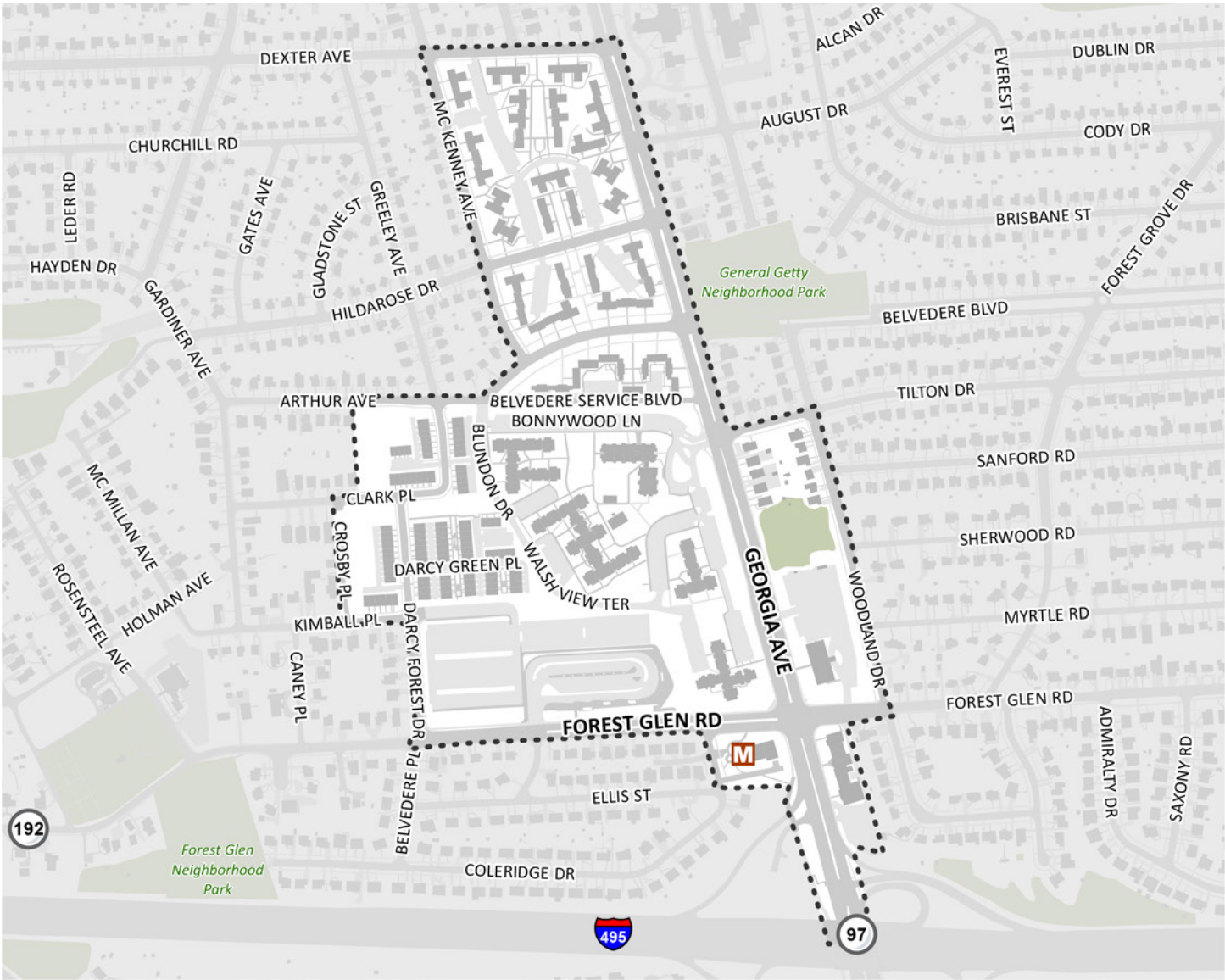
Ethan Allen Avenue Gateway Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary



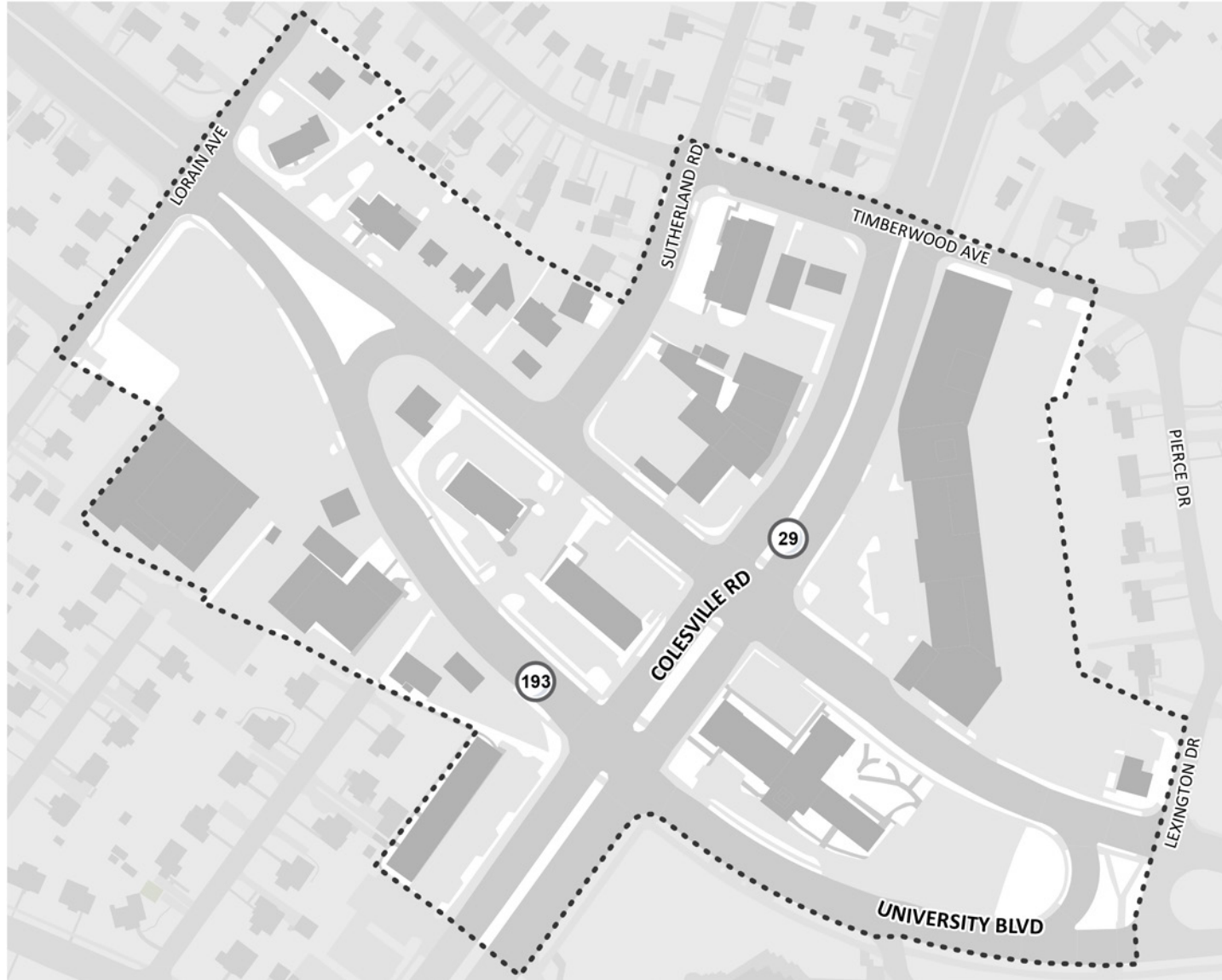
Forest Glen Town Center



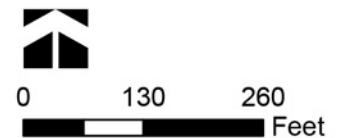
- Complete Streets Design Guide Area Boundary
- County Boundary
- Metro Stations



Four Corners Town Center



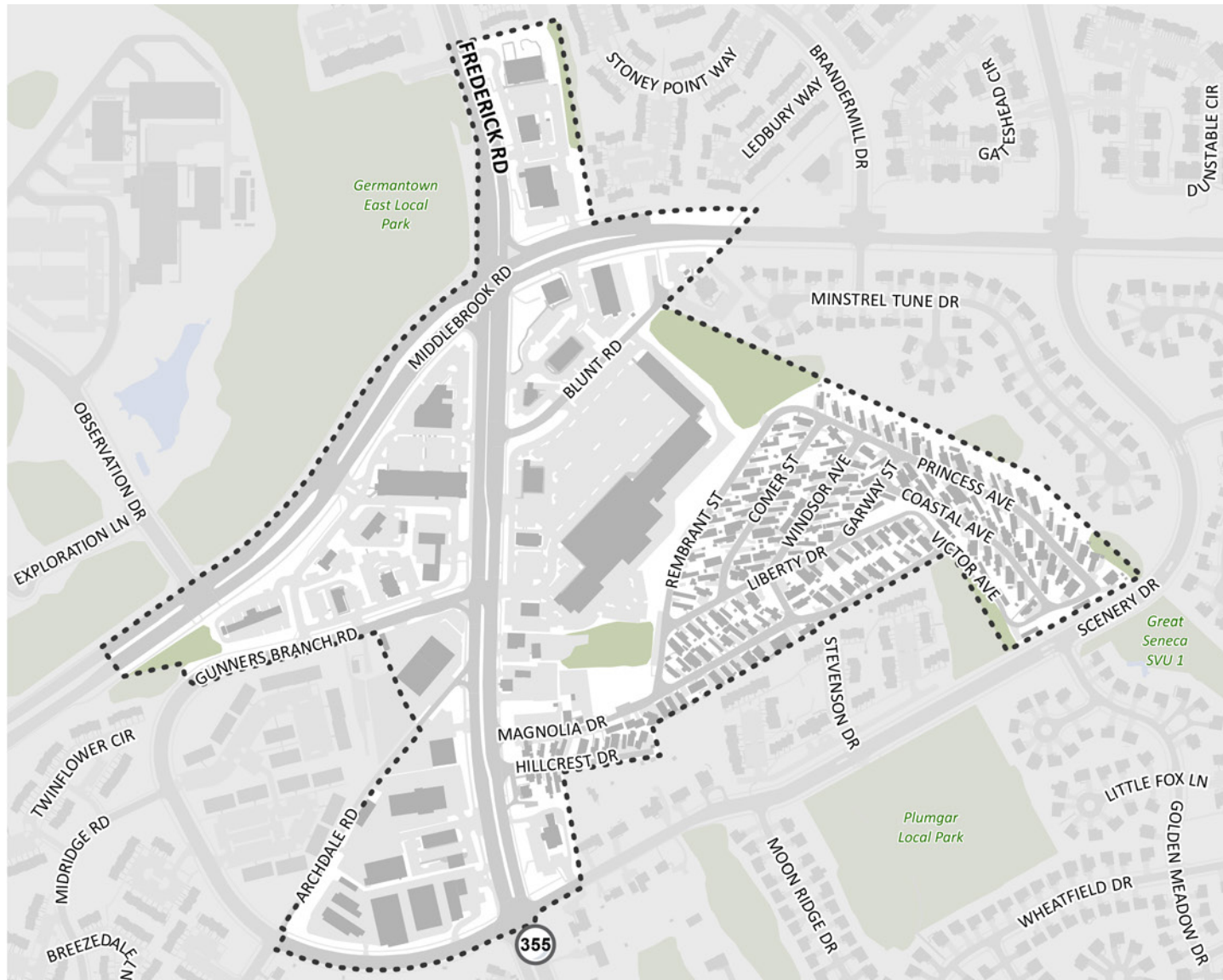
The designation and area boundary for Four Corners Town Center will be reviewed when the County Council takes up the University Boulevard Corridor Plan.





- Complete Streets Design Guide Area Boundary
- County Boundary



Foxchapel Town Center

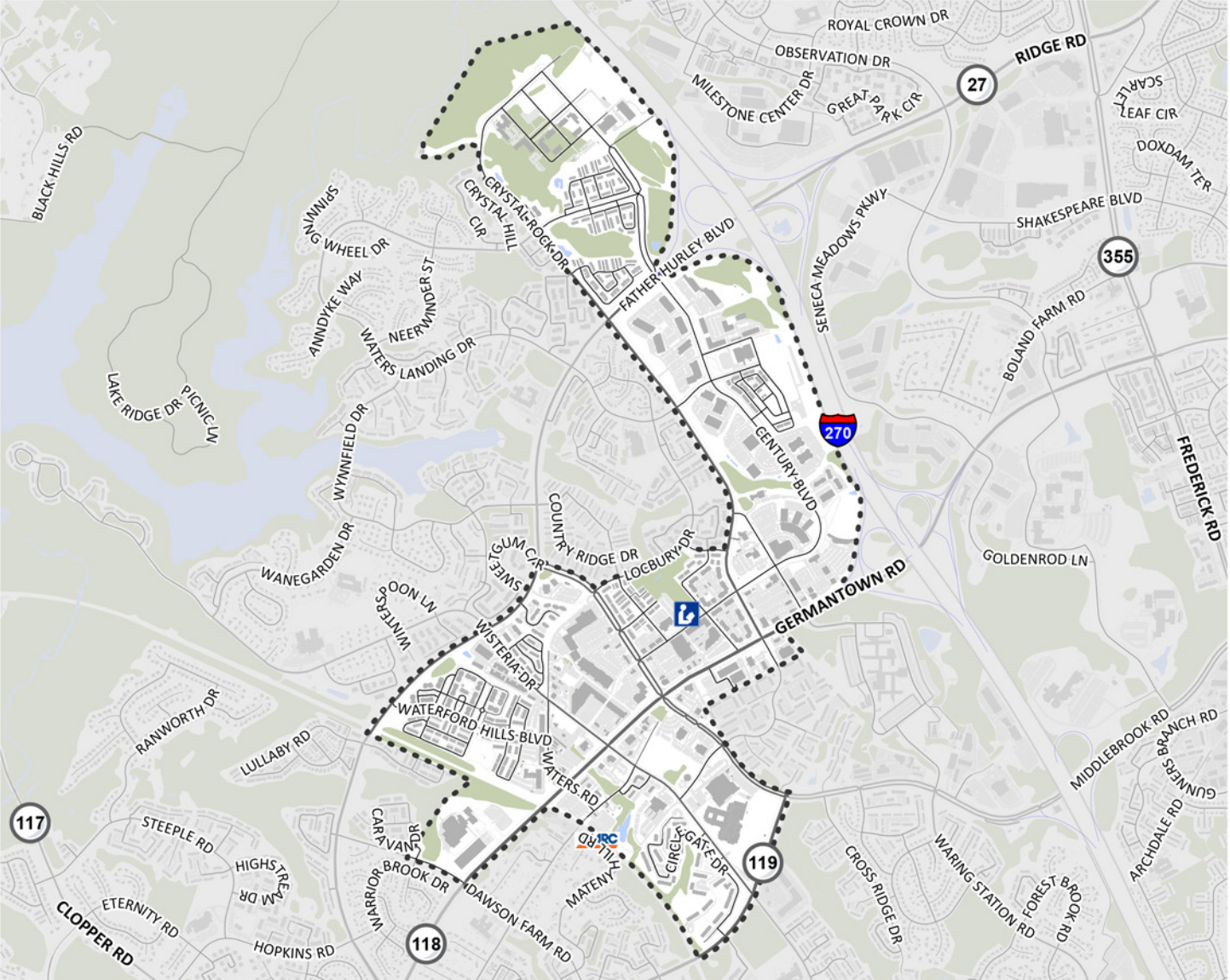


 Complete Streets Design Guide Area Boundary

 County Boundary



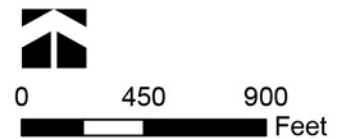
Germantown Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- MARC Station
- Libraries



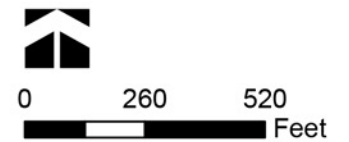
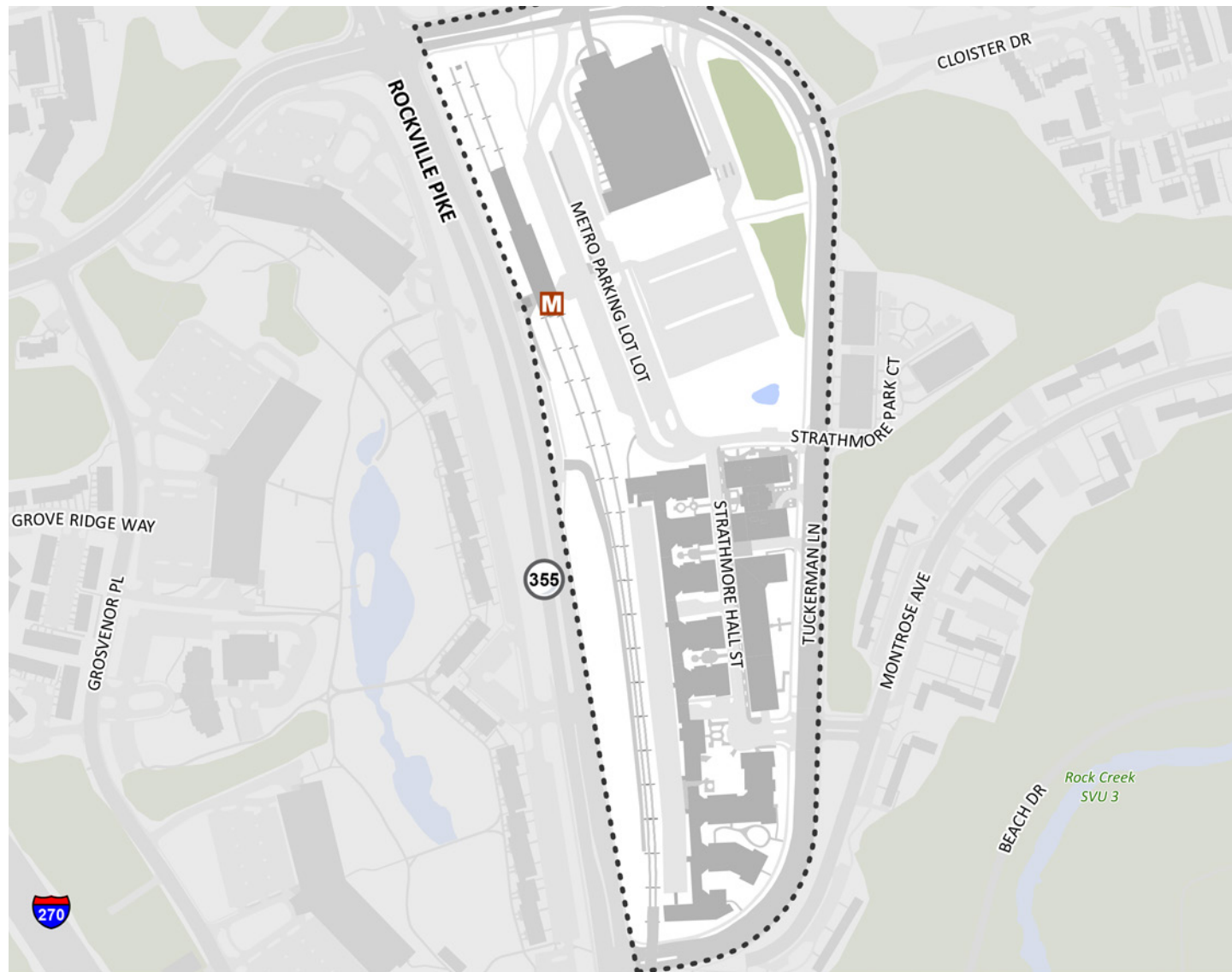
Glenmont Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- M Metro Stations



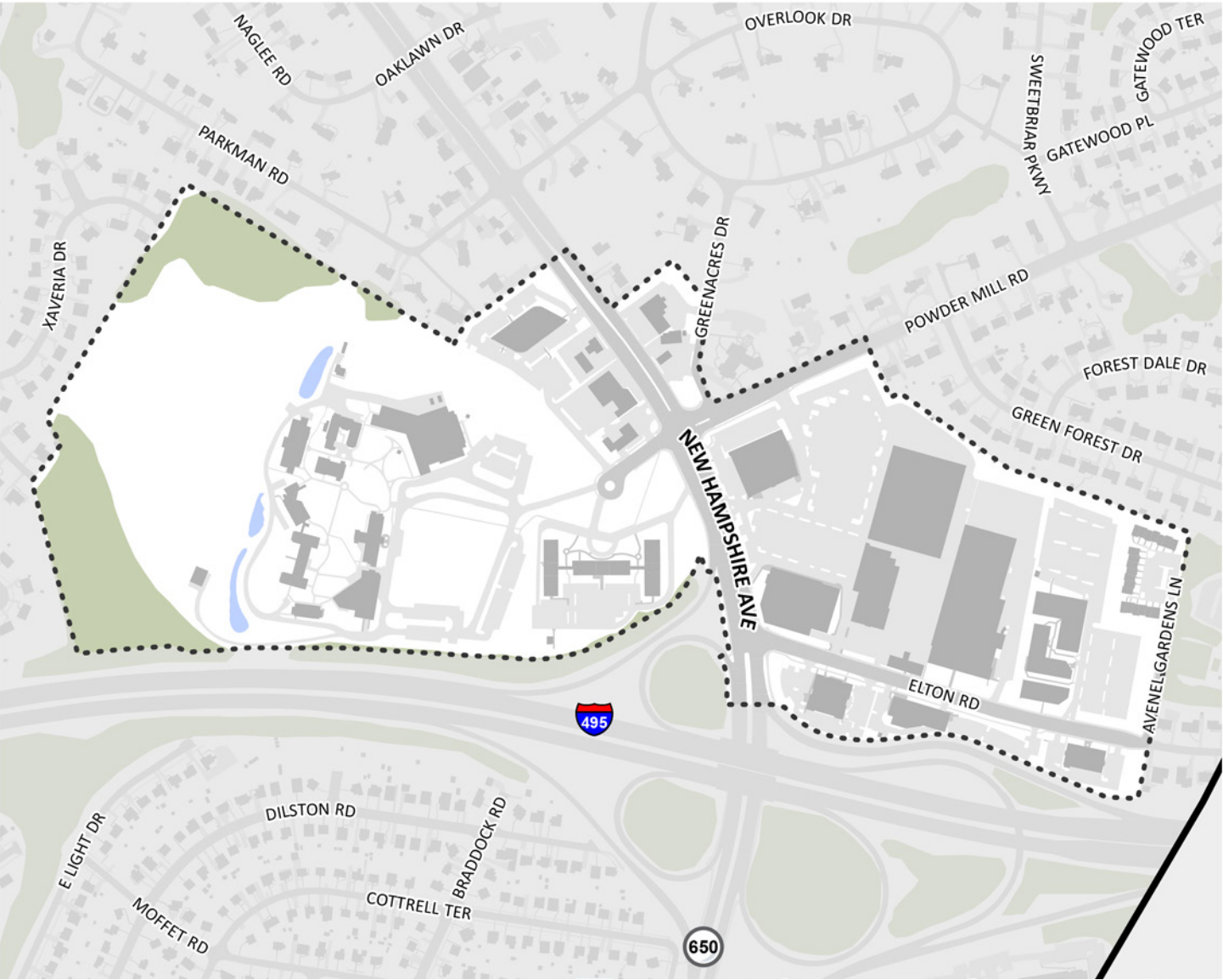
Grosvenor Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- M Metro Stations



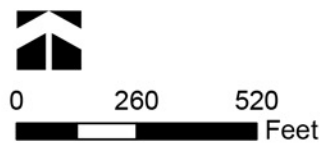
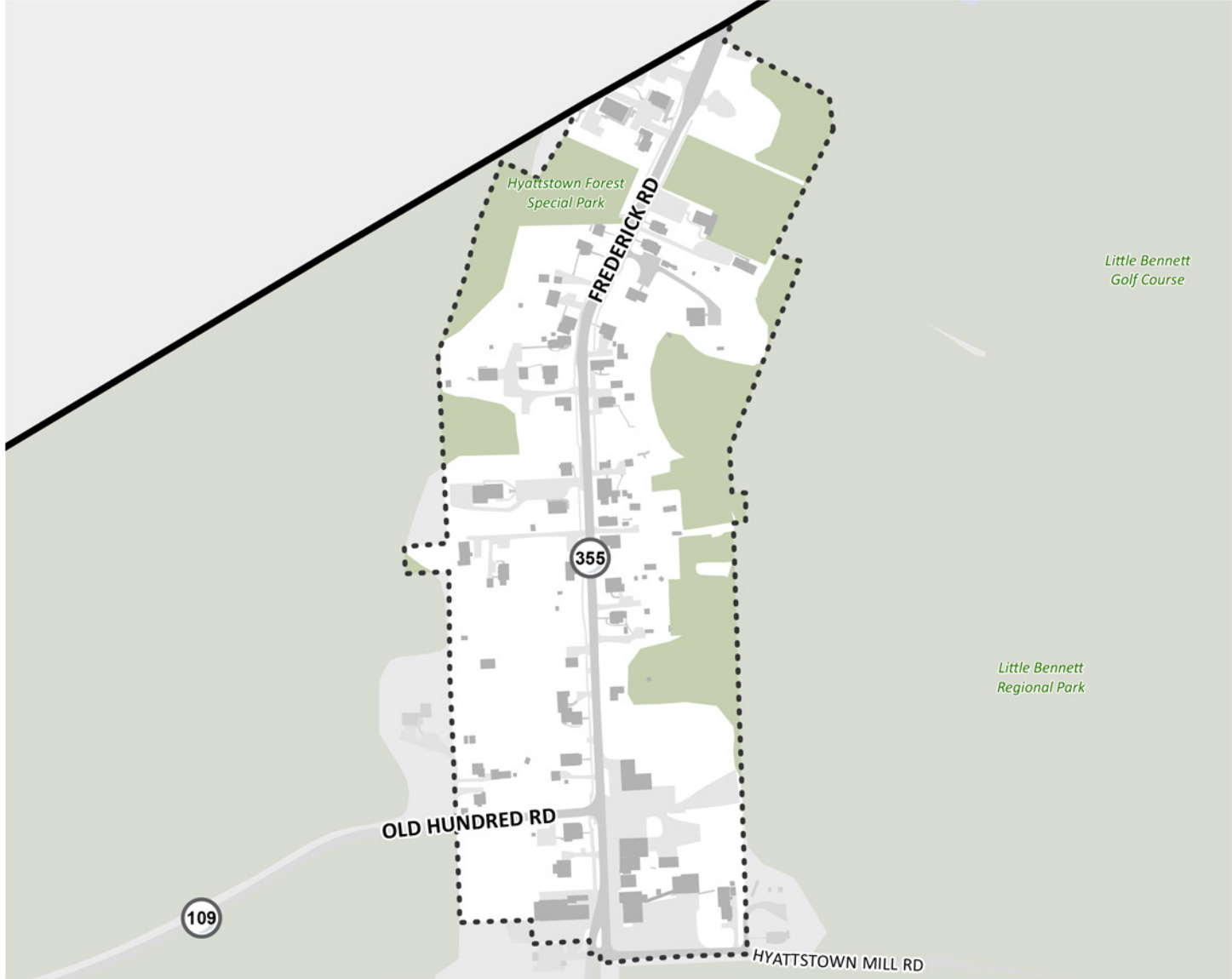
Hillendale Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



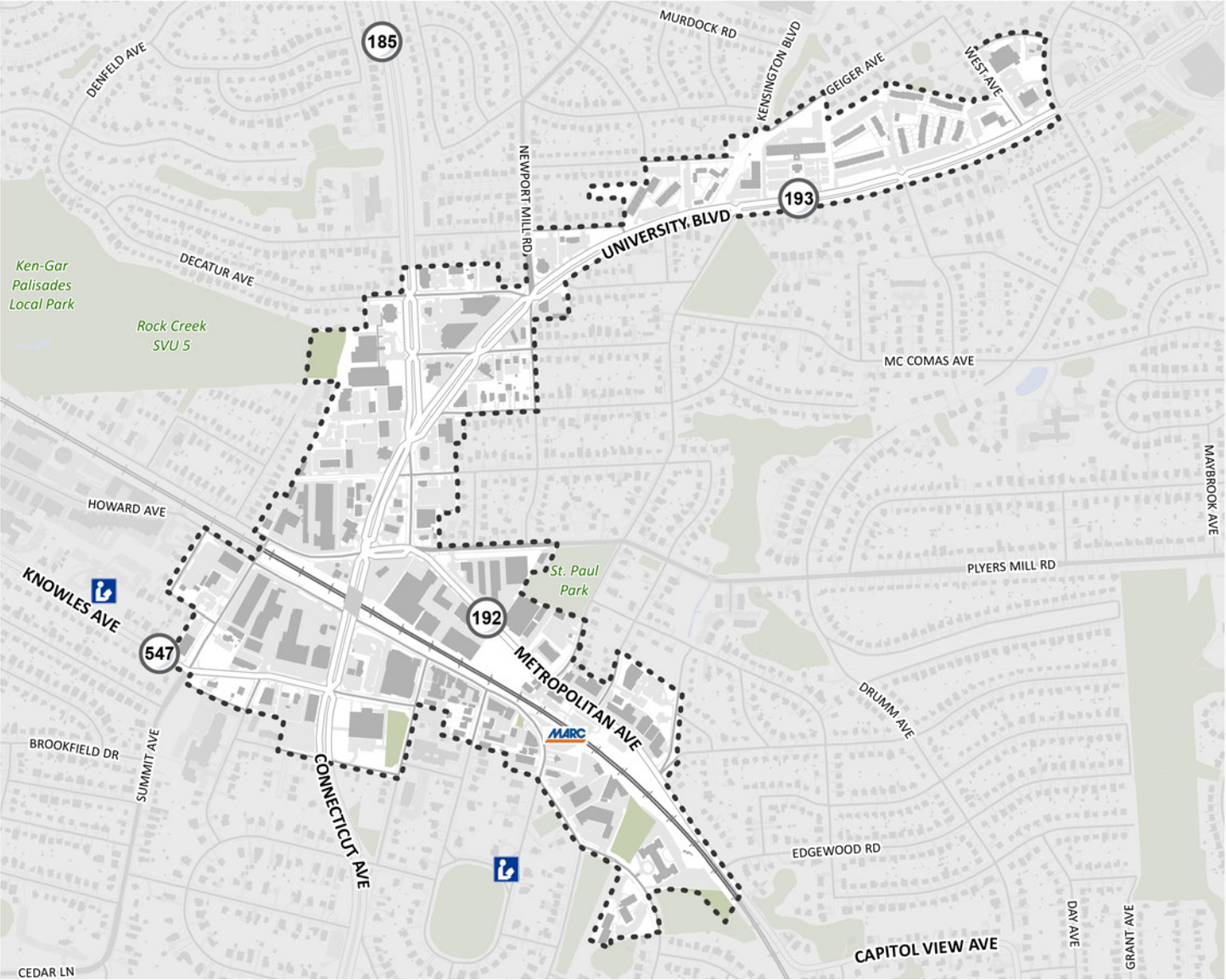
Hyattstown Town Center







 Complete Streets Design Guide Area Boundary  County Boundary



Kensington Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  MARC Station
-  Libraries



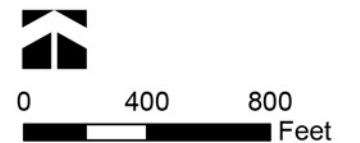
Layhill Town Center







-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Libraries



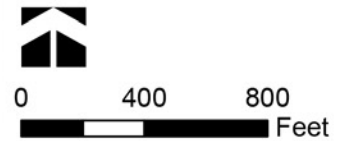
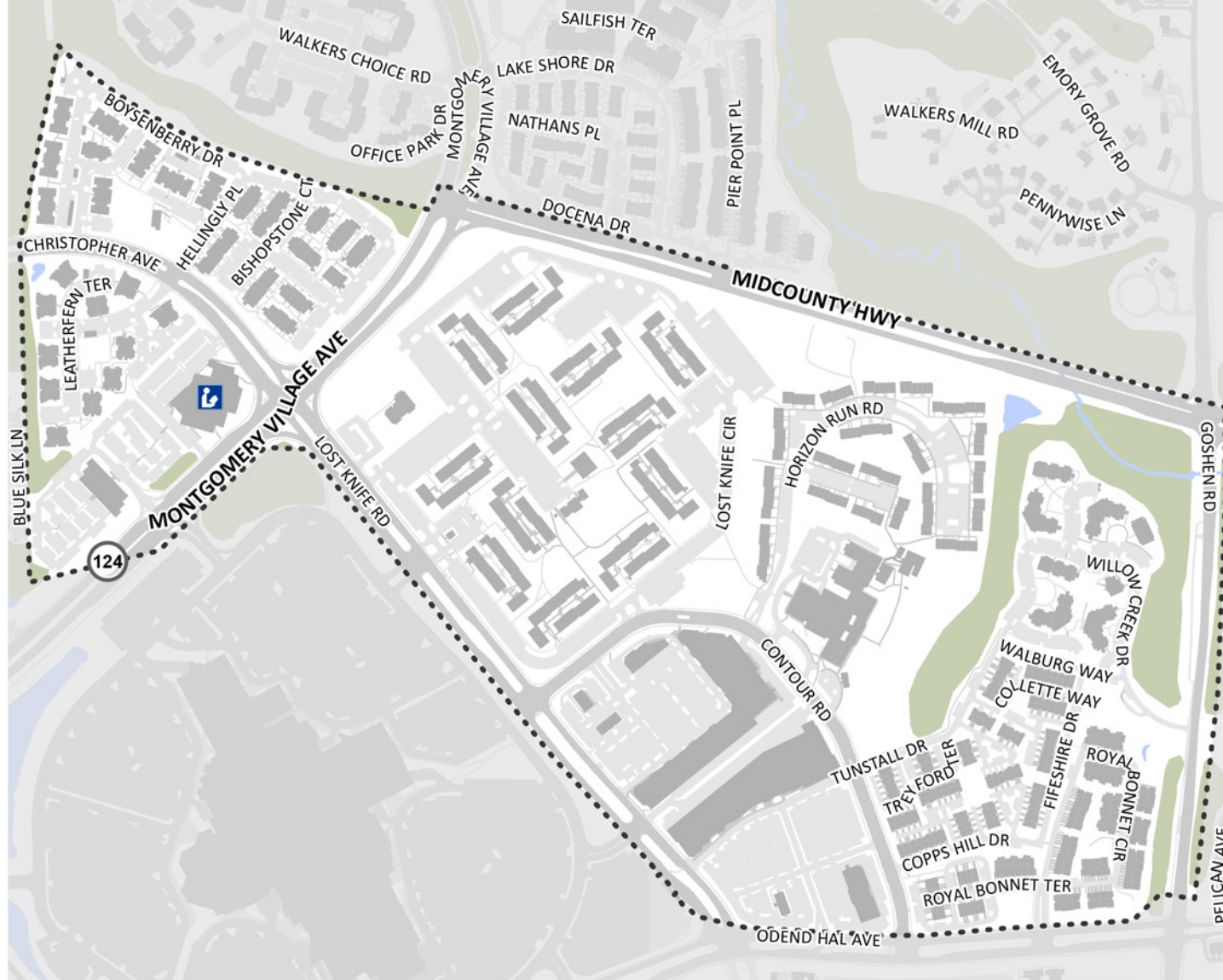
Long Branch Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Purple Line Station
-  Libraries



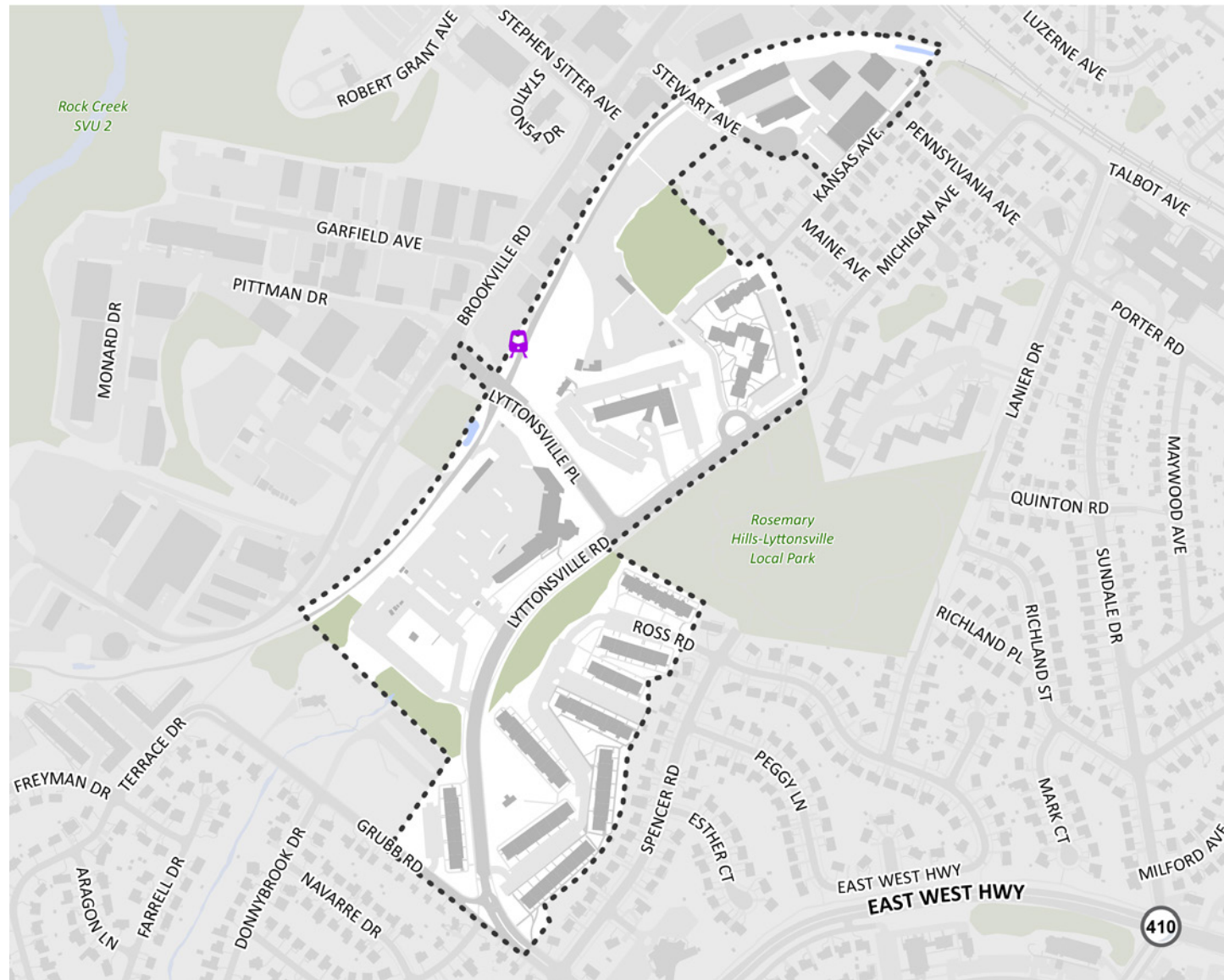
Lower Village Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- Libraries



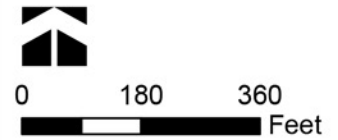
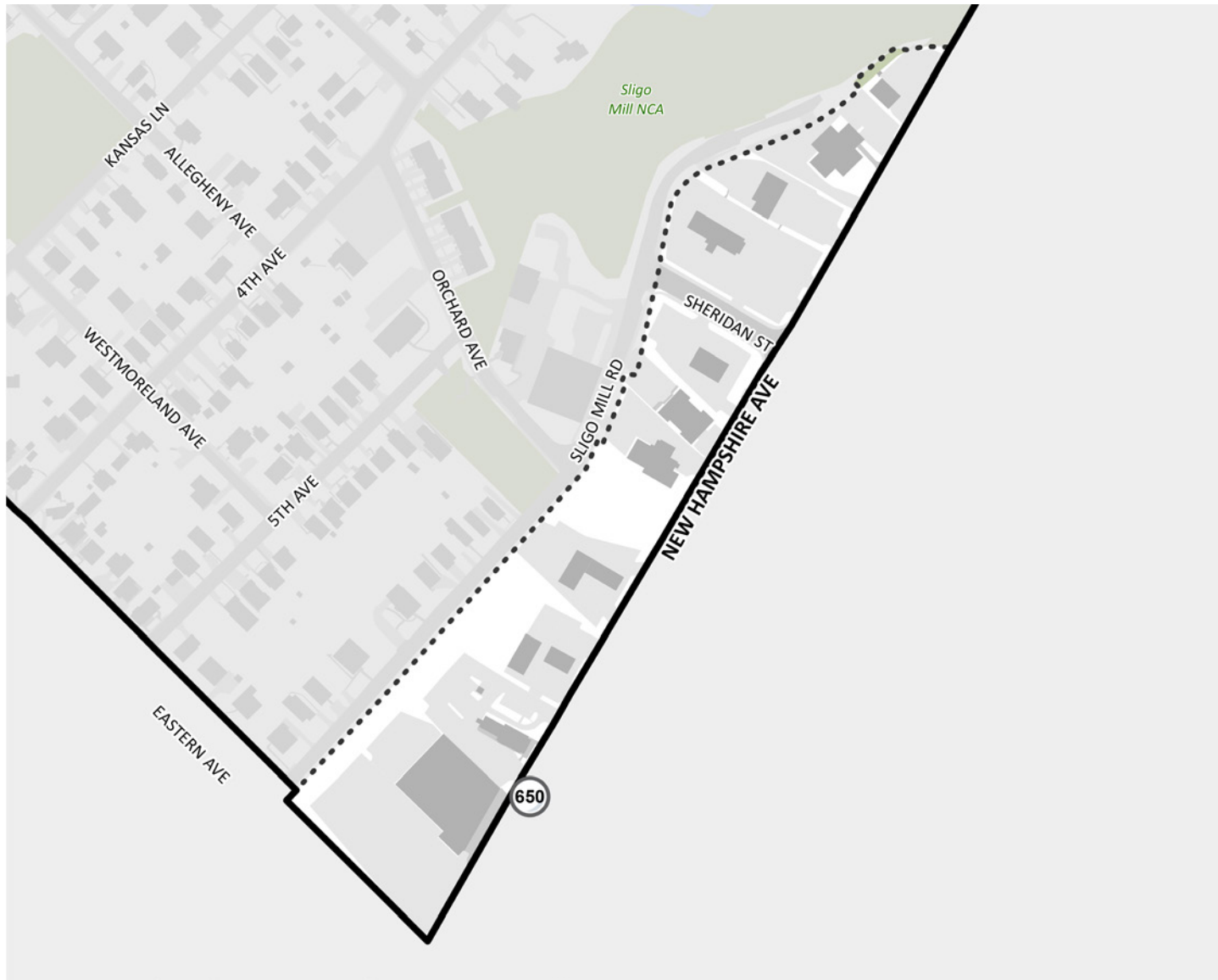
Lyttonsville Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Purple Line Station



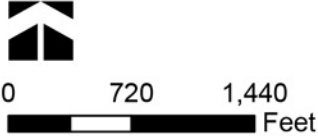
Maryland Gateway Town Center



 Complete Streets Design Guide Area Boundary  County Boundary



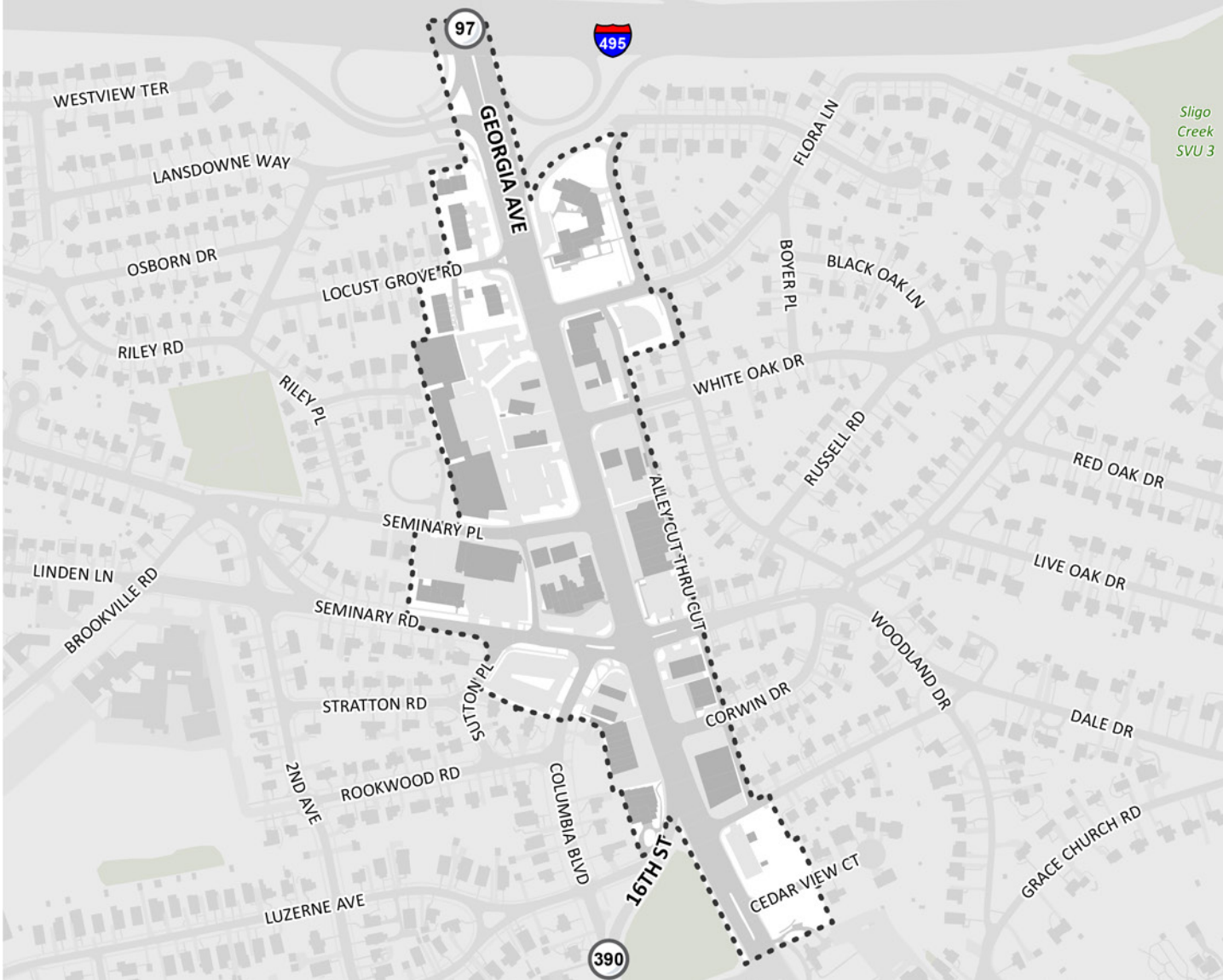
Milestone Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



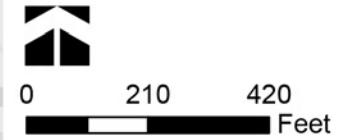
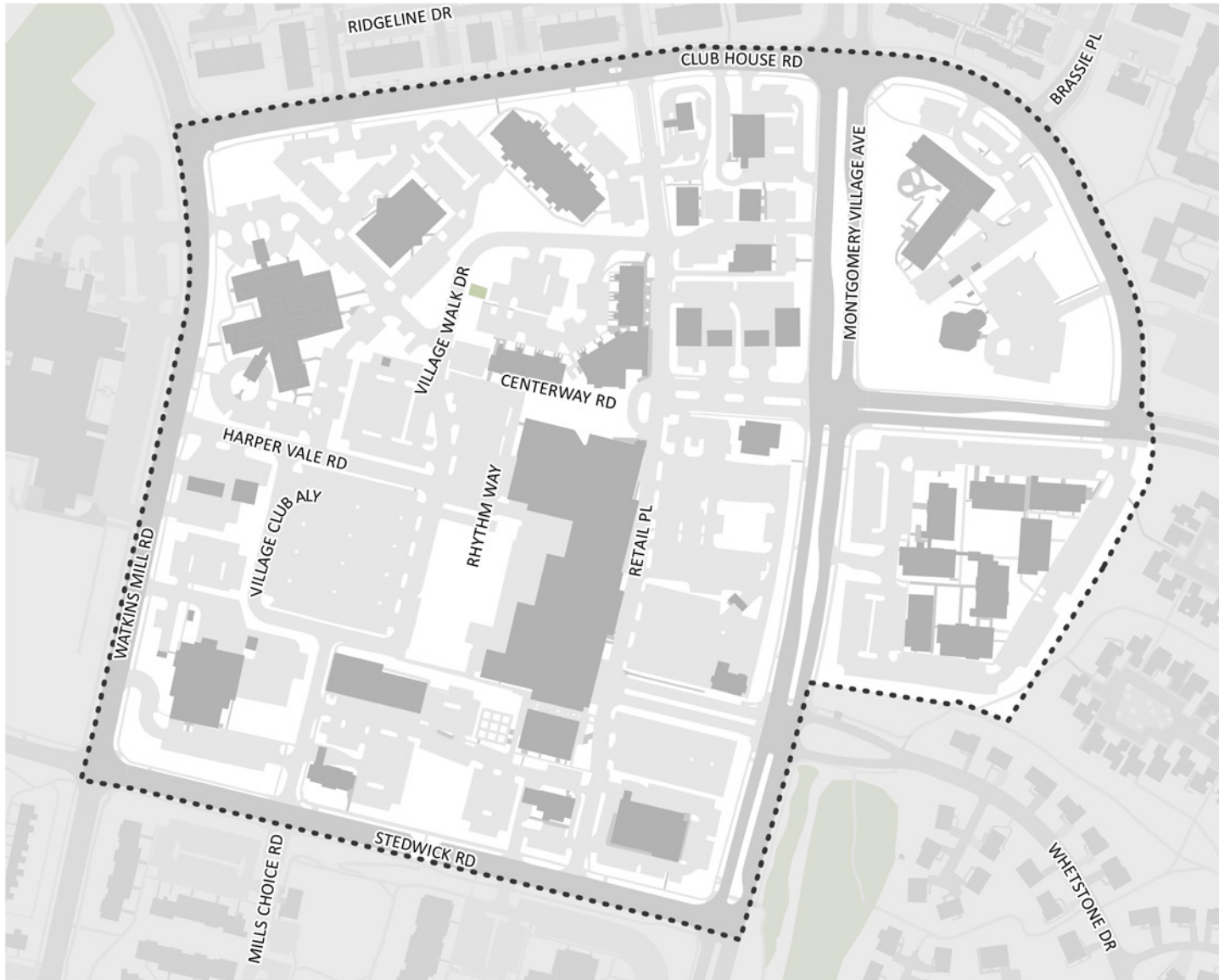
Montgomery Hills Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



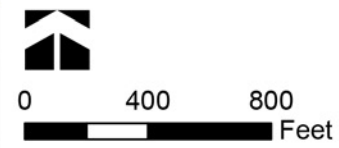
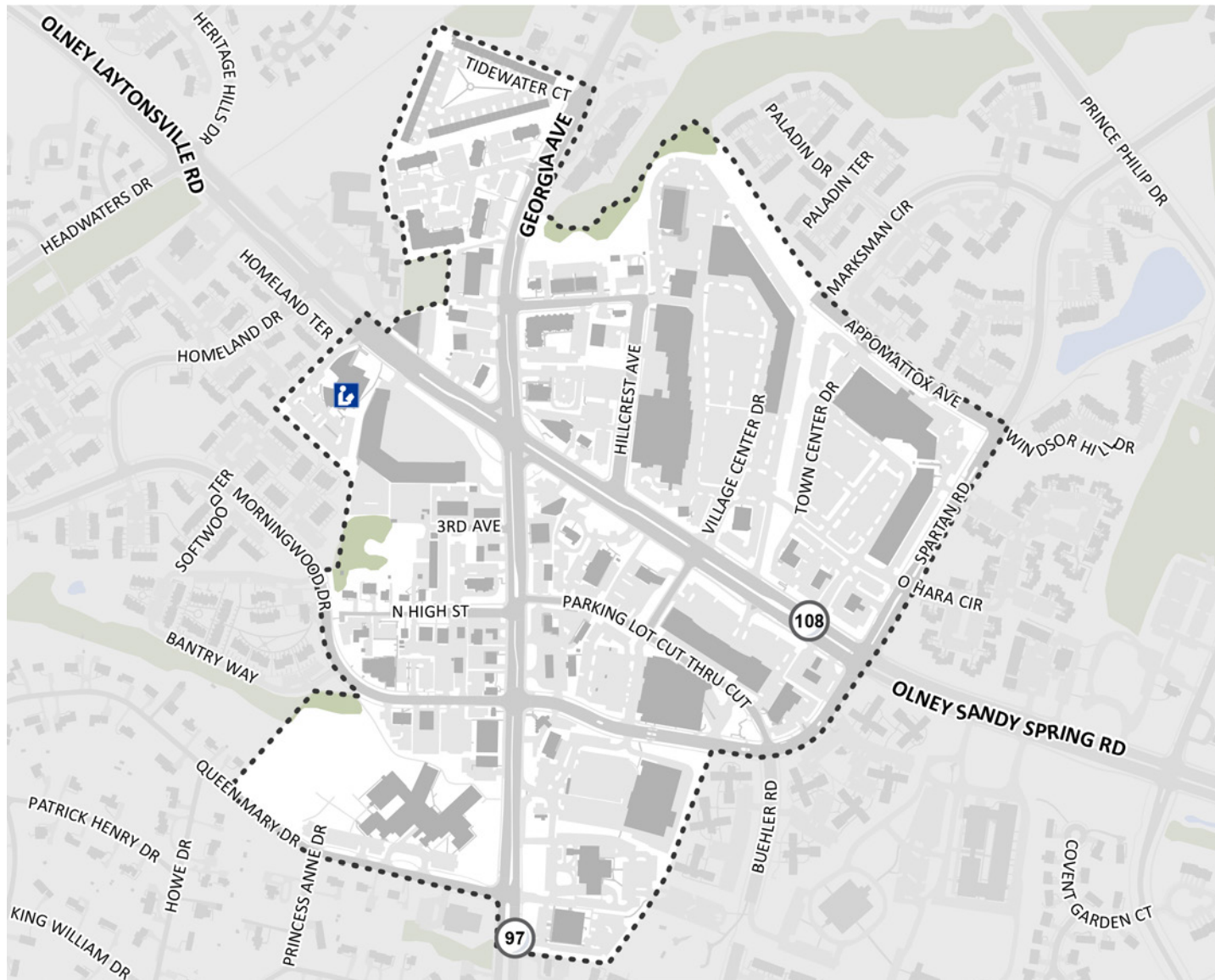
Montgomery Village Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



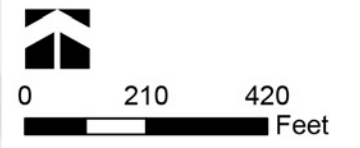
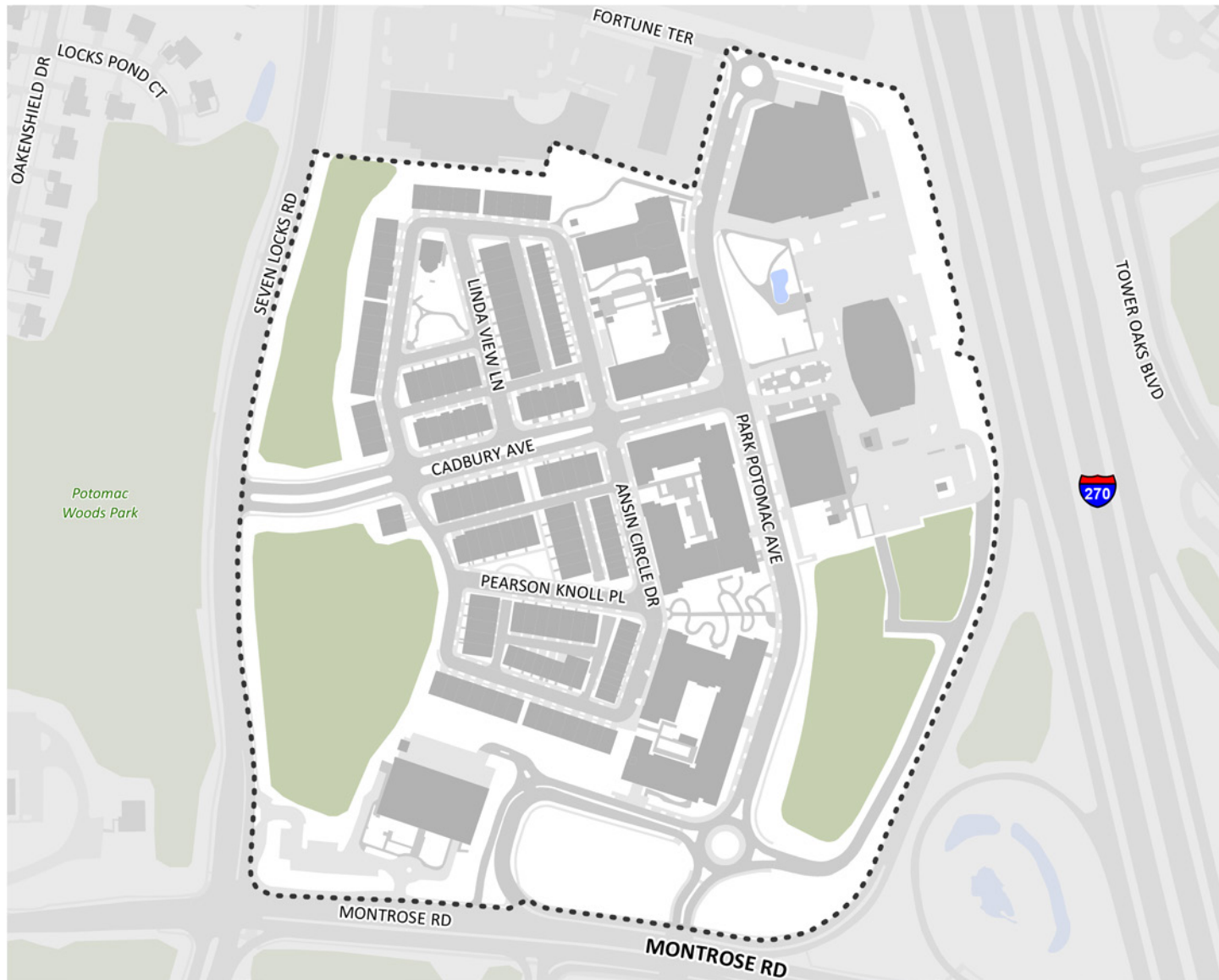
Olney Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- 📖 Libraries



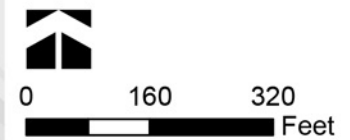
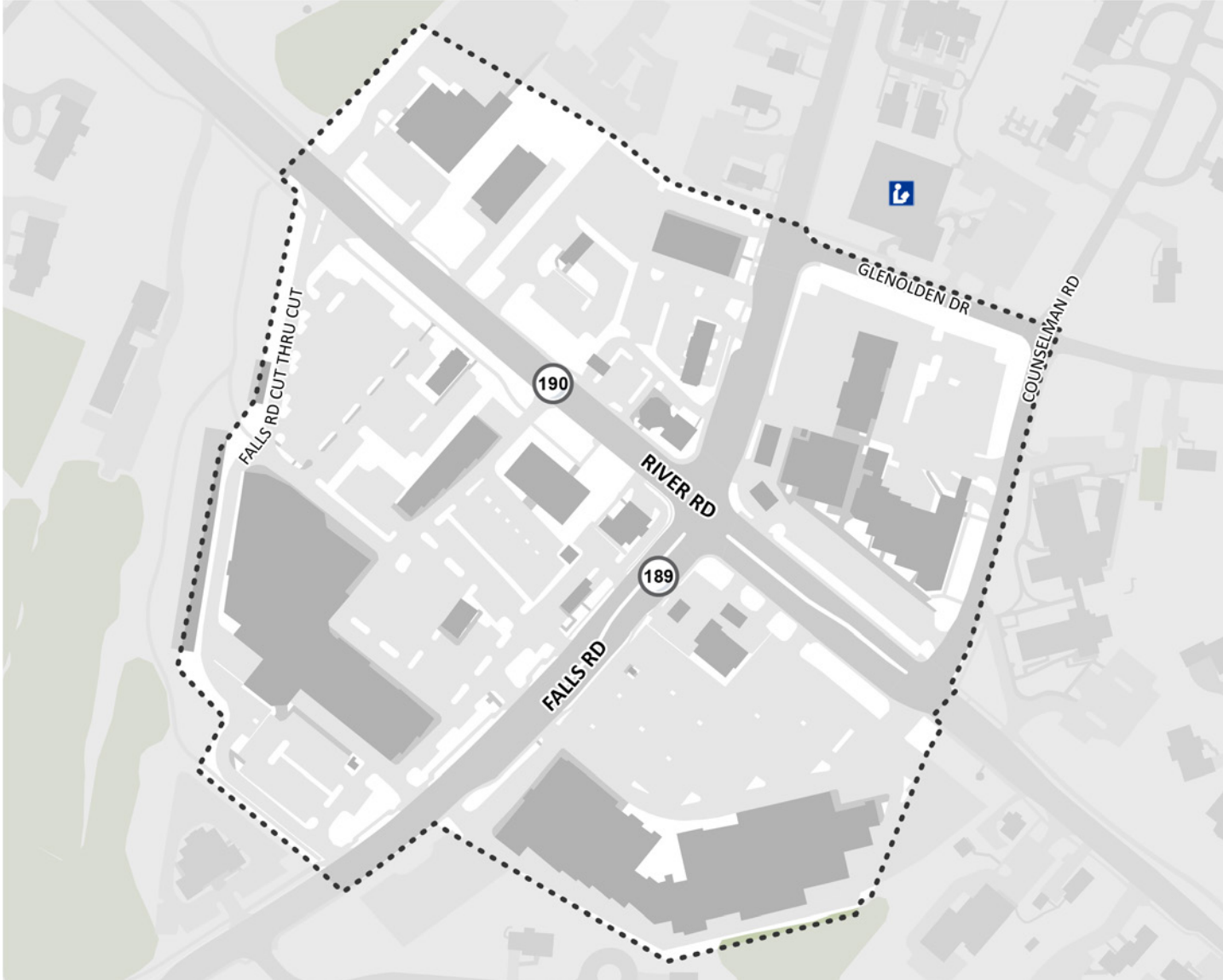
Park Potomac Town Center






-  Complete Streets Design Guide Area Boundary
-  County Boundary



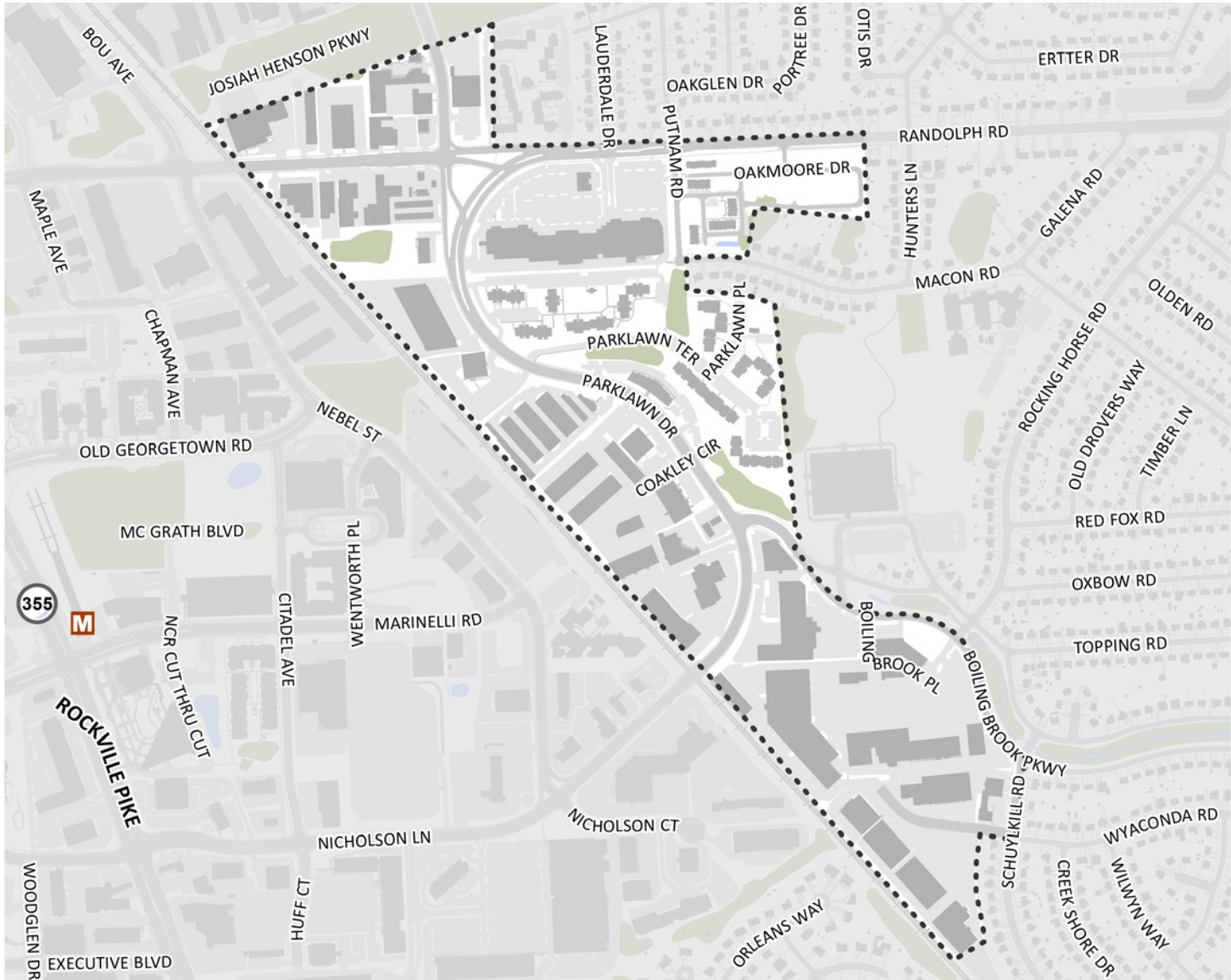
Potomac Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Libraries



Randolph Hills Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Metro Stations



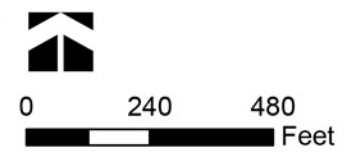
Redland Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



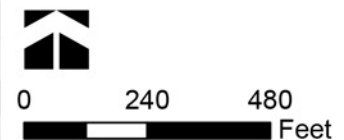
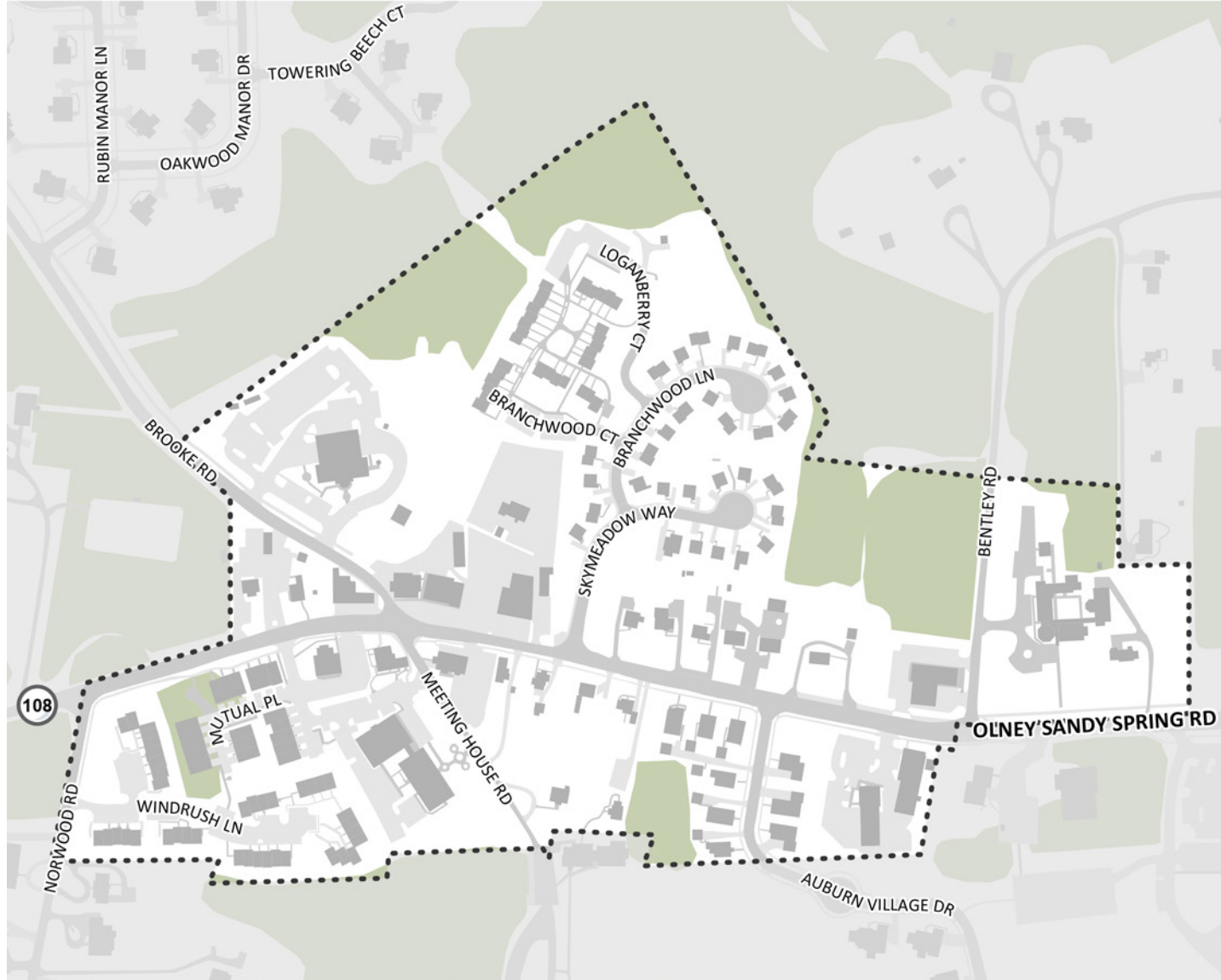
Rock Creek Village Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary



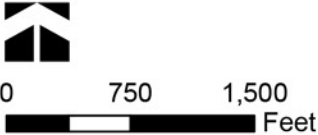
Sandy Spring Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



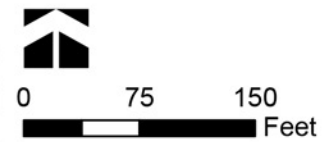
Shady Grove Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- M Metro Stations



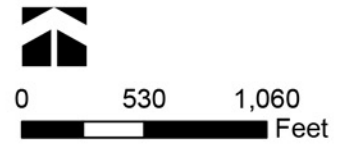
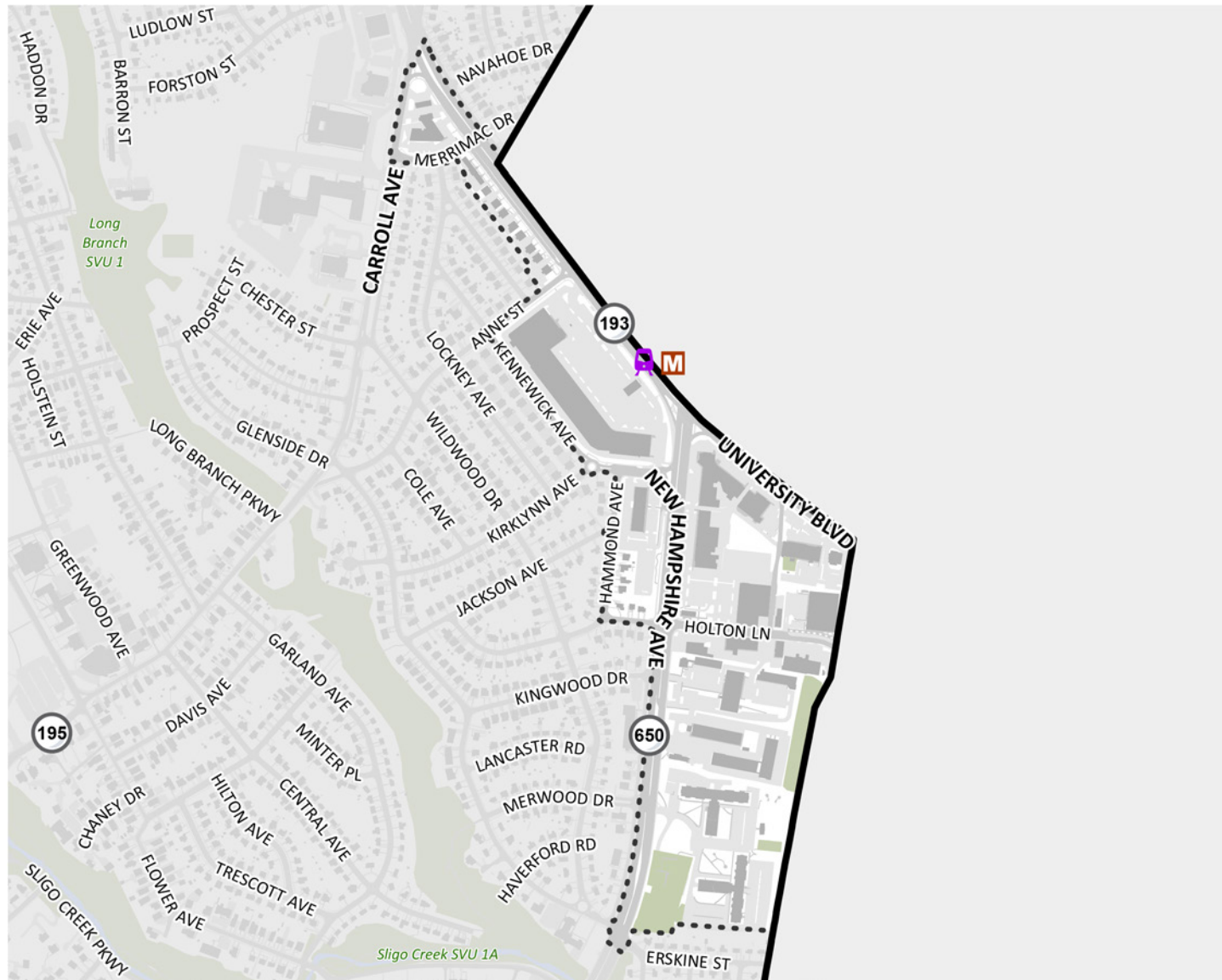
Takoma Junction Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary



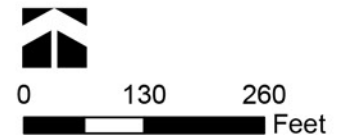
Takoma Langley Crossroads Town Center



- Complete Streets Design
- County Boundary
- Purple Line Station
- Metro Stations
- Guide Area Boundary



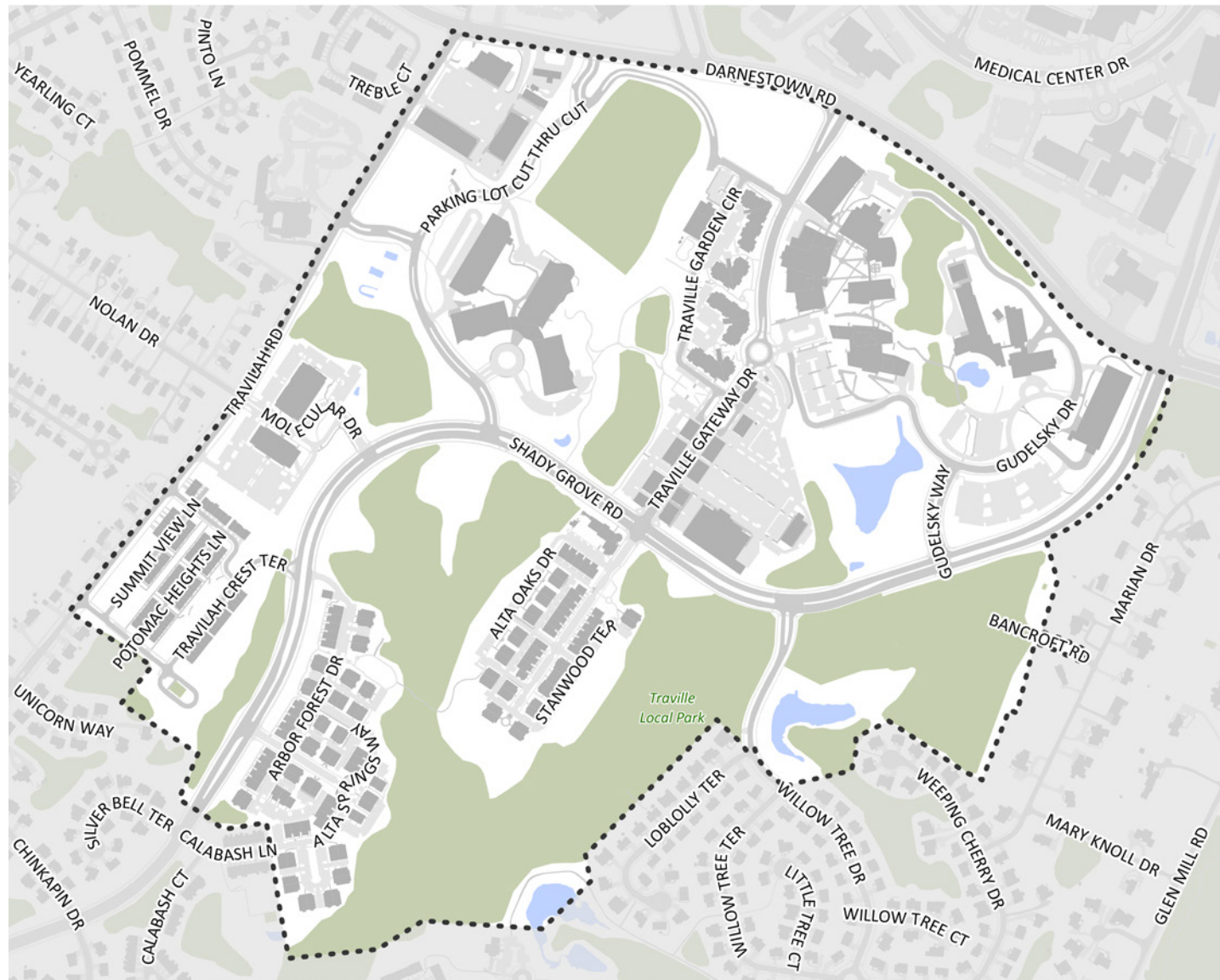
Takoma Old Town Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary



Traville / USG Town Center

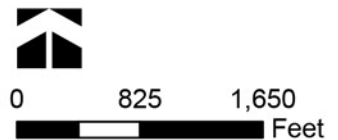
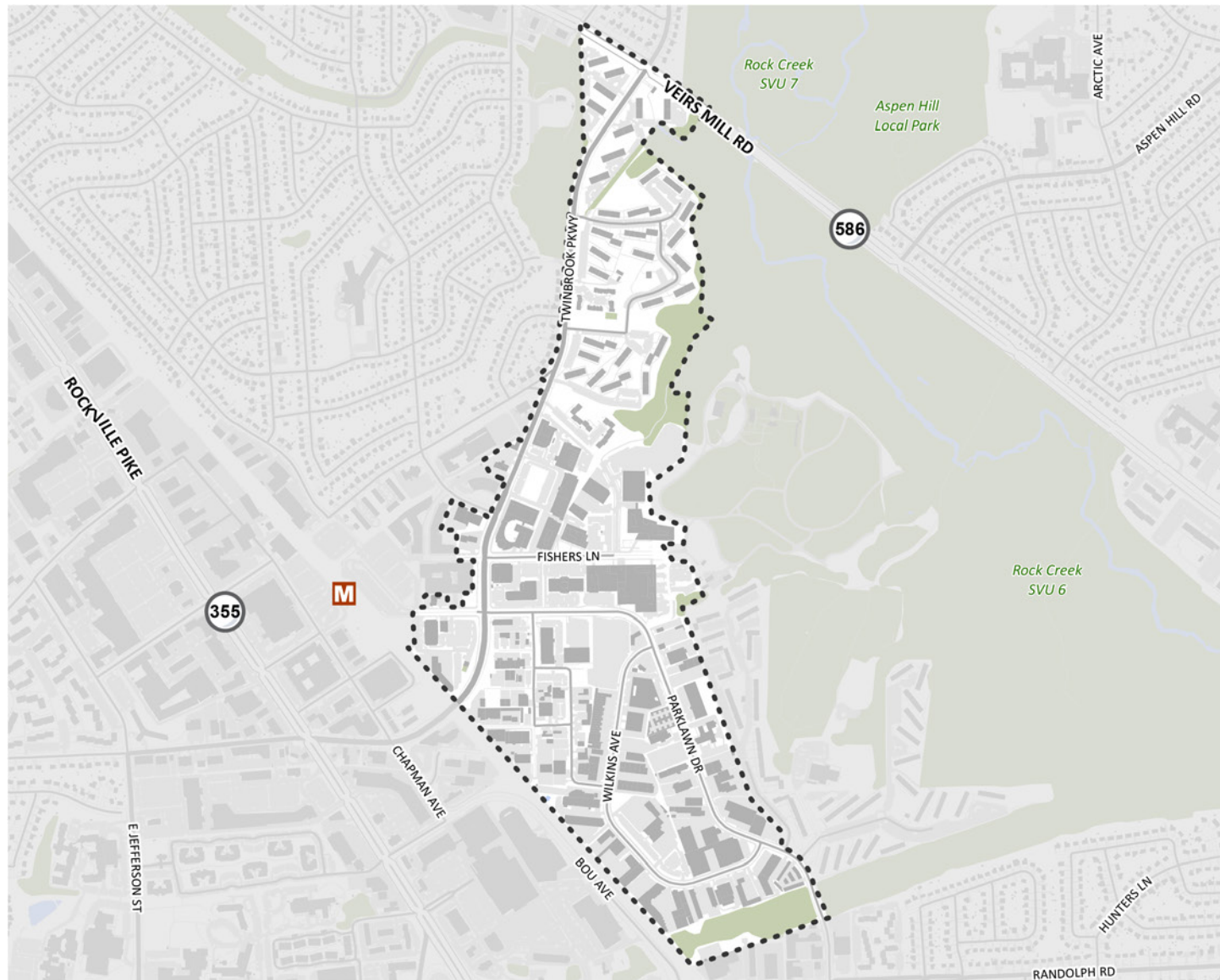


The Downtown interim designation and boundary for the Life Sciences (Great Seneca) area and the designation and boundary for the Traville/USG Town Center will be reviewed when the County Council takes up the Great Seneca Plan: Connecting Life and Science.

-  Complete Streets Design Guide Area Boundary
-  County Boundary



Twinbrook Town Center




-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Metro Stations



Viers Mill - Randolph Town Center

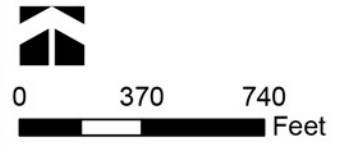
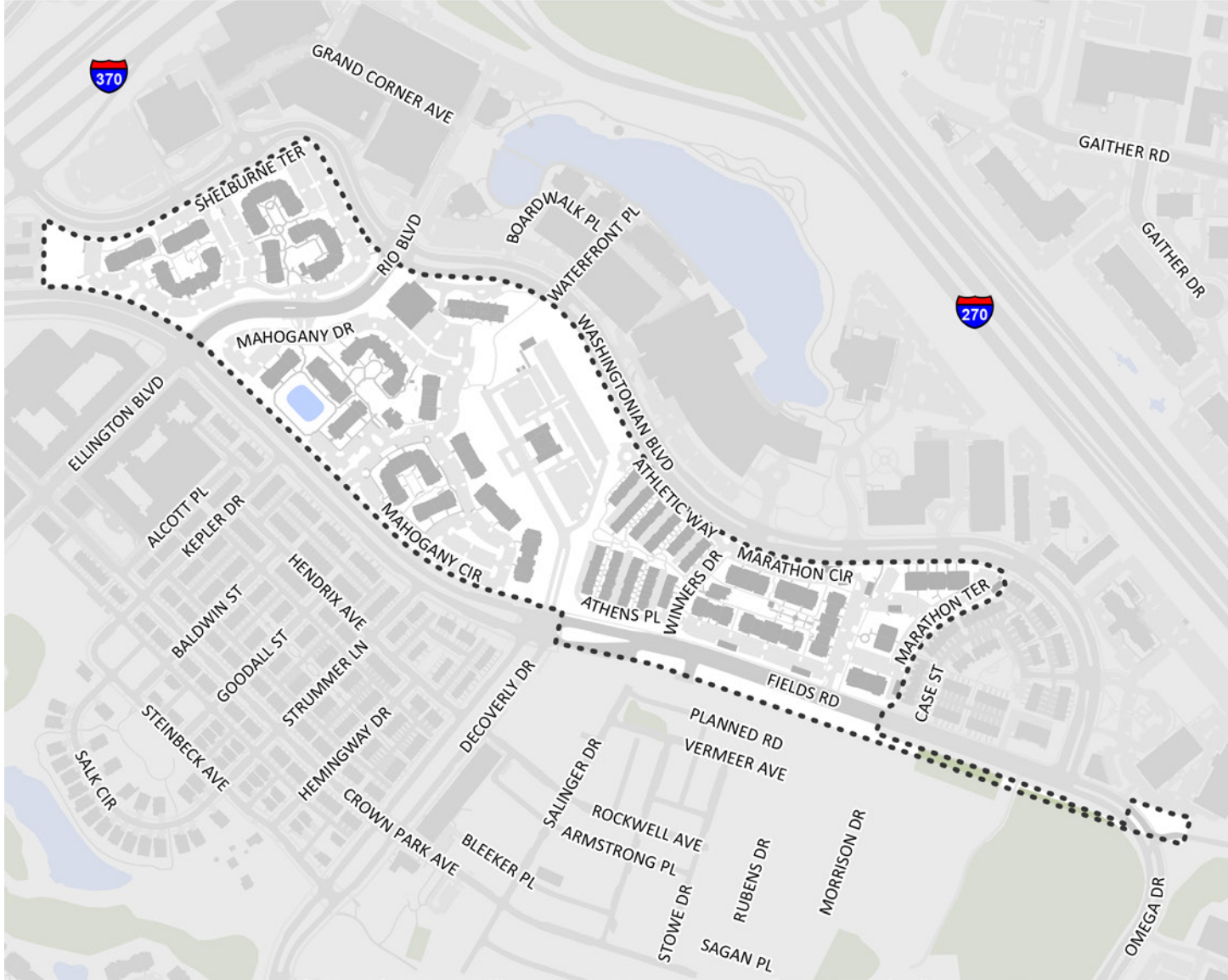


 Complete Streets Design Guide Area Boundary

 County Boundary



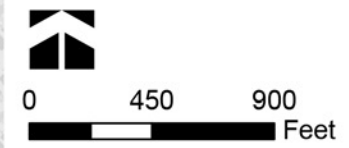
Washingtonian Town Center



Complete Streets Design Guide Area Boundary
 County Boundary



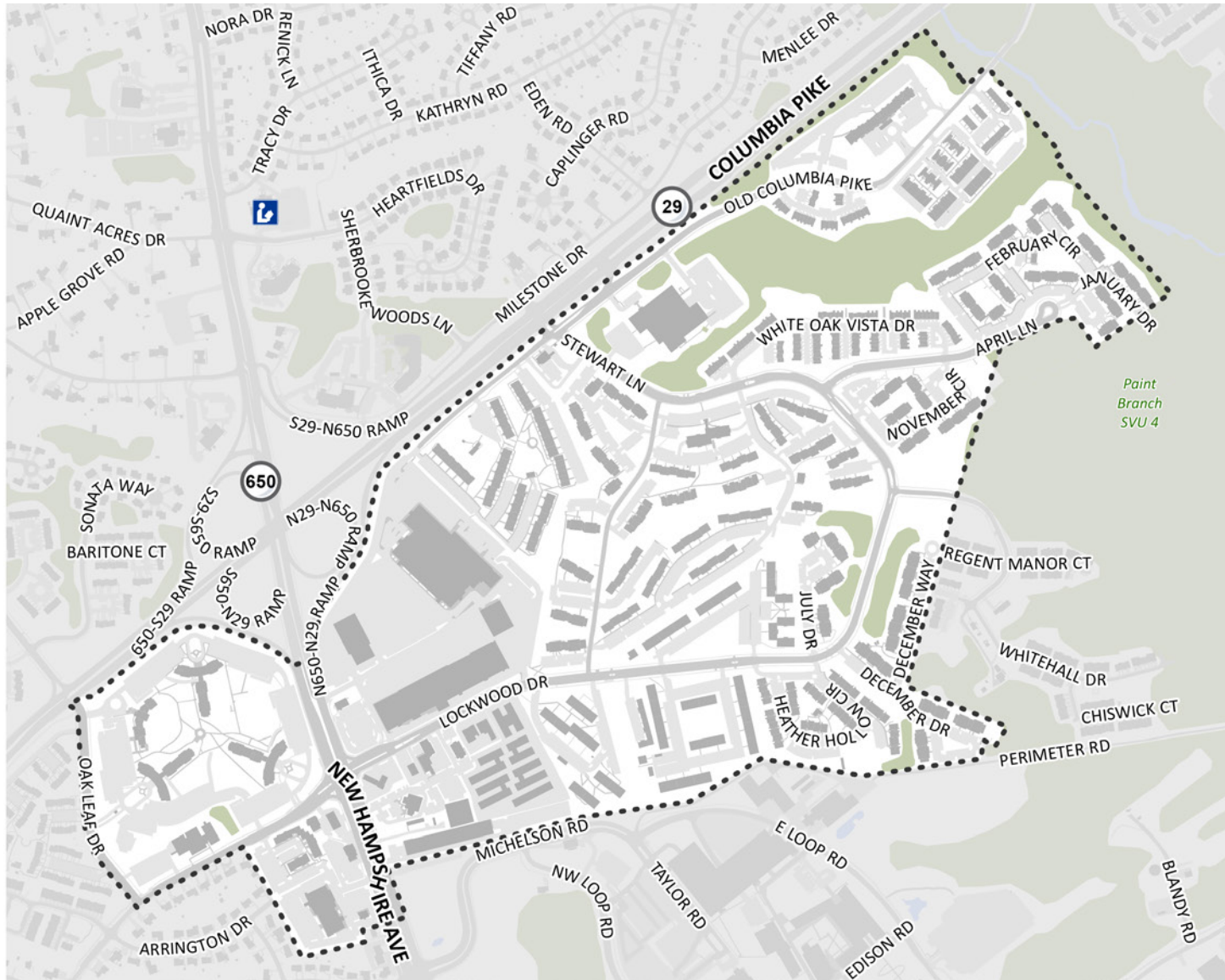
Westbard Town Center



- Complete Streets Design Guide Area Boundary
- County Boundary
- Libraries



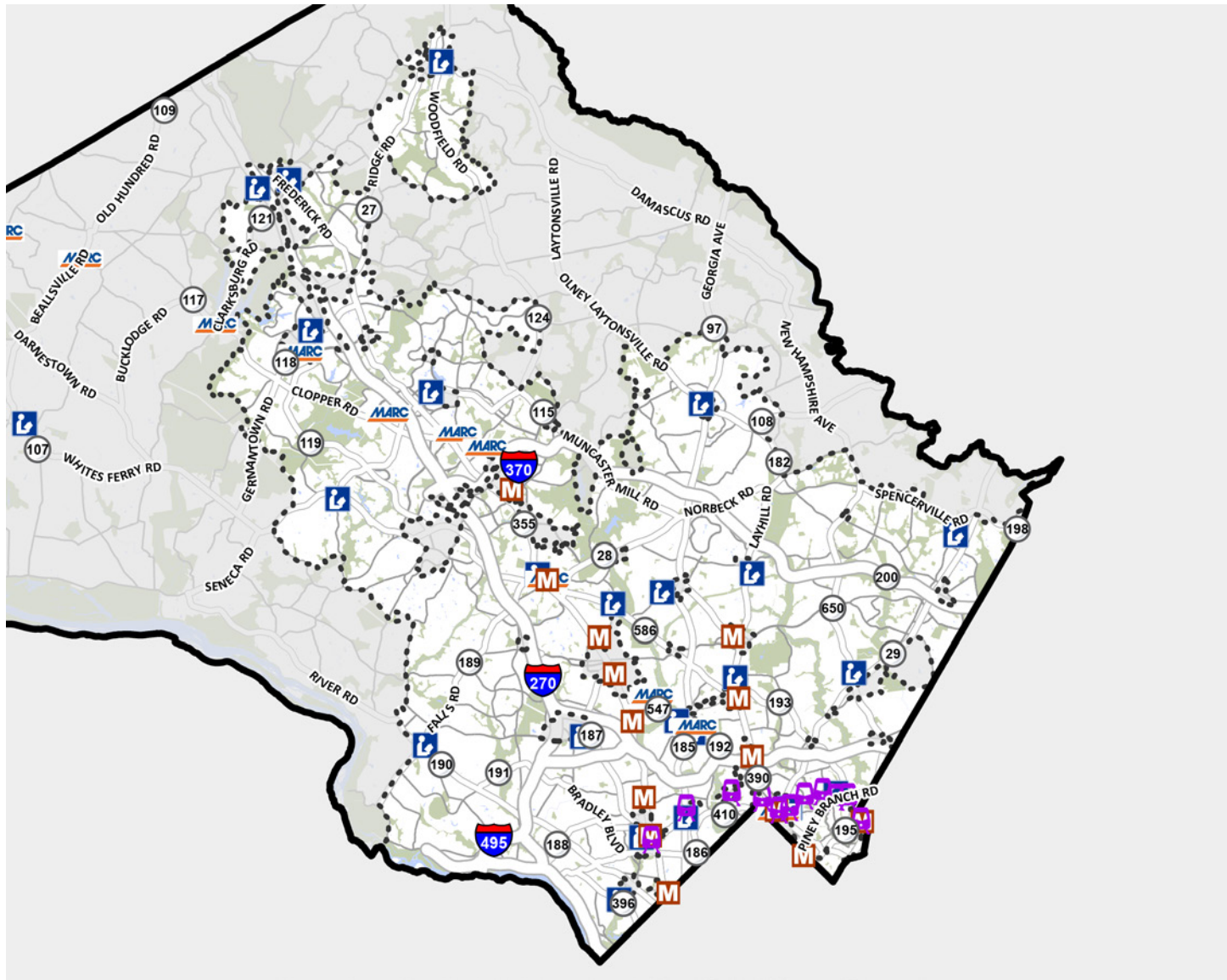
White Oak Town Center



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Libraries



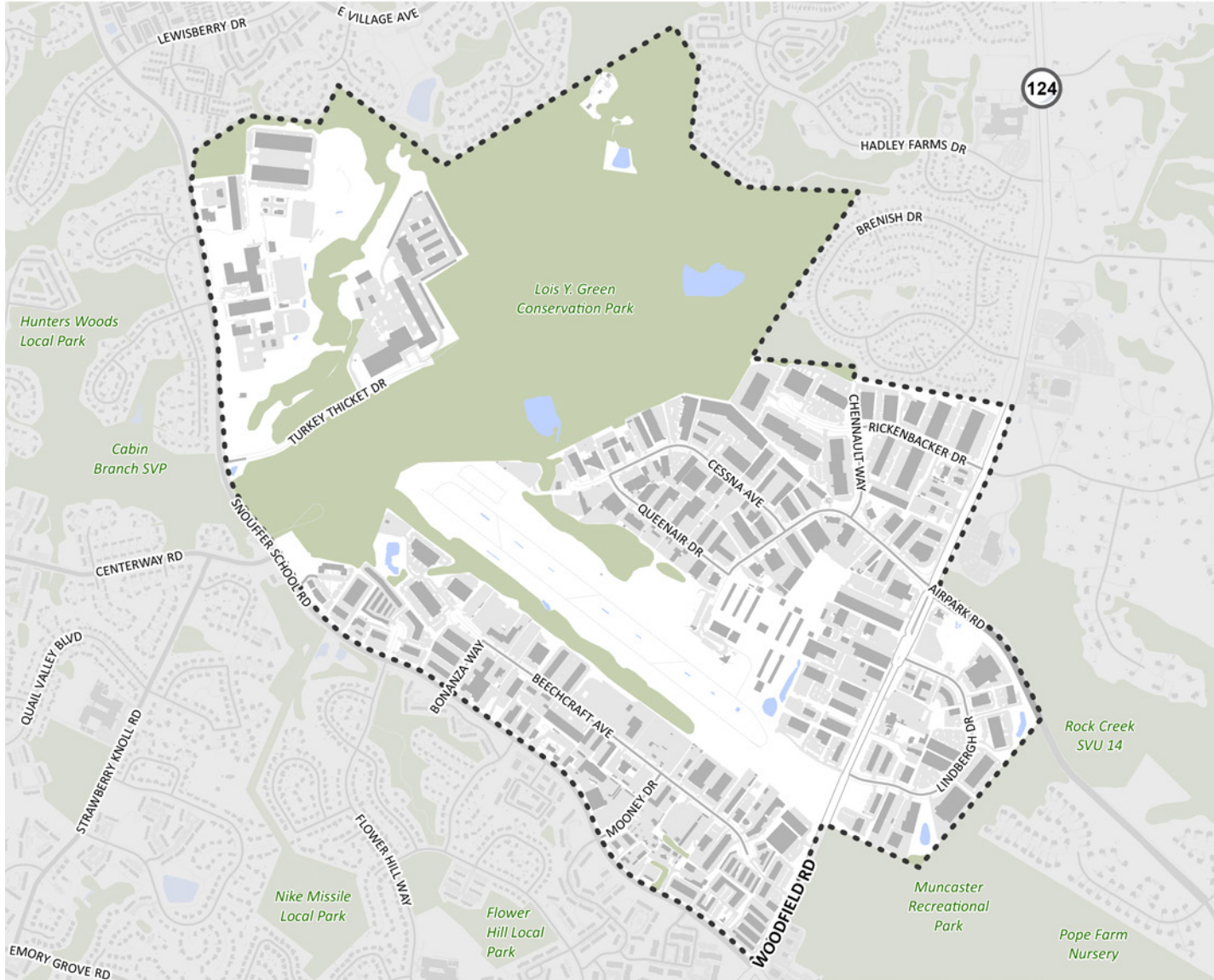
Suburban



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  MARC Station
-  Purple Line Stations
-  Metro Stations
-  Libraries



Airpark Industrial Area

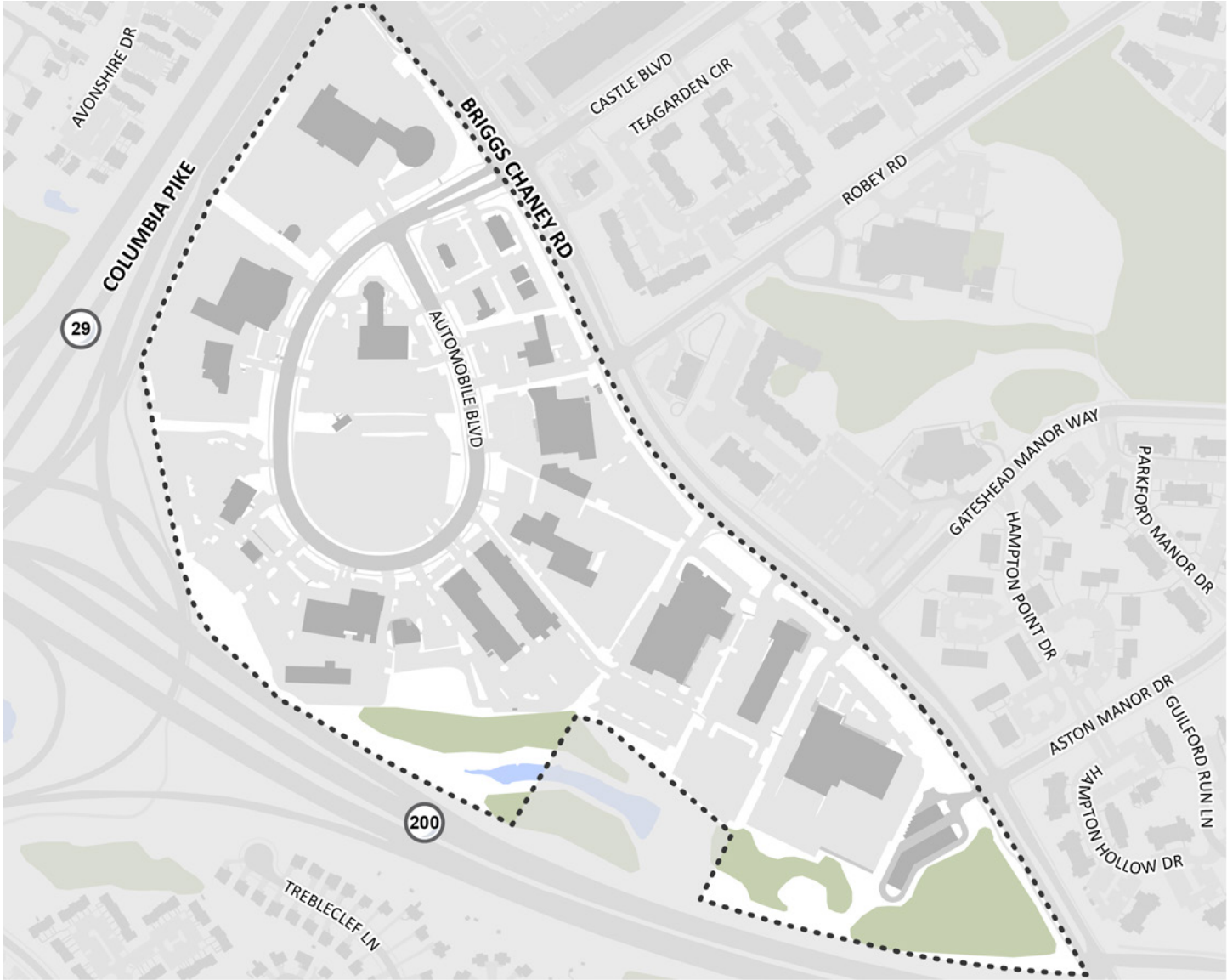


Complete Streets Design
 Guide Area Boundary

County Boundary



Briggs Chaney Industrial Area

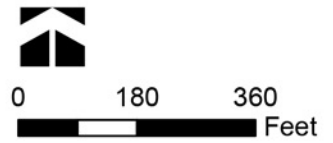
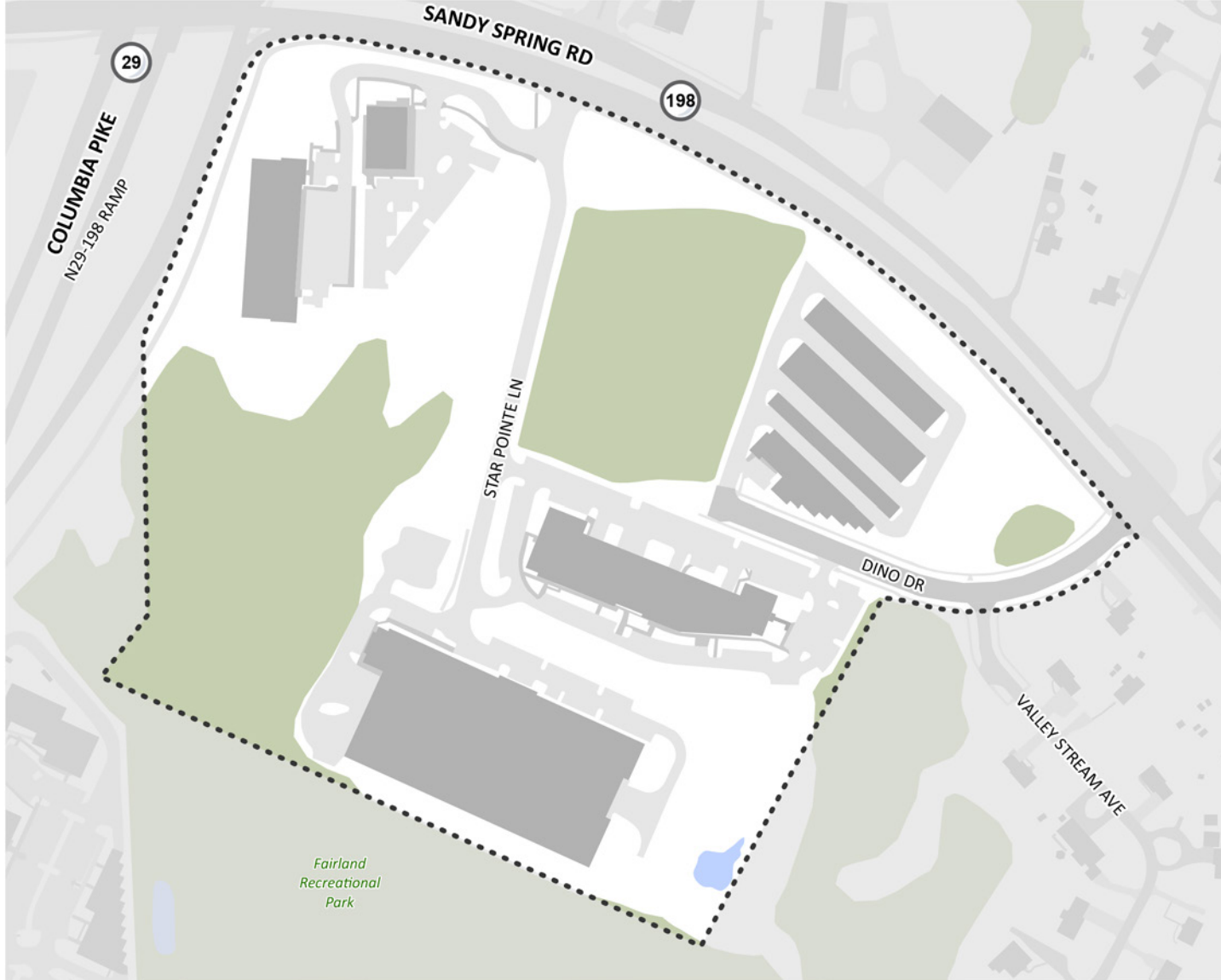


The designation and area boundary for Briggs Chaney Industrial Area will be reviewed when the County Council takes up the Fairland and Briggs Chaney Master Plan.

- Complete Streets Design Guide Area Boundary
- County Boundary



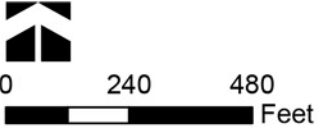
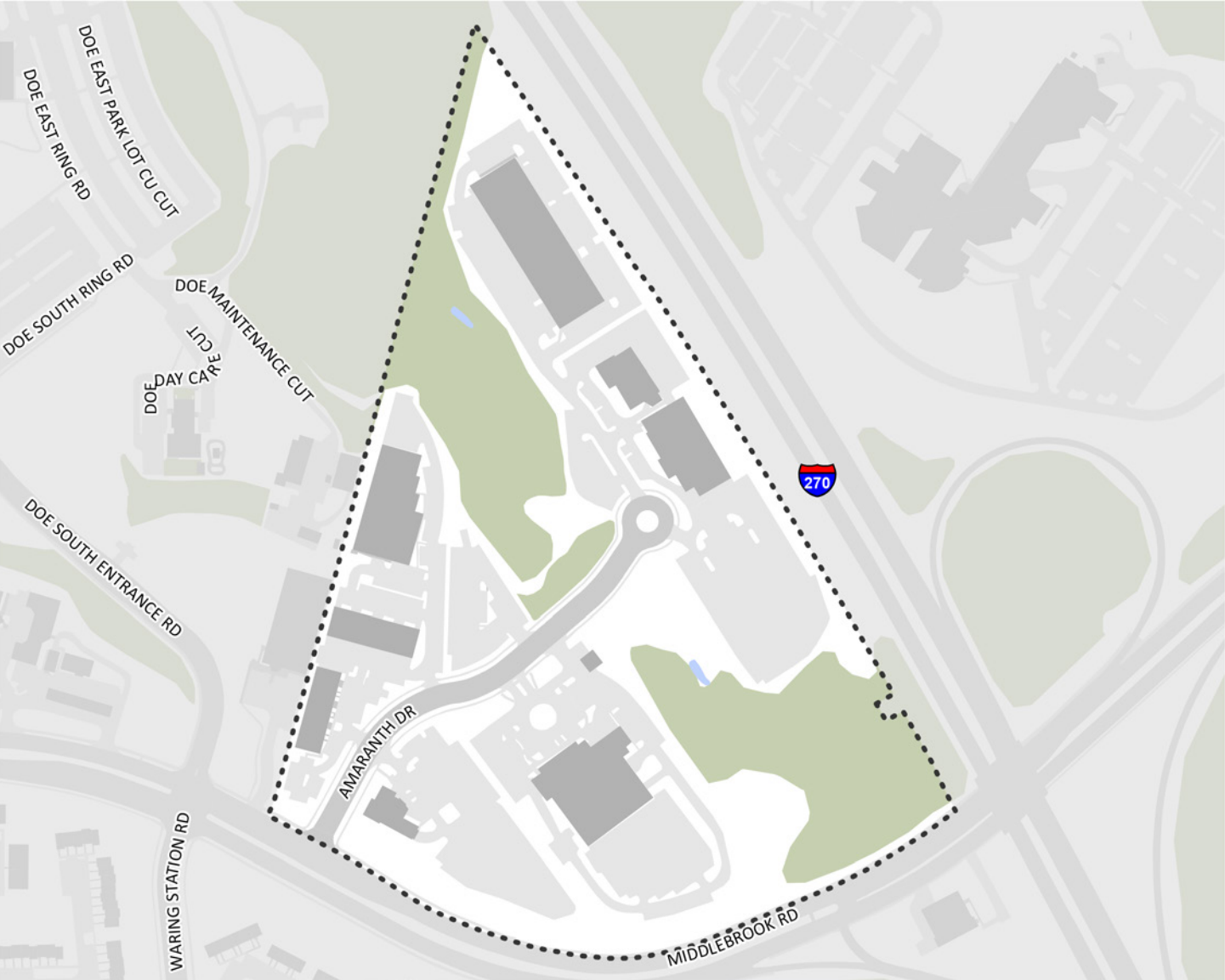
Burtonsville Industrial Area



-  Complete Streets Design Guide Area Boundary
-  County Boundary



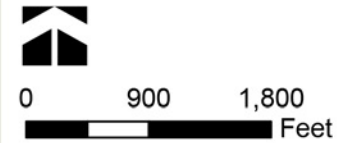
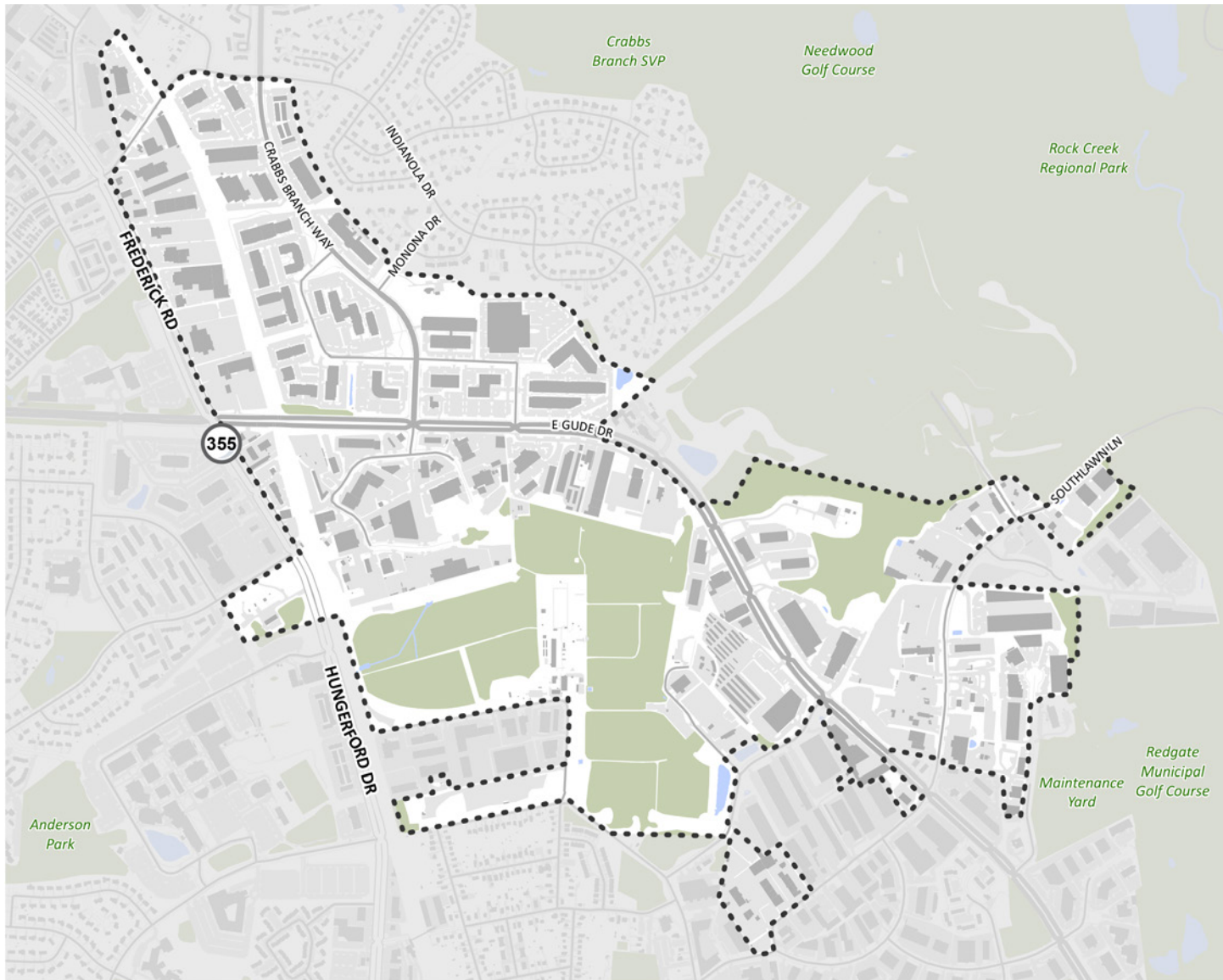
Germantown Industrial Area



-  Complete Streets Design Guide Area Boundary
-  County Boundary



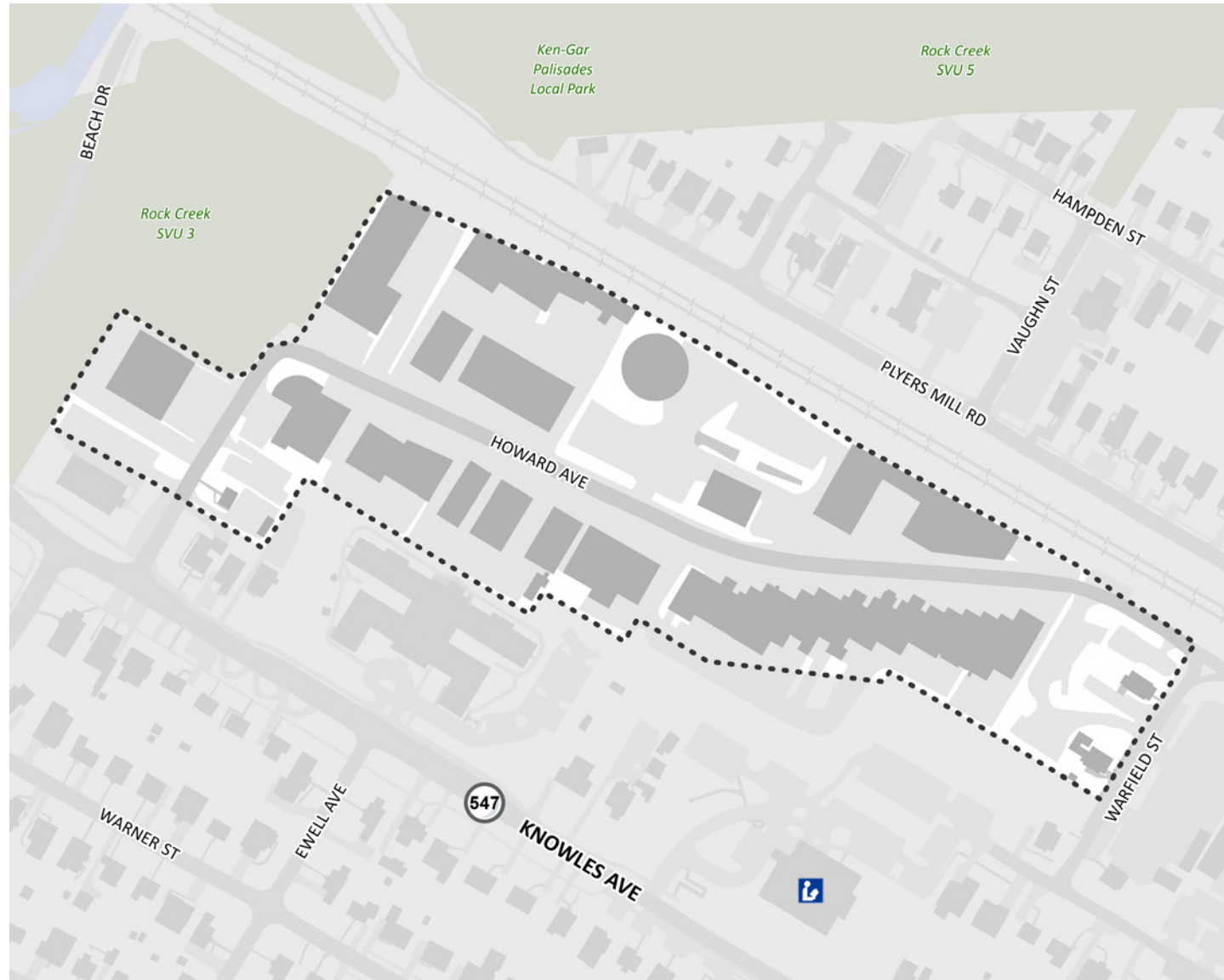
Gude Drive Industrial Area





-  Complete Streets Design Guide Area Boundary
-  County Boundary



Kensington Industrial Area



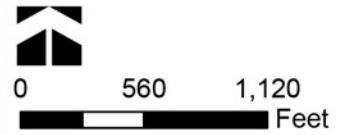
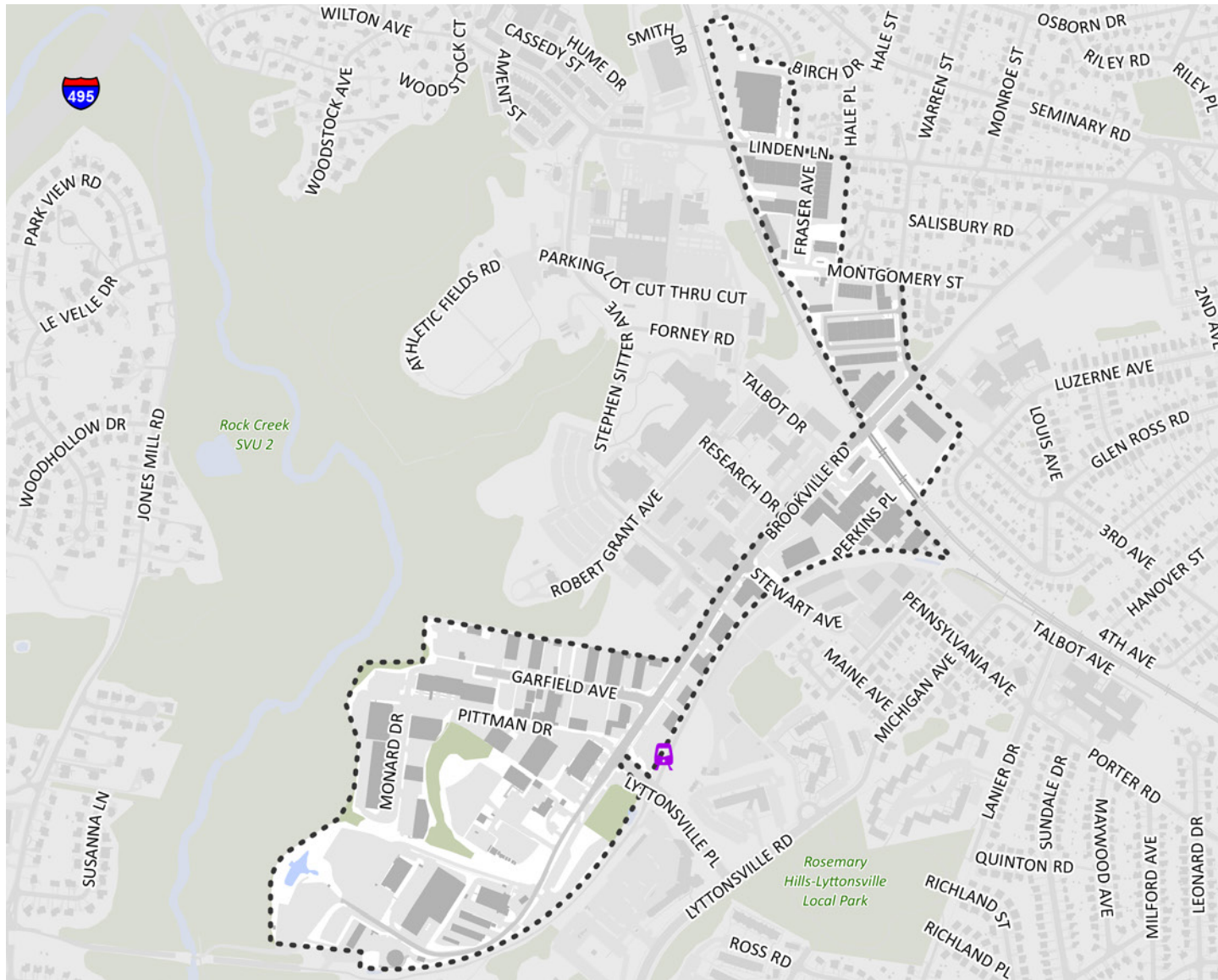
 Complete Streets Design Guide Area Boundary

 County Boundary

 Libraries



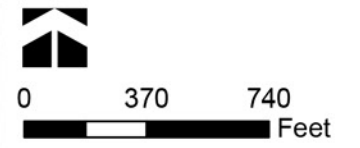
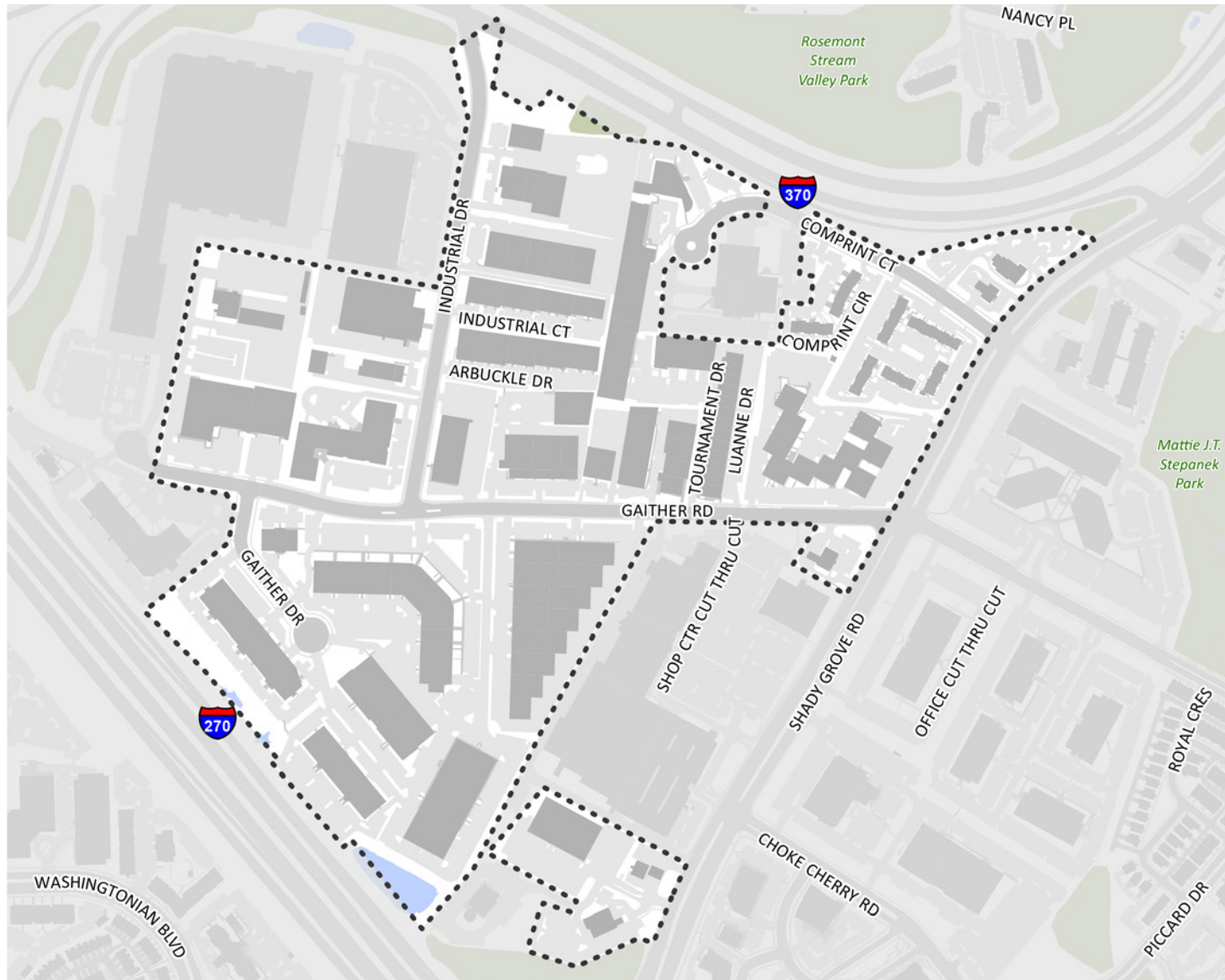
Lyttonsville Industrial Area



-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  Purple Line Station



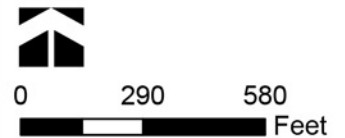
Shady Grove 1 Industrial Area



-  Complete Streets Design Guide Area Boundary
-  County Boundary

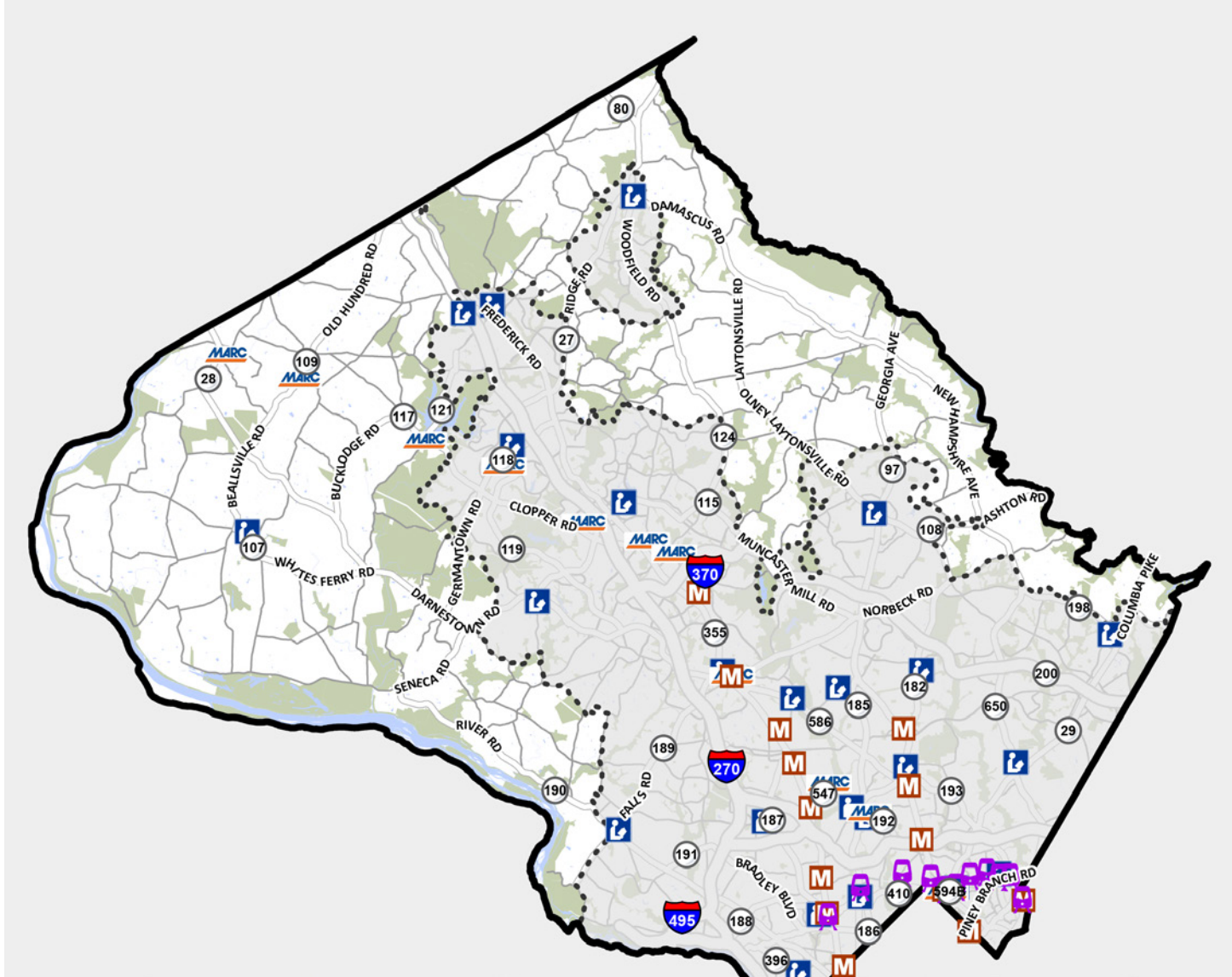


Shady Grove 2 Industrial Area



-  Complete Streets Design Guide Area Boundary
-  County Boundary





-  Complete Streets Design Guide Area Boundary
-  County Boundary
-  MARC Station
-  Purple Line Stations
-  Metro Stations
-  Libraries



Pedestrian Infrastructure Recommendations

In addition to identifying broadly where pedestrian safety and connectivity investments should go, the Pedestrian Master Plan makes limited recommendations for specific connections: pedestrian shortcuts and country sidepaths. This plan's specific pedestrian network recommendations are minimal because the county's CSDG requires the provision of pedestrian pathways along the majority of street types in Montgomery County so individual pathways along streets do not need to be specifically recommended. Additionally, the CSDG identifies the need for sidepaths (wider shared pedestrian and bicycle pathways) along Country Connectors and Country Roads. The Pedestrian Master Plan identifies a network of these important connections.



Pedestrian Shortcuts

A pedestrian shortcut is an informal pedestrian connection not along a street that provides a more direct pedestrian route than the sidewalk and trail network. Also known as a “people’s choice path,” a “desire line” or a “goat path,” an existing pedestrian shortcut may look like trodden grass, dirt, gravel, or pavement that has fallen into disrepair. These connections are not currently sidewalks or trails, but provide important, time-saving benefits for pedestrians interested in making direct trips to local destinations. Many people use these connections daily to run errands, get to work or school, connect to public transportation, and exercise. This section recommends master-planning a network of pedestrian shortcuts so they can be improved through public capital projects and private development. As sidewalks, trails, and other appropriate facilities are built along these connections, more people will be able to safely walk

using the most direct route. To the extent practicable, a 20-foot right-of-way dedication should be provided for those pedestrian shortcuts not already located in a public right-of-way. These connections should be built through capital projects and private development as applicable, in line with Key Action B-7b. Shortcuts should be prioritized for construction using the data-driven approach identified in the Implementation chapter.

Table 34 and associated maps identify 310 locations where informal pedestrian shortcuts currently exist across the county. These connections were identified through a public engagement process and subsequent review of property boundaries and subdivision plats. A description of the approach is in the Pedestrian Shortcut Methodology appendix. The Map Reference # column corresponds to the shortcut location on the respective policy area maps starting on page 211.



PEDESTRIAN SHORTCUTS AND COUNTRY SIDEPATHS



Table 34 and associated maps identify 310 locations where informal pedestrian shortcuts currently exist across the county. These connections were identified through a public engagement process and subsequent review of property boundaries and subdivision plats. A description of the approach is in the Pedestrian Shortcut Methodology appendix. The Map Reference # column corresponds to the shortcut location on the respective policy area maps starting on page 211.

Table 34. Pedestrian Shortcut Recommendations			
Policy Area	Origin	Destination	Map Reference #
Aspen Hill	Flint Hill Road	Allanwood Court	1
Aspen Hill	Grenoble Drive	Judith Street	2
Aspen Hill	Bel Pre Road	Chesterfield Road	3
Aspen Hill	Bitterroot Way	Emory Lane	4
Aspen Hill	Bel Pre Road	Crossway Road	5
Aspen Hill	Catoctin Terrace	Shilling Lane	6
Aspen Hill	Arctic Avenue	Loree Lane	7
Aspen Hill	Iris Street	Oriental Street	8
Aspen Hill	Palmira Lane	Connecticut Avenue	9
Aspen Hill	Weeping Willow Court	Peppertree Lane	10
Bethesda CBD	Wisconsin Avenue	West Avenue	11
Bethesda CBD	Bradley Boulevard	Wisconsin Avenue	12
Bethesda CBD	Wellington Drive	Bradley Boulevard	13
Bethesda CBD	Strathmore Street	Wisconsin Avenue	14
Bethesda CBD	Wisconsin Avenue	County Parking Lot	15
Bethesda CBD	Arlington Road	Capital Crescent Trail	16
Bethesda CBD	Montgomery Avenue	Capital Crescent Trail	17
Bethesda CBD	East-West Highway	Capital Crescent Trail	18
Bethesda CBD	Montgomery Avenue	Capital Crescent Trail	19
Bethesda CBD	Old Georgetown Road	Midblock Fairmont Avenue	20
Bethesda CBD	St. Elmo Avenue	Cordell Avenue	21
Bethesda CBD	Cordell Avenue	Del Ray Avenue	22
Bethesda CBD	Cordell Avenue	St. Elmo Avenue	23
Bethesda CBD	Woodmont Avenue	Wisconsin Avenue	24
Bethesda CBD	Wisconsin Avenue	Woodmont Avenue	25
Bethesda CBD	Rugby Avenue	Trail	26
Bethesda CBD	Rugby Avenue	Trail	27



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Bethesda CBD	Bethesda Trolley Trail	Woodmont Avenue	28
Bethesda CBD	Glenbrook Road	Battery Lane	29
Bethesda CBD	Chevy Chase Drive	Norwood Local Park	30
Bethesda CBD	Bradley Boulevard	Norwood Drive	31
Bethesda/Chevy Chase	Bent Branch Road	Bay Tree Lane	32
Bethesda/Chevy Chase	Bent Branch Road	Tulip Hill Terrace	33
Bethesda/Chevy Chase	Bay Tree Lane	Goldsboro Road	34
Bethesda/Chevy Chase	Buttonwood Lane	Goldsboro Road	35
Bethesda/Chevy Chase	Tulip Hill Terrace	Goldsboro Road	36
Bethesda/Chevy Chase	Chevy Chase Lake Drive	Springdell Place	37
Bethesda/Chevy Chase	Sangamore Road	Capital Crescent Trail	38
Bethesda/Chevy Chase	Fernwood Road	Kirkdale Road	39
Bethesda/Chevy Chase	Little Falls Parkway	Wakefield Road	40
Bethesda/Chevy Chase	Dorset Avenue	Greystone Street	41
Bethesda/Chevy Chase	Henning Street	Ayrlawn Local Park	42
Bethesda/Chevy Chase	Westbard Avenue	River Road	43
Bethesda/Chevy Chase	Jordan Road	Westbard Avenue	44
Bethesda/Chevy Chase	Leeke Forest Court	Beech Avenue	45
Bethesda/Chevy Chase	Radnor Road	Oldchester Road	46
Bethesda/Chevy Chase	Spruce Tree Avenue	Linden Avenue	47
Bethesda/Chevy Chase	Bannockburn Drive	East Halbert Road	48
Bethesda/Chevy Chase	Whitman Drive	Whittier Boulevard	49
Bethesda/Chevy Chase	Hutch Place	Inverness Drive	50
Bethesda/Chevy Chase	Stewart Driveway	Dundee Driveway	51
Bethesda/Chevy Chase	Shelton Street	North Bethesda Middle School	52
Bethesda/Chevy Chase	Greentree Road	Fallen Oak Court	53
Bethesda/Chevy Chase	Lambeth Road	York Lane	54
Bethesda/Chevy Chase	Linden Avenue	Balfour Drive	55
Bethesda/Chevy Chase	Raymond Street	Brennon Lane	56
Bethesda/Chevy Chase	Kenilworth Driveway	Dundee Driveway	57



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Bethesda/Chevy Chase	Hillmead Road	Greentree Road	58
Bethesda/Chevy Chase	Ridge Road	Fallen Oak Drive	59
Bethesda/Chevy Chase	Wilson Lane	West Halbert Road	60
Bethesda/Chevy Chase	Laverock Lane	East Halbert Road	61
Bethesda/Chevy Chase	East Halbert Road	Bannockburn Elementary School	62
Bethesda/Chevy Chase	Laverock Court	Ayr Lane	63
Bethesda/Chevy Chase	Selkirk Drive	Braeburn Parkway	64
Bethesda/Chevy Chase	Cayuga Avenue	Maryknoll Avenue	65
Bethesda/Chevy Chase	Thoreau Drive	Kenfield Court	66
Bethesda/Chevy Chase	Ridgewood Avenue	Beechwood Drive	67
Bethesda/Chevy Chase	Allandale Road	River Road	68
Bethesda/Chevy Chase	Keokuk Street	Crescent Street	69
Bethesda/Chevy Chase	Keokuk Street	Newport Avenue	70
Bethesda/Chevy Chase	Boxwood Court	Abingdon Road	71
Bethesda/Chevy Chase	Hollins Drive	Wadsworth Drive	72
Bethesda/Chevy Chase	Swords Way	Kirkdale Road	73
Bethesda/Chevy Chase	River Road	Winterberry Place	74
Bethesda/Chevy Chase	Radnor Road	Bradley Boulevard	75
Bethesda/Chevy Chase	Pauline Drive	Brooklawn Terrace	76
Bethesda/Chevy Chase	Radnor Road	Pembroke Road	77
Bethesda/Chevy Chase	Lawton Drive	Nahant Street	78
Bethesda/Chevy Chase	Lamar Road	Kirkwood Drive	79
Bethesda/Chevy Chase	Falmouth Road	Portsmouth Road	80
Bethesda/Chevy Chase	Park Avenue	Brookdale Road	81
Bethesda/Chevy Chase	Jones Mill Road	Brierly Road	82
Bethesda/Chevy Chase	Baltan Road	Sentinel Drive	83
Bethesda/Chevy Chase	Overbrook Road	Cooper Lane	84
Bethesda/Chevy Chase	Sherrill Avenue	Willard Avenue Trail	85
Bethesda/Chevy Chase	Baltimore Avenue	Willard Avenue Trail	86
Bethesda/Chevy Chase	Saratoga Avenue	Willard Avenue Trail	87



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Bethesda/Chevy Chase	Westbard Avenue	Capital Crescent Trail	88
Cloverly	Perrywood Drive	Timberlake Drive	89
Cloverly	Peachwood Drive	Cloverly Loop Trail	90
Cloverly	Evesham Place	Pamela Drive	91
Cloverly	Harding Lane	Good Hope Road	92
Cloverly	Watergate Road	New Hampshire Avenue	93
Cloverly	Awkard Lane	Farmgate Lane	94
Cloverly	Old Orchard Road	Norbeck Road	95
Cloverly	Bryants Nursery Road	Norbeck Road	96
Damascus	Damascus Pool	Damascus High School	97
Damascus	Ridge Road	Damascus Community Center	98
Damascus	Coltrane Drive	Wright Road	99
Damascus	Bethesda Church Road	Magruder Branch Trail	100
Derwood	Moccasin Lane	Derwood Station Playground	101
Derwood	Polara Place	Epsilon Drive	102
Derwood	Briardale Road	Briardale Court	103
Derwood	Beauvoir Boulevard	Redland Local Park	104
Derwood	Needwood Road	Metro Stormwater Pond Trail	105
Derwood	Metro Access Path	Mystic View Court	106
Derwood	Chestnut Street	Oakmont Street	107
East Purple Line	Three Oaks Drive	Melbourne Avenue	108
East Purple Line	Dale Drive	Nolte Local Park	109
East Purple Line	Easley Street	Thayer Avenue	110
East Purple Line	Geren Road	Sligo Creek Trail	111
East Purple Line	Schuyler Road	East Wayne Avenue	112
East Purple Line	Bradford Road	Sligo Creek Trail	113
East Purple Line	Colesville Road	Ellsworth Drive	114
East Purple Line	Whitney Street	Walden Road	115
East Purple Line	Piney Branch Road	Carroll Avenue	116
East Purple Line	Manchester Road	Saffron Lane	117



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
East Purple Line	Dale Drive	Fleetwood Terrace	118
Fairland/Colesville	Beaumont Road	Bregman Road	119
Fairland/Colesville	Olivine Way	Serpentine Way	120
Fairland/Colesville	Schubert Drive	Alpenhorn Way	121
Fairland/Colesville	Tapestry Circle	Castle Ridge Circle	122
Fairland/Colesville	Aldora Circle	Castle Boulevard	123
Fairland/Colesville	Northwest Drive	Prelude Drive	124
Fairland/Colesville	Legato Way	Sonata Way	125
Fairland/Colesville	Ballinger Drive	Castle Terrace	126
Fairland/Colesville	Robey Road	Sir Thomas Drive	127
Fairland/Colesville	Venice Drive	Martin Luther King, Jr. Recreational Park	128
Fairland/Colesville	Gaffney Road	Randolph Road	129
Fairland/Colesville	Fairland Road	Notley Road	130
Fairland/Colesville	Bluff Terrace	Finale Terrace	131
Fairland/Colesville	West Fairland Local Park	Falling Creek Road	132
Fairland/Colesville	Deer Park Drive	Musgrove Road	133
Fairland/Colesville	Briggs Chaney Marketplace	Windsor Court and Tower	134
Fairland/Colesville	Robey Road	Castle Boulevard Parking Lot	135
Forest Glen	Everest Street	Medical Park Drive	136
Forest Glen	Brisbane Court	Belvedere Boulevard	137
Gaithersburg City	Downing Street	Wilson Street	138
Germantown East	Germantown Road	Boland Farm Road	139
Germantown East	Observation Court	Germantown Road	140
Germantown East	Drumcastle Terrace	Neelsville Middle School	141
Germantown East	Greenfield Road	Observation Drive	142
Germantown East	Observation Drive	Great Park Circle	143
Germantown East	Major Drive	Seneca Meadows Parkway	144
Germantown East	Great Park Circle	Ridge Road	145
Germantown East	Middlebrook Road	Scenery Drive	146
Germantown East	Middlebrook Road	Gunners Branch Road	147



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Germantown East	Emerald Way	Ridge Road	148
Germantown Town Center	Century Boulevard	Wisteria Drive	149
Germantown Town Center	Germantown Road	MARC Station Parking Lot	150
Germantown Town Center	Walter Johnson Road	Crystal Rock Drive	151
Germantown Town Center	Ridge Road	The Shops at Seneca Meadows	152
Germantown Town Center	Father Hurley Boulevard	Century Boulevard	153
Germantown West	Great Seneca Highway	Davertry Way	154
Germantown West	Teakwood Circle	Father Hurley Boulevard	155
Germantown West	Grey Eagle Court	Wisteria Drive	156
Germantown West	Poplar Glen Court	Clopper Road	157
Germantown West	Gunners Lake Trails	Caledonia Court	158
Germantown West	Great Seneca Highway	Gunner's Lake Local Park	159
Germantown West	Great Seneca Highway	Northwest High School	160
Germantown West	Red Rocks Drive	Northwest High School	161
Germantown West	Conlon Ridge Court	Great Seneca Highway	162
Germantown West	Hickory Tree Way	Middlebrook Road	163
Germantown West	Waters Landing Drive	Deerwater Drive	164
Germantown West	Leatherbark Way	Roberto Clemente Middle School	165
Germantown West	Tidewinds Way	Black Hill Regional Park Trails	166
Germantown West	Duhart Road	Germantown Road	167
Germantown West	Bridger Way	Century Boulevard	168
Germantown West	Poppyseed Lane	Red Robin Terrace	169
Kensington/Wheaton	Woodman Avenue	Sligo Creek Trail	170
Kensington/Wheaton	Valleywood Court	May Street	171
Kensington/Wheaton	Pennydog Lane	Carroll Knolls Local Park	172
Kensington/Wheaton	Greenlock Road	University Boulevard	173
Kensington/Wheaton	Capitol View-Homewood Local Park	Oakland Terrace Elementary School	174
Kensington/Wheaton	Edgewood Road	Leslie Street	175
Kensington/Wheaton	Wheaton Lane	Sligo Creek Natural Surface Trails	176
Kensington/Wheaton	Whitehall Street	Orange Drive	177



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Kensington/Wheaton	Breewood Road	MacDonald Knolls Early Childhood Center	178
Kensington/Wheaton	Whitehall Street	MacDonald Knolls Early Childhood Center	179
Kensington/Wheaton	Parkwood Drive	Edgefield Road	180
Kensington/Wheaton	Saint Laurence Drive	Williamsburg Drive	181
Kensington/Wheaton	Green Holly Terrace	Everest Street	182
Kensington/Wheaton	Hannes Street	Northwest Branch Trail	183
Kensington/Wheaton	Lamberton Drive	Kemp Mill Swim Club	184
Kensington/Wheaton	Newport Mill Road	Highview Avenue	185
Kensington/Wheaton	Kersey Road	Auth Lane	186
Kensington/Wheaton	Capitol View-Homewood Local Park	Plyers Mill Road	187
Kensington/Wheaton	Rosensteel Avenue	Flora Singer Elementary School	188
Kensington/Wheaton	Menlo Avenue	Loma Street	189
Kensington/Wheaton	Arcola Avenue	Henderson Avenue	190
Kensington/Wheaton	Rocky Mount Way	Sligo Creek Natural Surface Trails	191
Kensington/Wheaton	Homewood Parkway	Plyers Mill Road	192
Kensington/Wheaton	Windham Lane	Glen Haven Elementary School	193
Kensington/Wheaton	Georgia Avenue	Elkin Street	194
Kensington/Wheaton	Sampson Road	Ferrara Drive	195
Kensington/Wheaton	Eastmoor Drive	Colesville Road	196
Kensington/Wheaton	Auth Lane	Ridgewell Way	197
Kensington/Wheaton	Ferndale Street	Oakland Terrace Elementary School	198
Kensington/Wheaton	Drumm Avenue	Capitol View Avenue	199
Kensington/Wheaton	Hollow Glen Place	Rosensteel Avenue	200
Kensington/Wheaton	Brunswick Avenue	Hayden Drive	201
Kensington/Wheaton	Breewood Road	University Boulevard	202
Kensington/Wheaton	Haywood Drive	Carroll Knolls Local Park	203
Kensington/Wheaton	Nimitz Road	Kensington Boulevard	204
Kensington/Wheaton	Kenton Drive	Upton Drive	205
Kensington/Wheaton	Belvedere Boulevard	Sligo Creek Trail	206
Kensington/Wheaton	Lamberton Drive	Horton Drive	207



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Kensington/Wheaton	Newport Mill Road	Wheaton-Claridge Local Park Playground	208
Kensington/Wheaton	Odessa Shannon Middle School	Wheaton Regional Park	209
Kensington/Wheaton	Saddlebrook Local Park	Landmark at Glenmont Station	210
Kensington/Wheaton	Orebaugh Avenue	Colt Terrace	211
Kensington/Wheaton	Dallas Avenue	University Boulevard	212
Kensington/Wheaton	Connecticut Avenue	Woodson Avenue	213
Kensington/Wheaton	Le Baron Terrace	Gilsan Street	214
Kensington/Wheaton	University Boulevard	Edgewood Avenue	215
Kensington/Wheaton	University Boulevard	Montgomery Blair High School	216
Kensington/Wheaton	Hannes Street	Lombardy Road	217
Kensington/Wheaton	Breewood Road	Sligo Creek Parkway	218
Kensington/Wheaton	Windham Lane	Glenhaven Drive	219
Kensington/Wheaton	Windham Lane	Glenhaven Drive	220
Kensington/Wheaton	Windham Lane	Jamaica Drive	221
Kensington/Wheaton	Windham Lane	Francis Drive	222
Kensington/Wheaton	Windham Lane	Huntley Avenue	223
Kensington/Wheaton	Colt Terrace Neighborhood Park	Wheaton Regional Park	224
Kensington/Wheaton	Sligo Creek Trail	Dewey Court	225
Kensington/Wheaton	Gilmoure Drive	Greenock Road	226
Kensington/Wheaton	Dennis Avenue	Dallas Avenue	227
Kensington/Wheaton	Whitehall Street	Breewood Road	228
Kensington/Wheaton	Fiesta Road	University Boulevard	229
Kensington/Wheaton	Adams Drive	Rickover Road	230
Kensington/Wheaton	Lamberton Drive	Hyde Road	231
Kensington/Wheaton	Fairoak Drive	Bluff Terrace	232
Kensington/Wheaton	Charlton Drive	Kemp Mill Elementary School	233
Kensington/Wheaton	Culver Court	Saul Road	234
Kensington/Wheaton	Byrd Road	Ingersol Drive	235
Kensington/Wheaton	Hildarose Drive	McMillan Avenue	236
Lyttonsville	Spencer Road	Rosemary Hills-Lyttonsville Local Park	237



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Lyttonsville	Lyttonsville Road	Rosemary Hills-Lyttonsville Local Park Internal Trails	238
Montgomery Village/Airpark	Montgomery Village Avenue	Lost Knife Circle	239
Montgomery Village/Airpark	Boysenberry Drive	Walker House Road	240
Montgomery Village/Airpark	Dunbridge Way	Montgomery Village Middle School	241
Montgomery Village/Airpark	Cloverwood Court	Snouffer School Road	242
Montgomery Village/Airpark	Brassie Place	Transhire Road	243
Montgomery Village/Airpark	Centerway Road	Broadwater Drive	244
Montgomery Village/Airpark	Snouffer School Road	Beechcraft Avenue	245
North Bethesda	Weymouth Street	Kenilworth Avenue	246
North Bethesda	Tuckerman Lane	Old Club Road	247
North Bethesda	Bou Avenue	Washington Avenue	248
North Bethesda	Fleming Avenue	Bethesda Trolley Trail	249
North Bethesda	Ralston Road	Huntover Lane	250
North Bethesda	Wyaconda Road	Boiling Brook Parkway	251
North Bethesda	Patapsco Drive	Boiling Brook Parkway	252
North Bethesda	Montauk Avenue	De Paul Drive	253
North Bethesda	Holmhurst Road	Mayfield Drive	254
North Bethesda	Rosemont Drive	Marcliff Road	255
North Bethesda	Old Georgetown Road	Berkshire Drive	256
North Potomac	Travilah Road	Yearling Drive	257
North Potomac	Great Seneca Highway	Seneca Creek State Park	258
Olney	Georgia Avenue	Gold Mine Road	259
Olney	Natural Gas Trail	Georgia Avenue	260
Olney	Appomattox Avenue	Brooke Farm Drive	261
Olney	North Branch SVU 2 West Side Rock Creek	North Branch SVU 2 East Side Rock Creek	262
Olney	Cutlass Drive	Norbeck Meadows Neighborhood Park	263
Olney	Dubarry Lane	Longwood Recreation Center	264
Potomac	Willowbrook Drive	Willowbrook Drive	265
Potomac	Cherbourg Drive	Willowbrook Drive	266
Potomac	Burbank Drive	The Corral Drive	267



Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Potomac	Bit and Spur Lane	Falls Road	268
Potomac	Logan Drive	Oaklyn Drive	269
R&D Village	Gudelsky Drive	Traville Gateway Shopping Center	270
R&D Village	Stanwood Terrace	Bald Cypress Drive	271
Rural East	Country Hills Road	Hidden Garden Lane	272
Rural East	Heartwood Drive	Magruder High School	273
Rural West	Celtic Court	Lloyd Road	274
Shady Grove Metro Station	Yellowstone Way	Crabbs Branch Way	275
Shady Grove Metro Station	Needwood Road	Metro Stormwater Pond Trail	276
Silver Spring CBD	Thayer Avenue	Bonifant Street	277
Silver Spring CBD	East-West Highway	Dixon Avenue	278
Silver Spring CBD	Georgia Avenue	Fenton Street	279
Silver Spring CBD	Wayne Avenue	Bonifant Street	280
Silver Spring CBD	Blair Road	Jesup Blair Local Park Internal Trail	281
Silver Spring CBD	Jesup Blair Pedestrian Bridge	Jesup Blair Local Park Internal Trail	282
Silver Spring/Takoma Park	New Hampshire Avenue	Mount Pisgah Road	283
Silver Spring/Takoma Park	Alton Parkway	Fairview Road	284
Silver Spring/Takoma Park	Columbia Boulevard	Flora Lane	285
Silver Spring/Takoma Park	Lanier Drive	Warren Street	286
Silver Spring/Takoma Park	Gude Avenue	Poplar Avenue	287
Silver Spring/Takoma Park	Cockerville Avenue	Allegheny Avenue	288
Silver Spring/Takoma Park	Hamilton Avenue	Saybrook Avenue	289
Silver Spring/Takoma Park	Kansas Lane	Westmoreland Avenue	290
Silver Spring/Takoma Park	Mintwood Street	East Franklin Avenue	291
Silver Spring/Takoma Park	4th Avenue	Sheridan Street	292
Silver Spring/Takoma Park	Harvey Road	Sligo Creek Parkway	293
Silver Spring/Takoma Park	Sligo Creek Parkway	Hamilton Avenue	294
Silver Spring/Takoma Park	Maple Avenue	Takoma Woods Trails	295
Silver Spring/Takoma Park	Watson Road	Harvey Road	296
Silver Spring/Takoma Park	Mark Court	East-West Highway	297

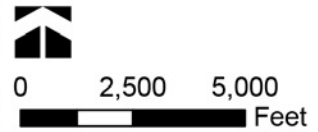
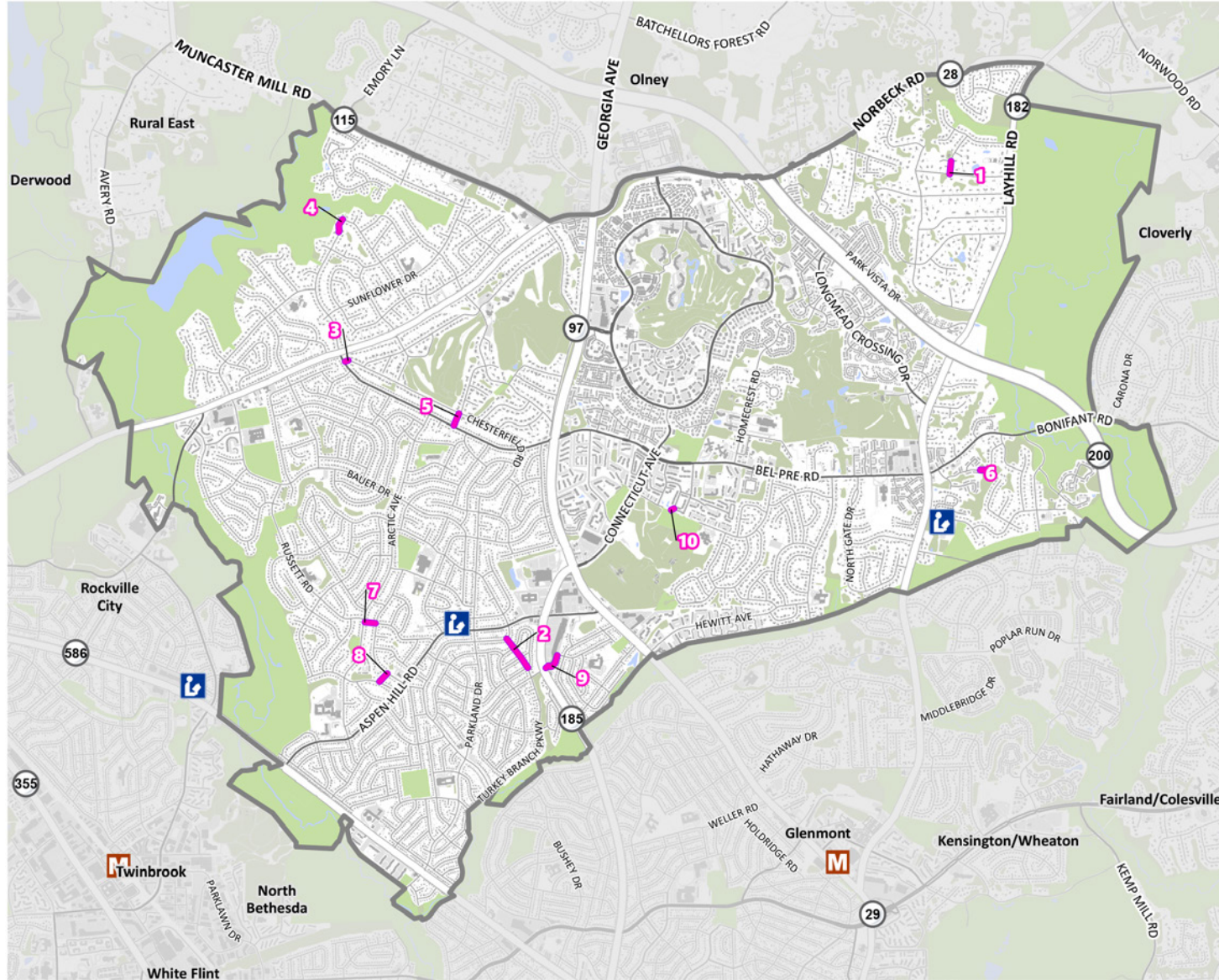


Table 34. Pedestrian Shortcut Recommendations

Policy Area	Origin	Destination	Map Reference #
Silver Spring/Takoma Park	Long Branch Parkway	East Melbourne Avenue	298
Wheaton CBD	University Boulevard	Blueridge Avenue	299
Wheaton CBD	Peregoy Drive	Torrance Drive	300
Wheaton CBD	Douglas Avenue	Mall Ring Road	301
White Flint	Rockville Pike	Maple Avenue	302
White Oak	Powder Mill Road	Forest Dale Drive	303
White Oak	Lockwood Drive	Columbia Pike	304
White Oak	Naglee Road	Parkman Road	305
White Oak	Royal Road	Naglee Road	306
White Oak	Harper Avenue	Francis Scott Key Middle School	307
White Oak	Oaklawn Court	Oaklawn Drive	308
Woodside	Grace Church Road	Lyttonsville Road	309
Woodside	East-West Highway	16th Street	310

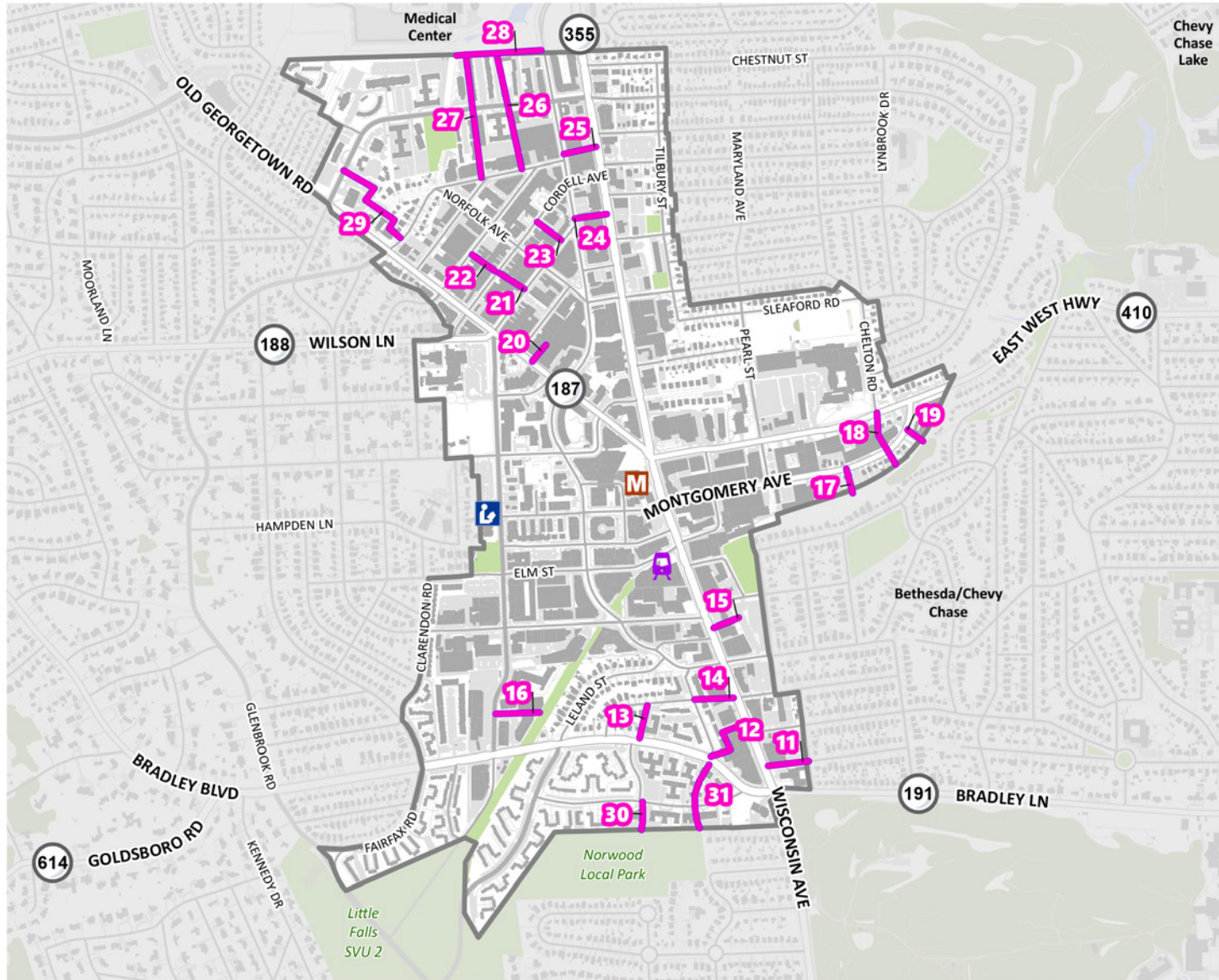


Aspen Hill Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- M Metro Stations
- i Libraries

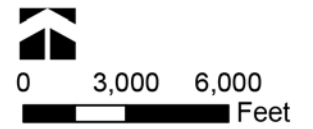
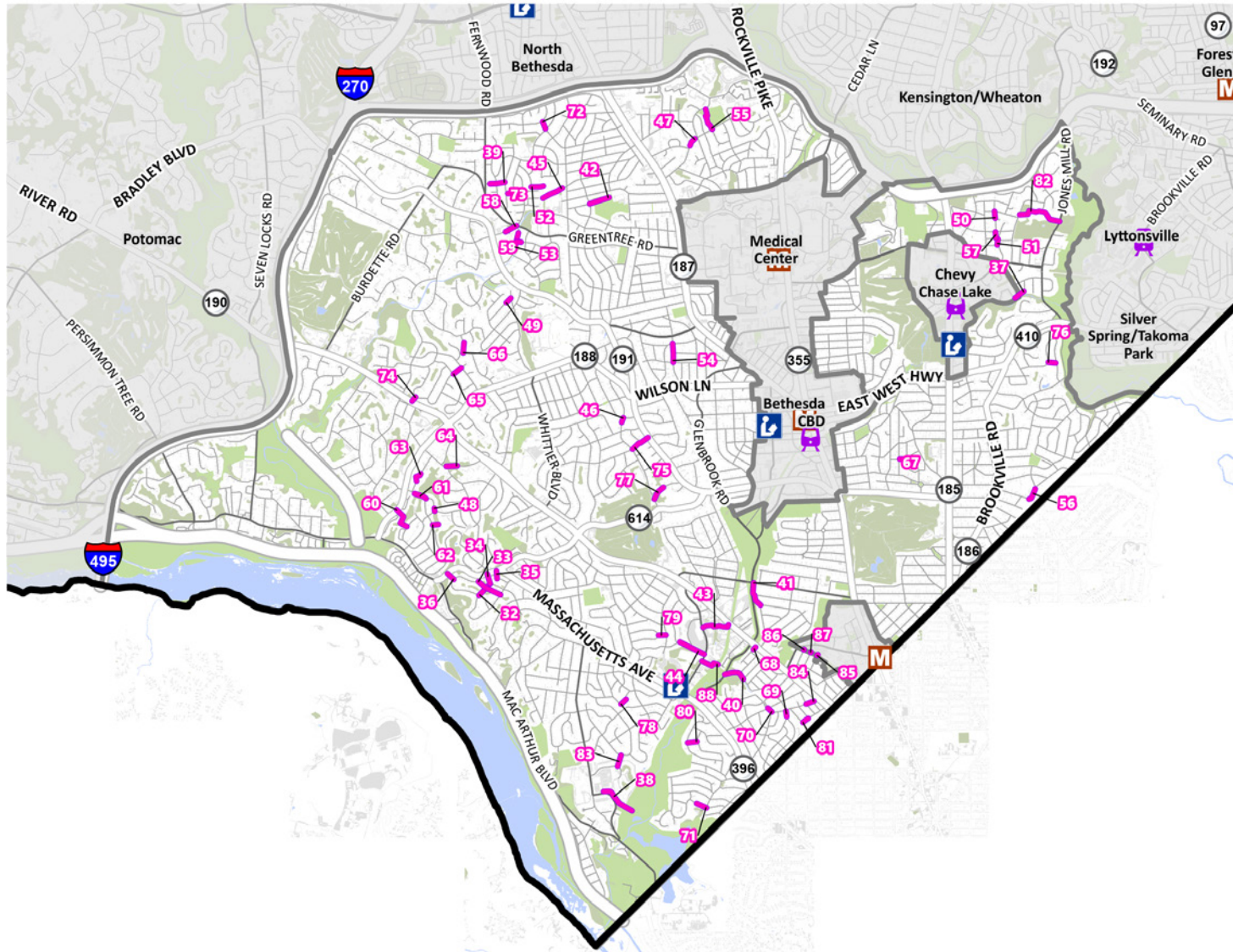
Bethesda CBD Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- Purple Line Stations
- M Metro Stations
- Libraries



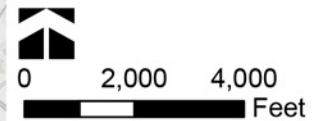
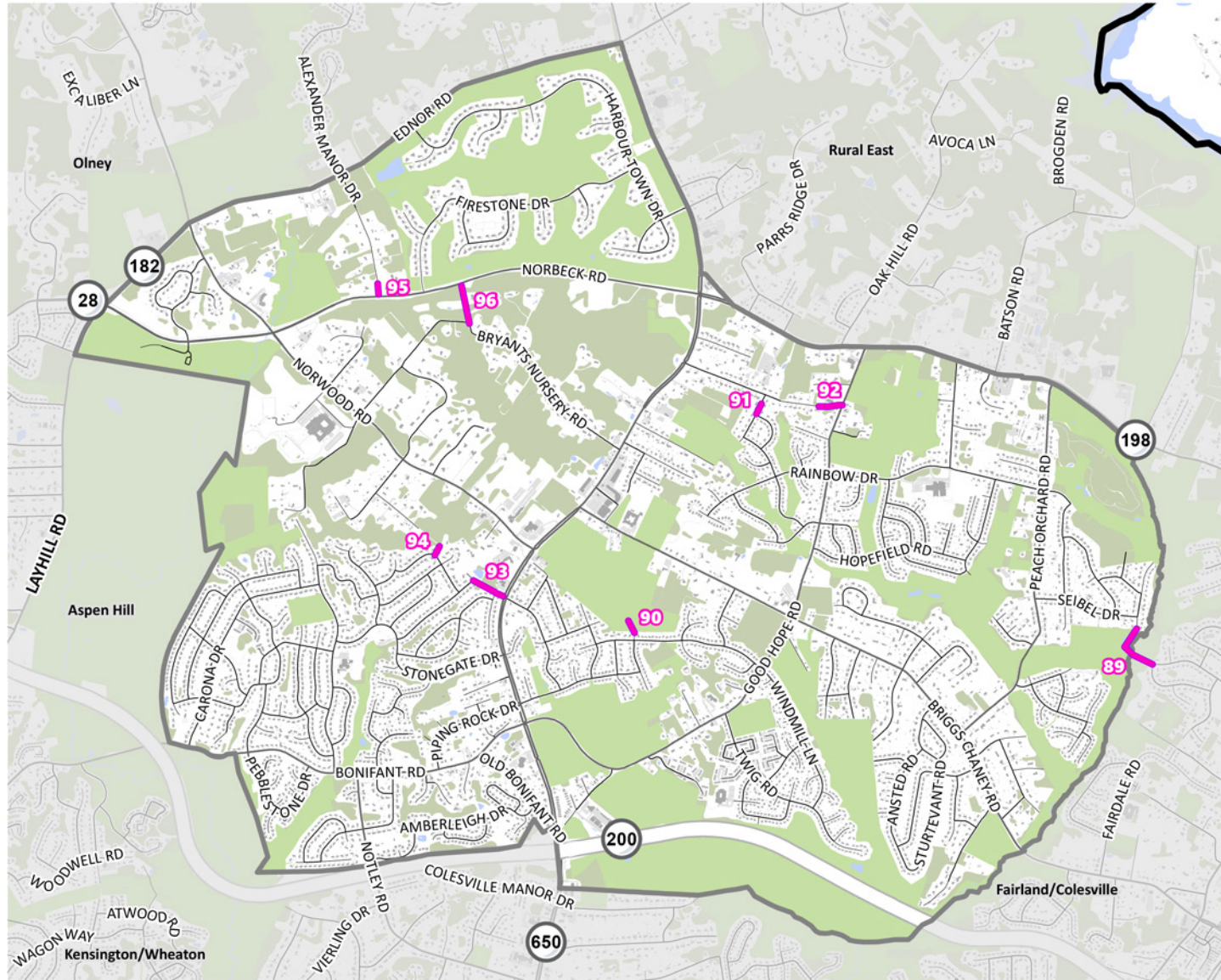
Bethesda/Chevy Chase Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- Purple Line Stations
- Metro Stations
- Libraries



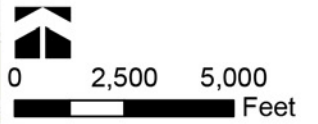
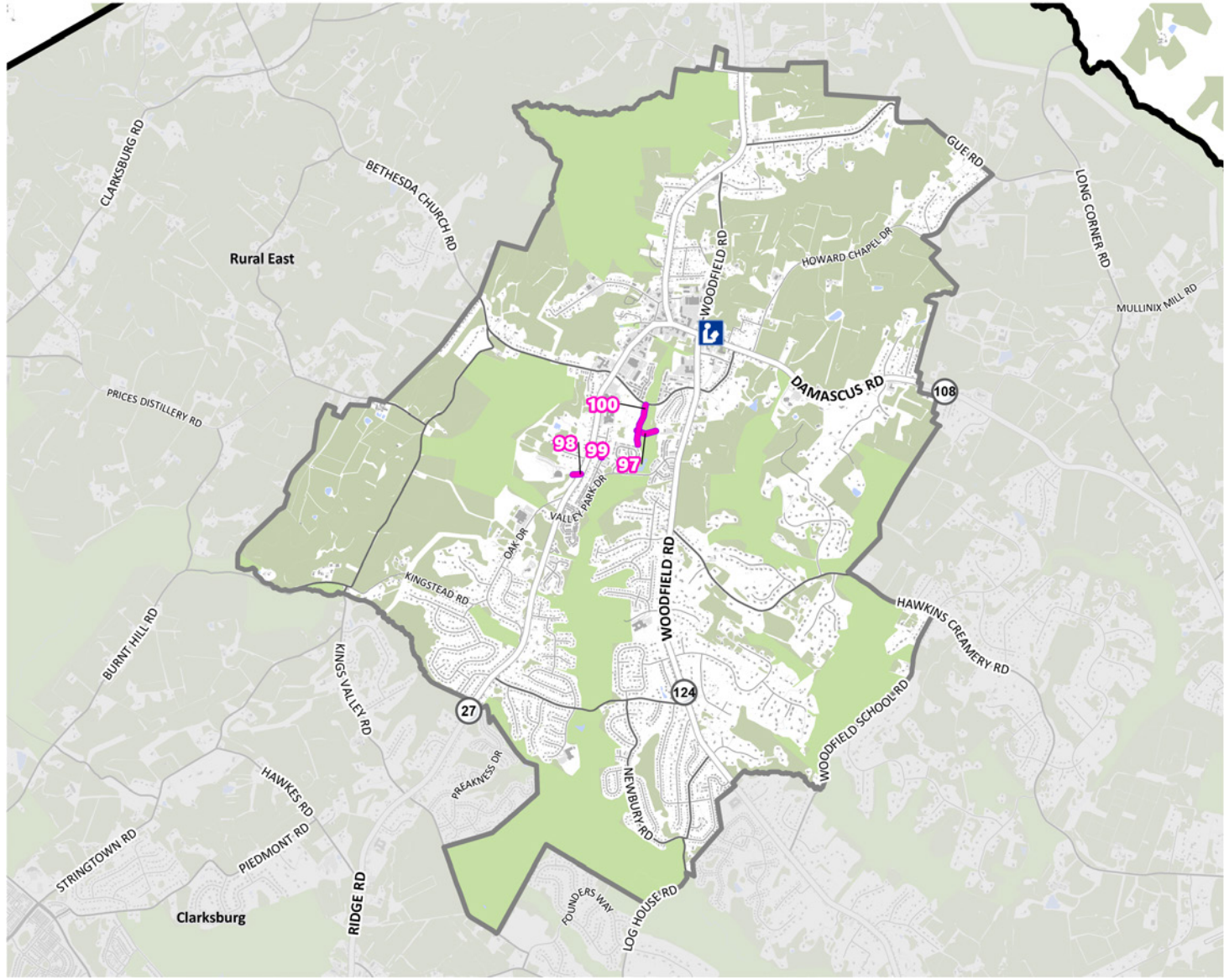
Cloverly Policy Area



— Pedestrian Shortcut (##)
 Policy Area

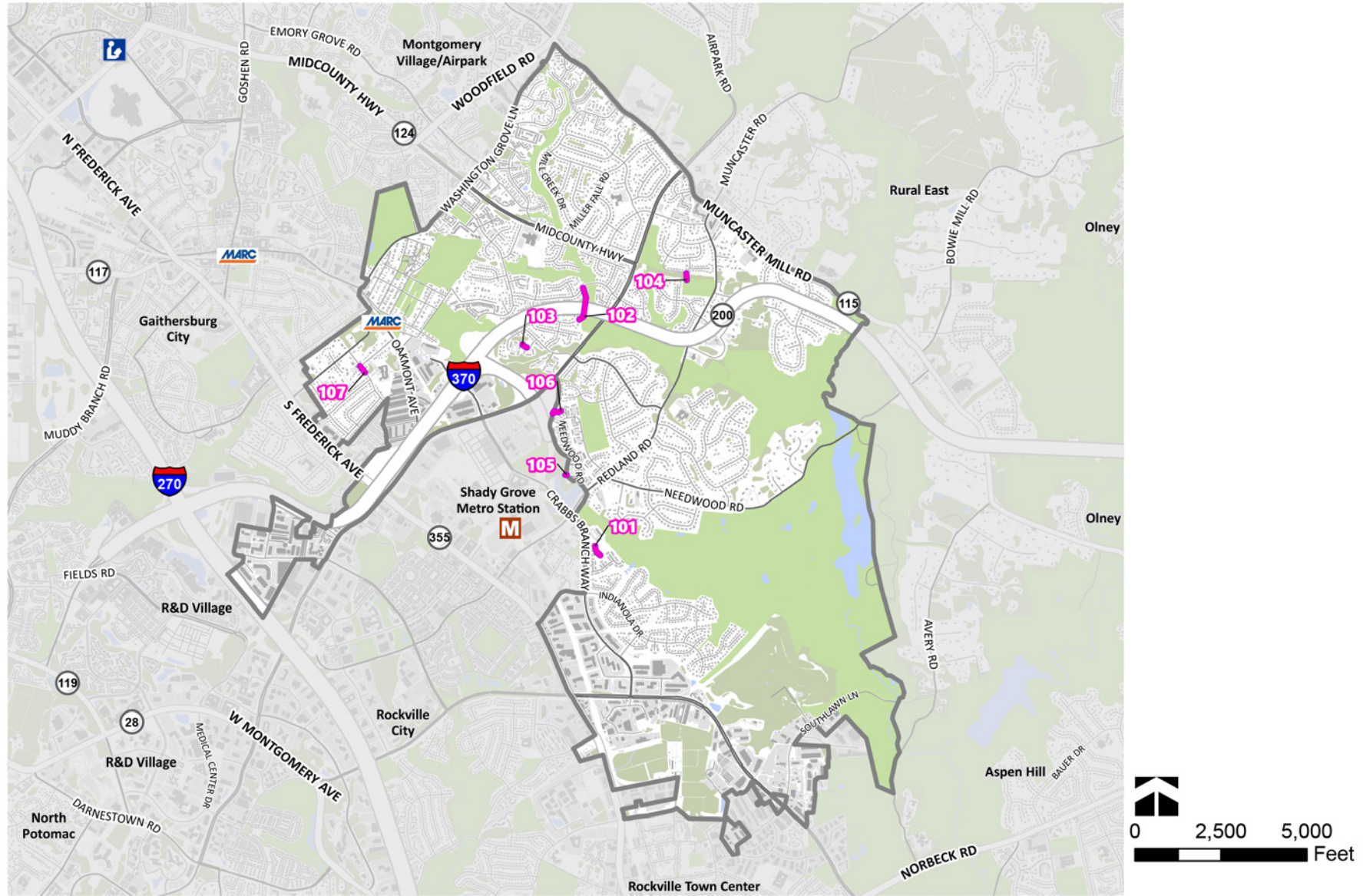


Damascus Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- L Libraries

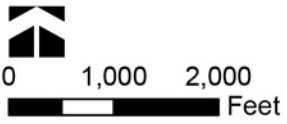
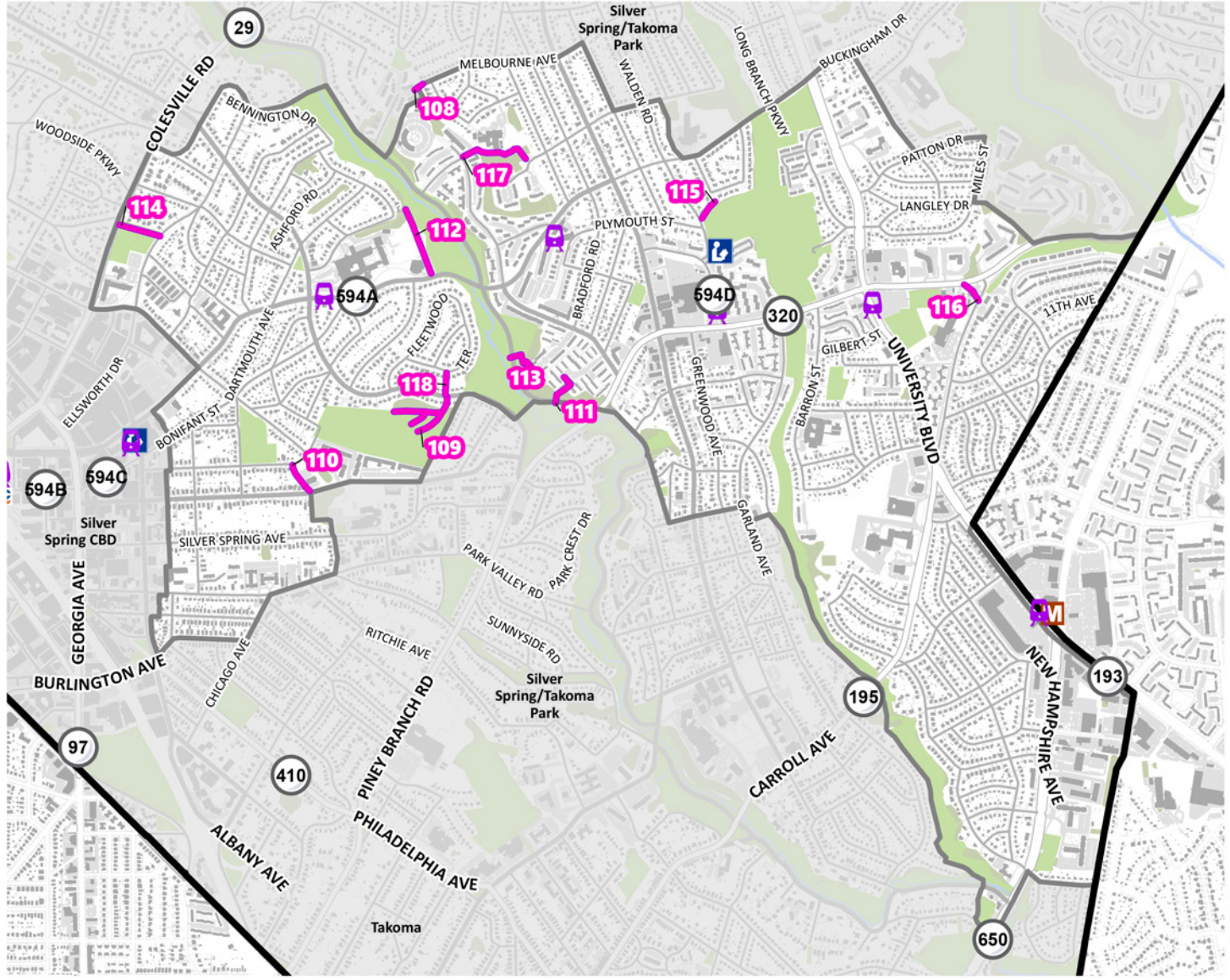
Derwood Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- M Metro Stations
- i Libraries

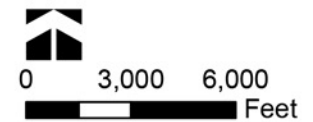
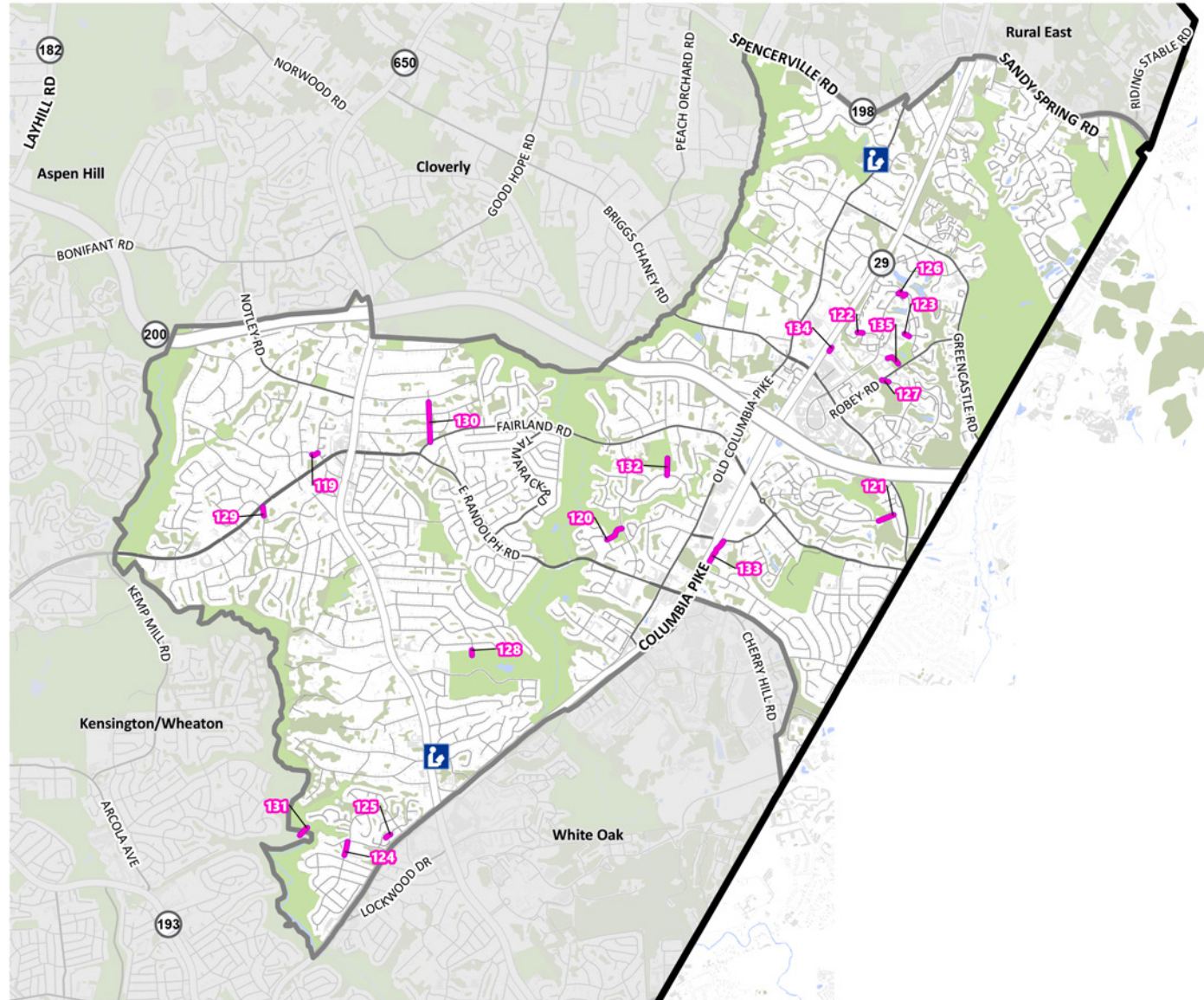


East Purple Line Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- Purple Line Stations
- Metro Stations
- Libraries

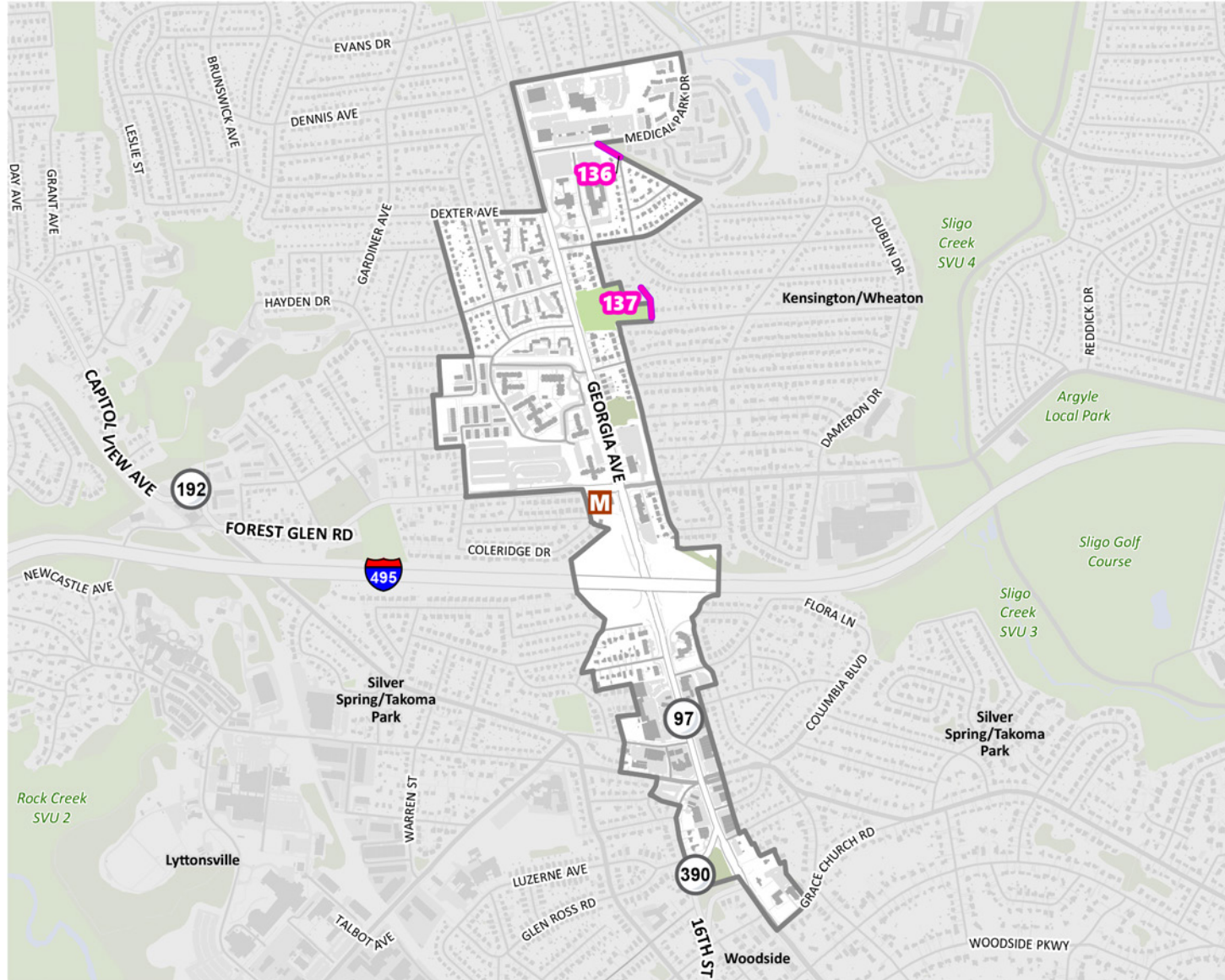
Fairland/Colesville Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- L Libraries



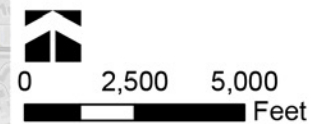
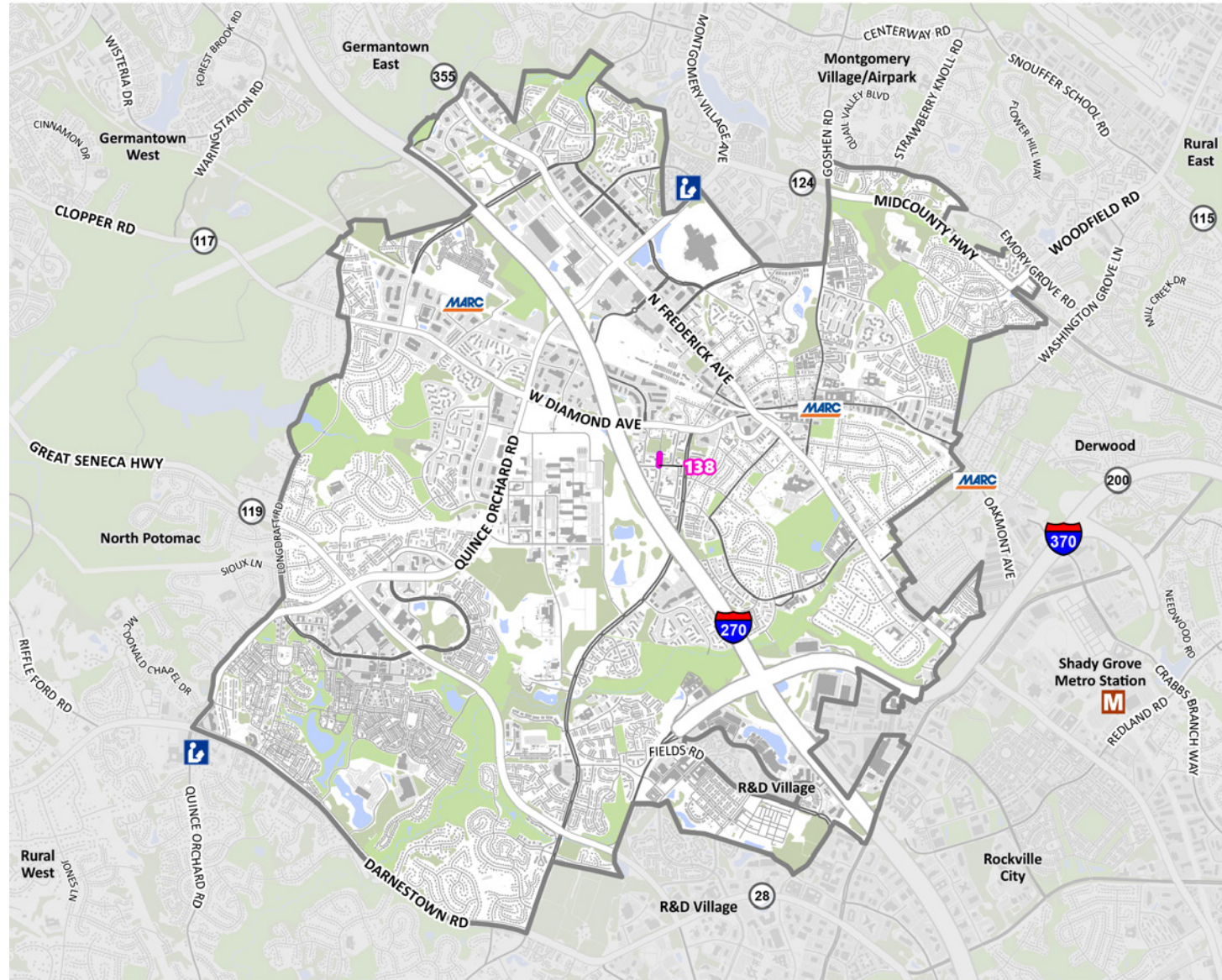
Forest Glen Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- M Metro Stations



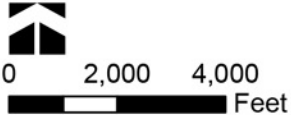
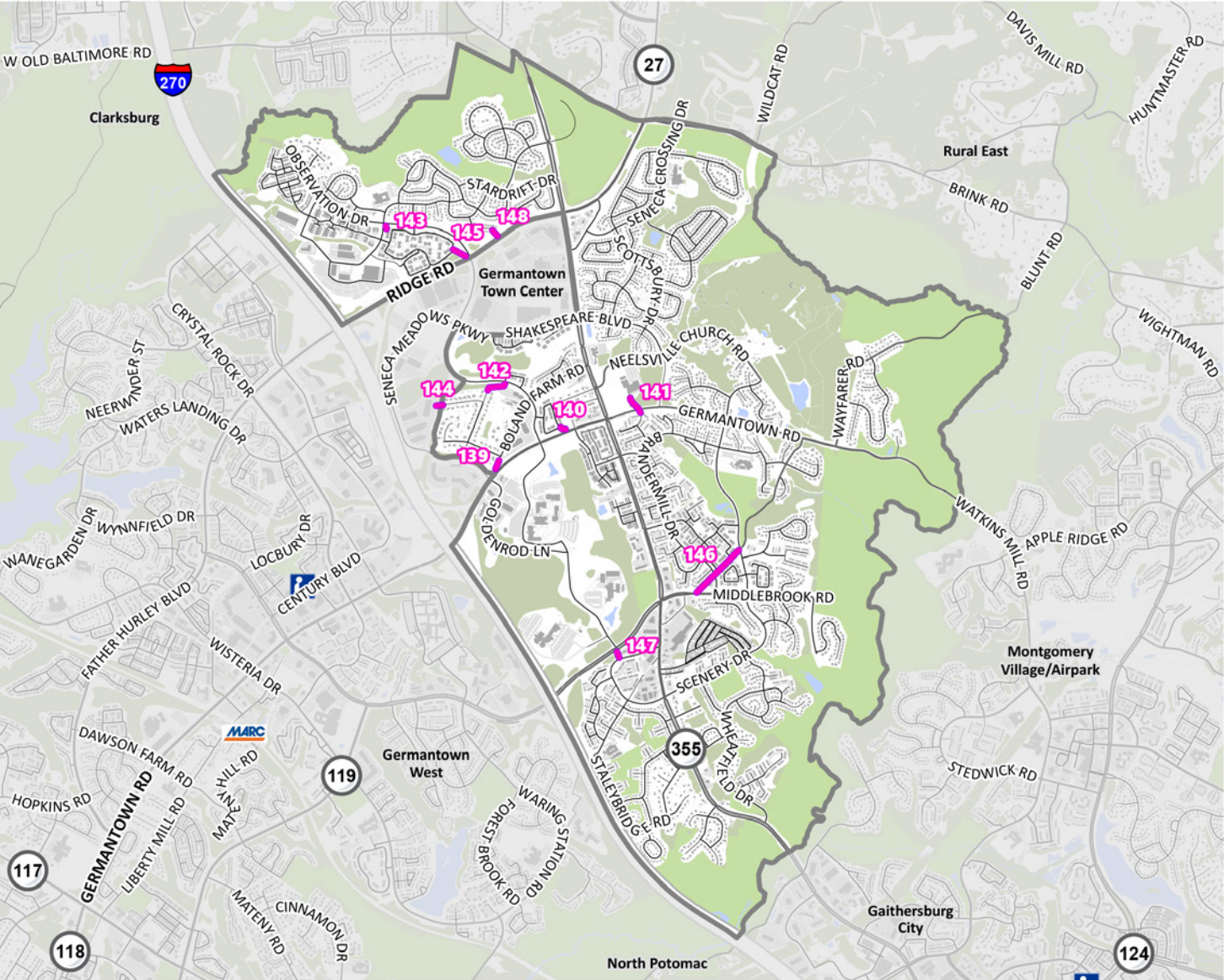
Gaithersburg City Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC MARC Station
- M Metro Stations
- L Libraries

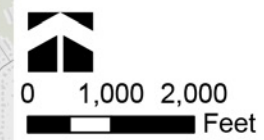
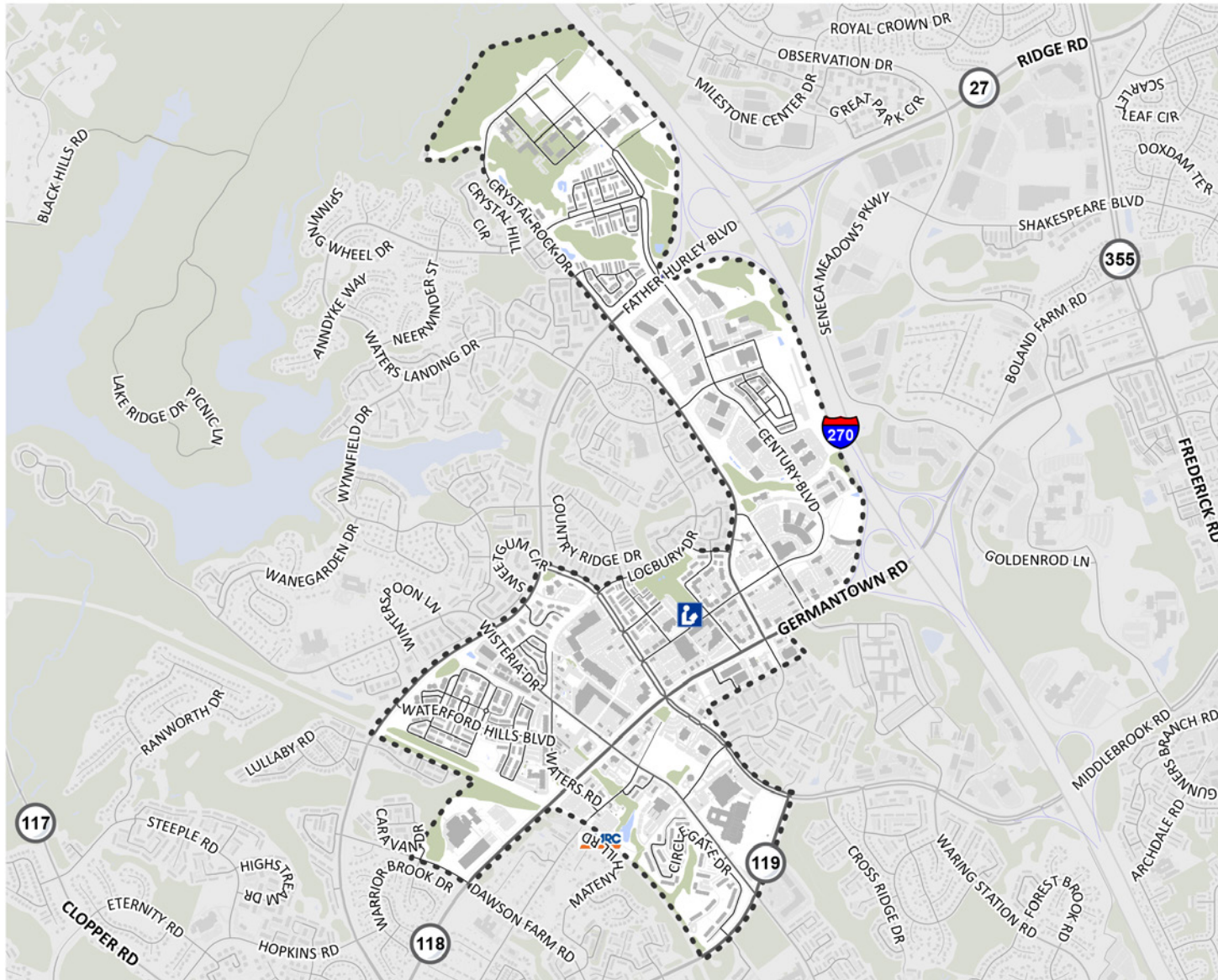


Germantown East Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- Libraries

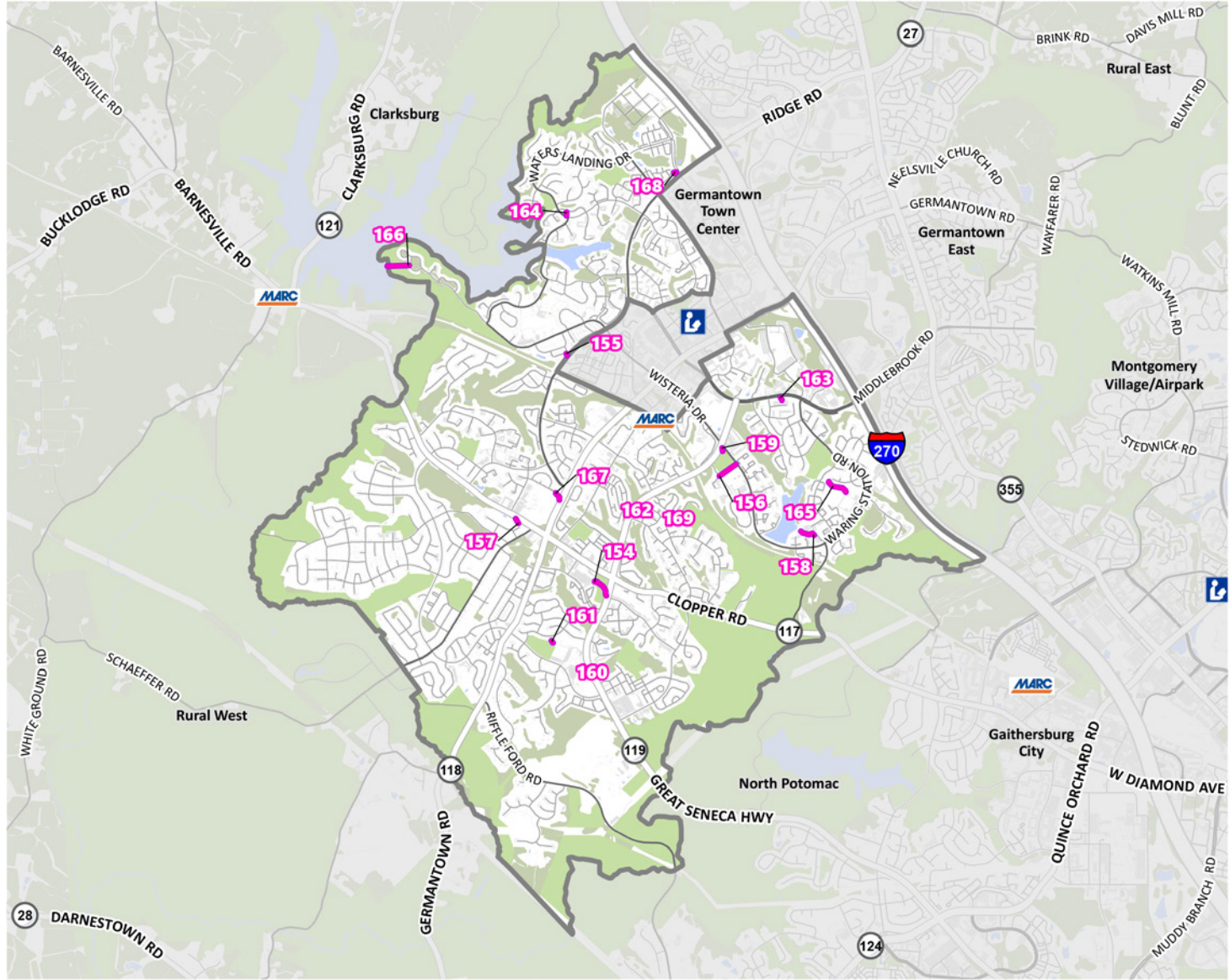
Germantown Town Center Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC MARC Station
- i Libraries



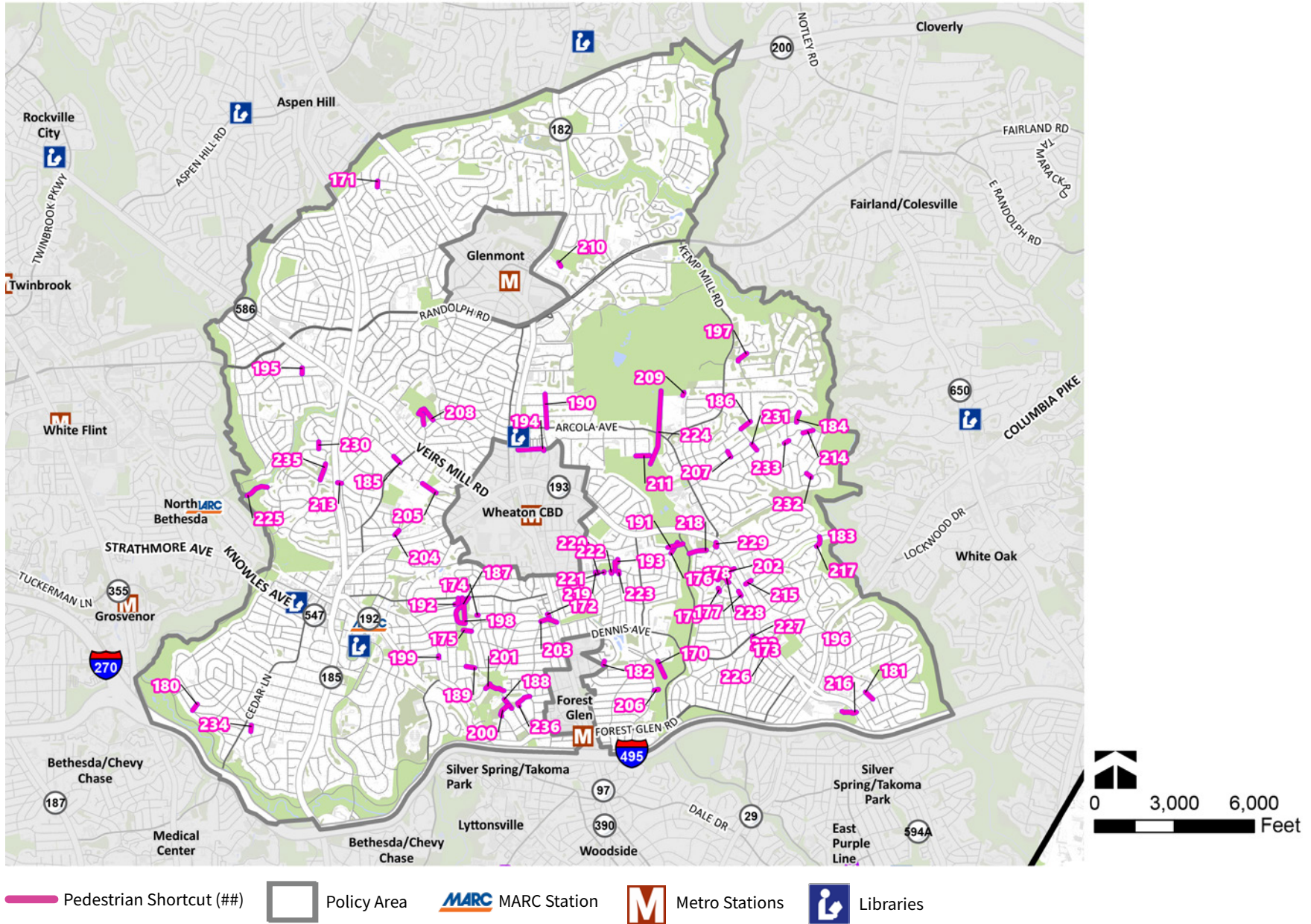
Germantown West Policy Area



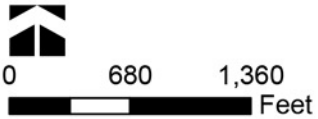
- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- i Libraries



Kensington/Wheaton Policy Area

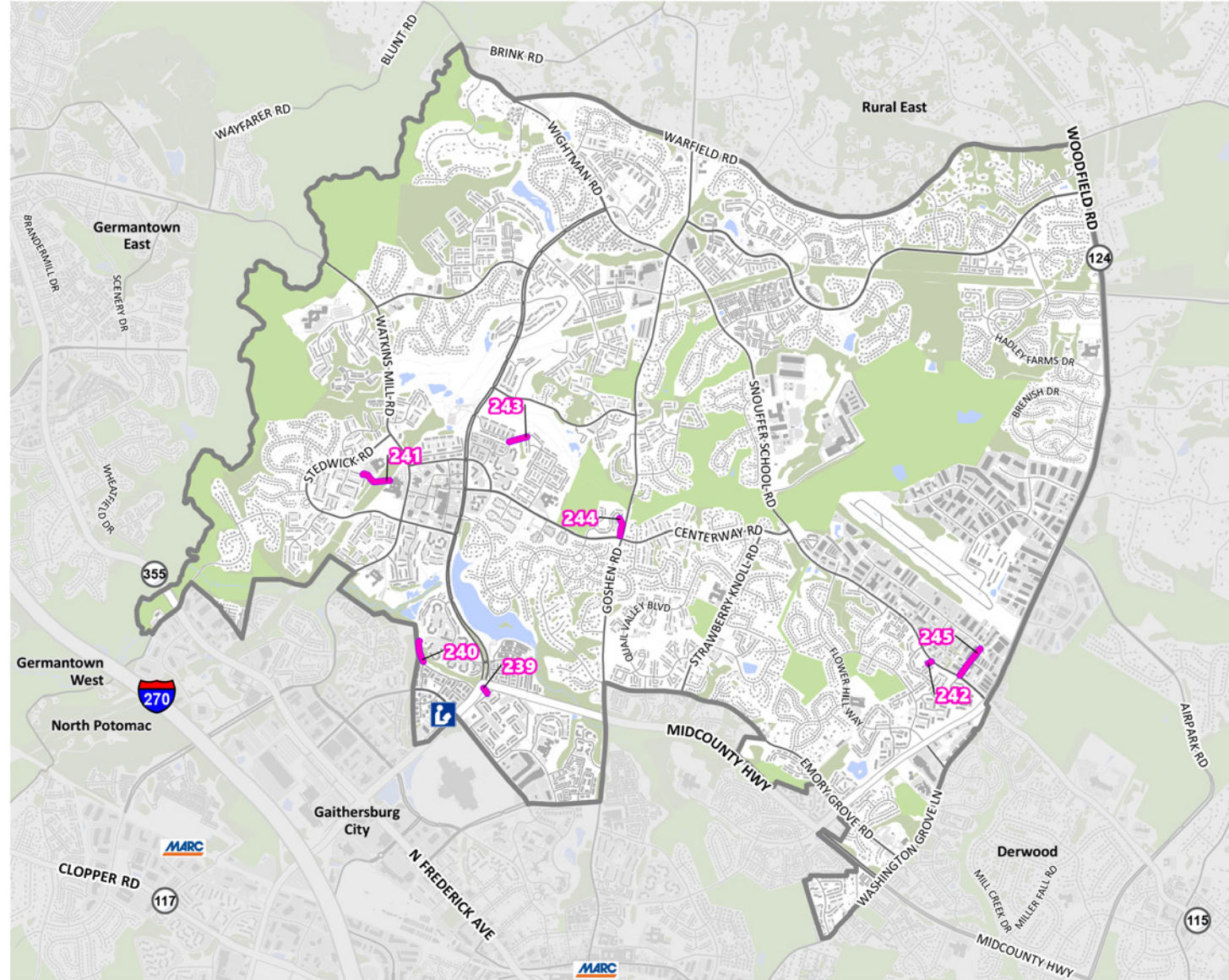


Lyttonsville Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- Purple Line Stations

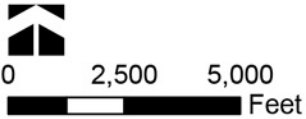
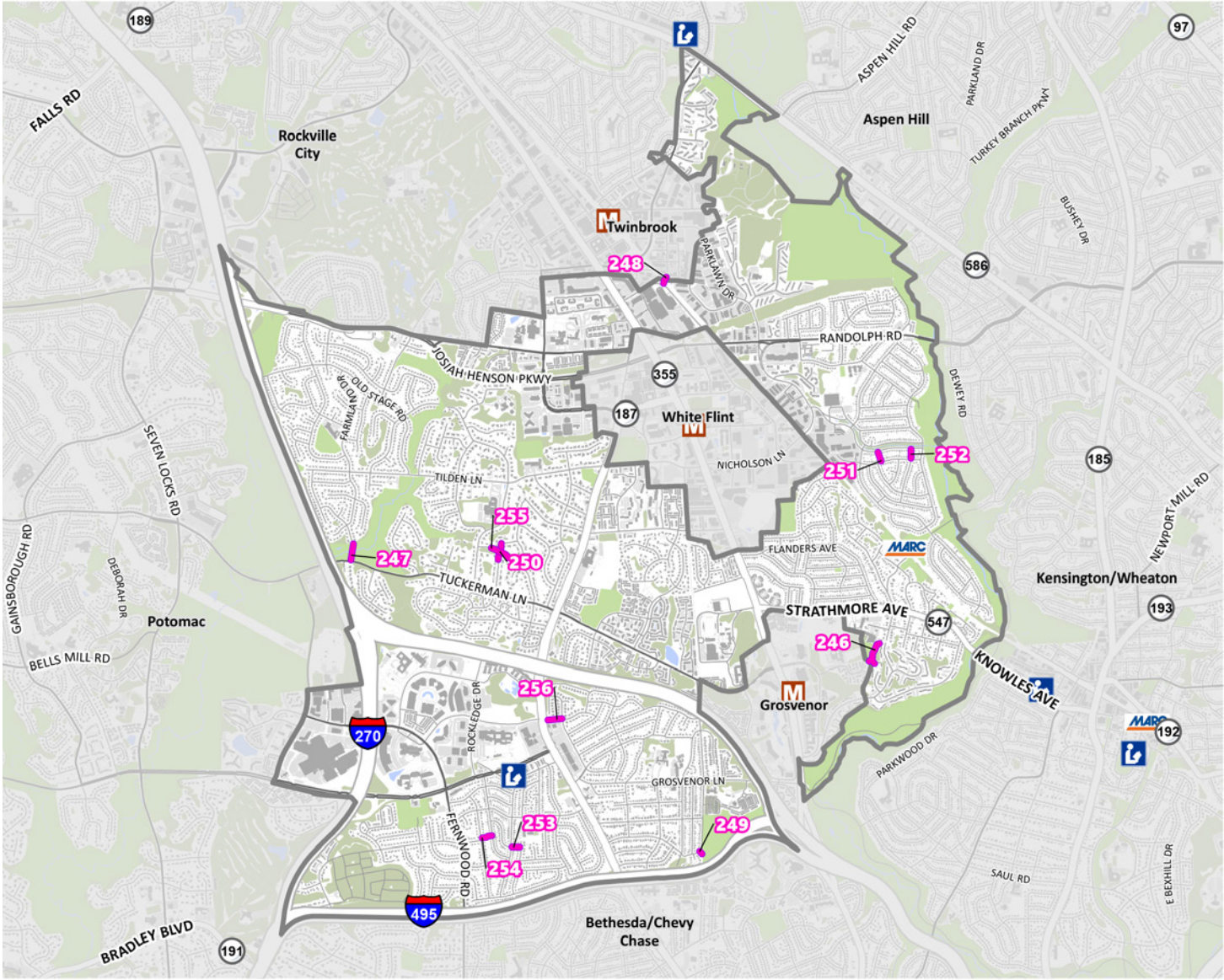
Montgomery Village/Airpark Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- i Libraries

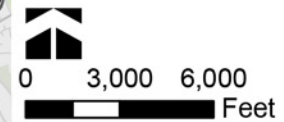
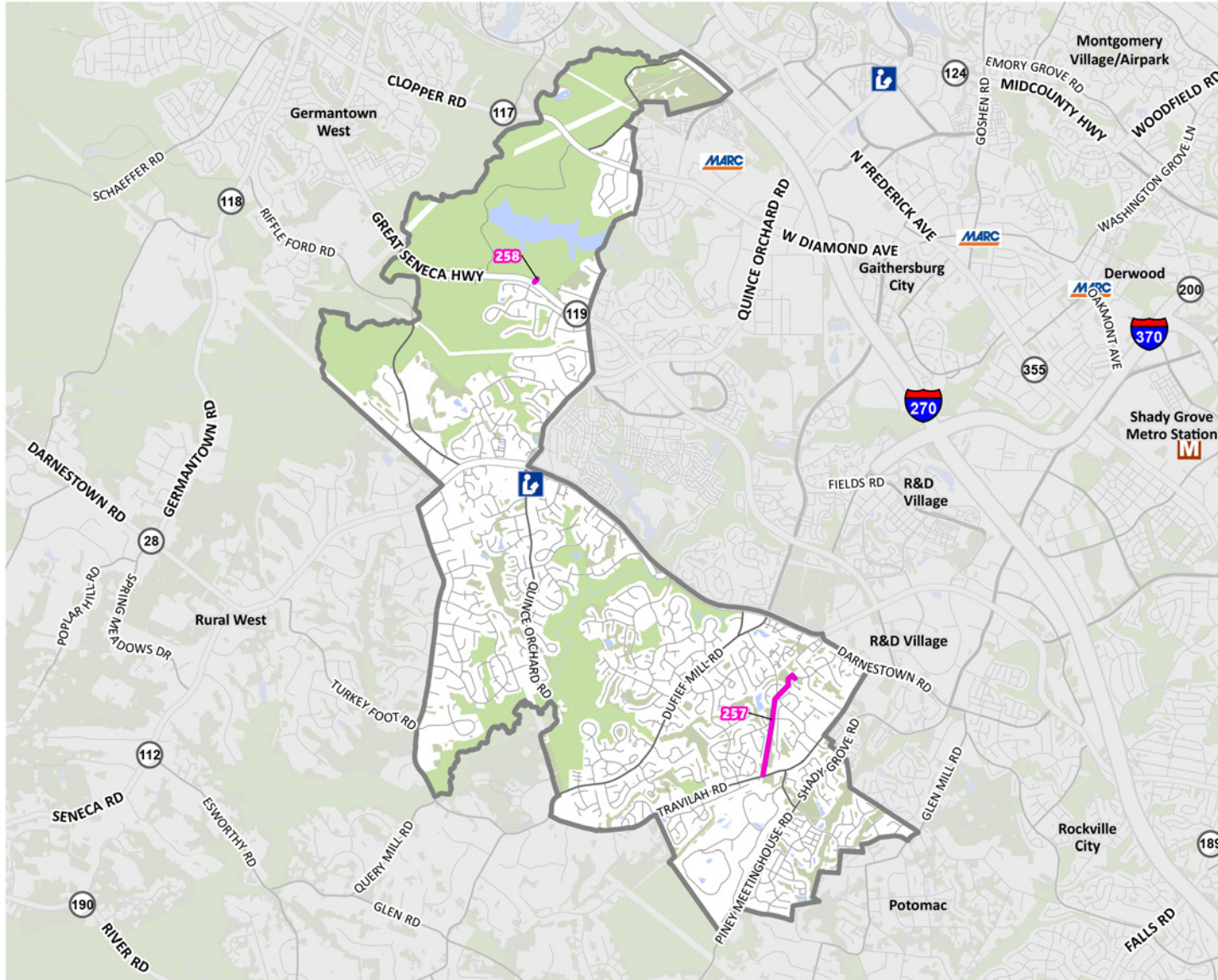


North Bethesda Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC MARC Station
- M Metro Stations
- i Libraries

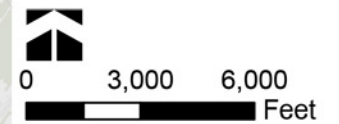
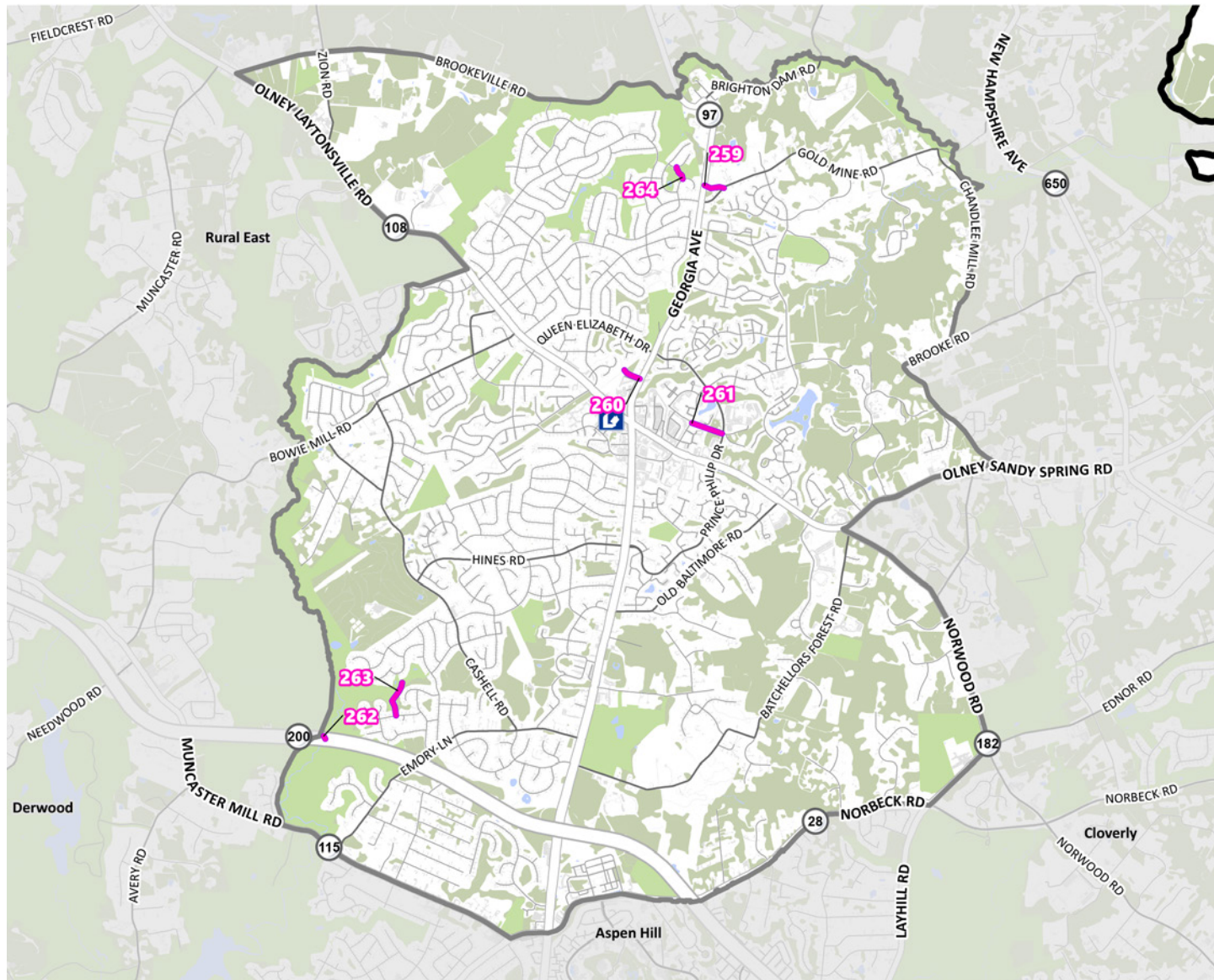
North Potomac Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- Metro Stations
- i Libraries



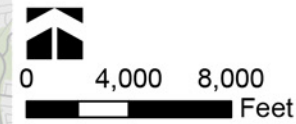
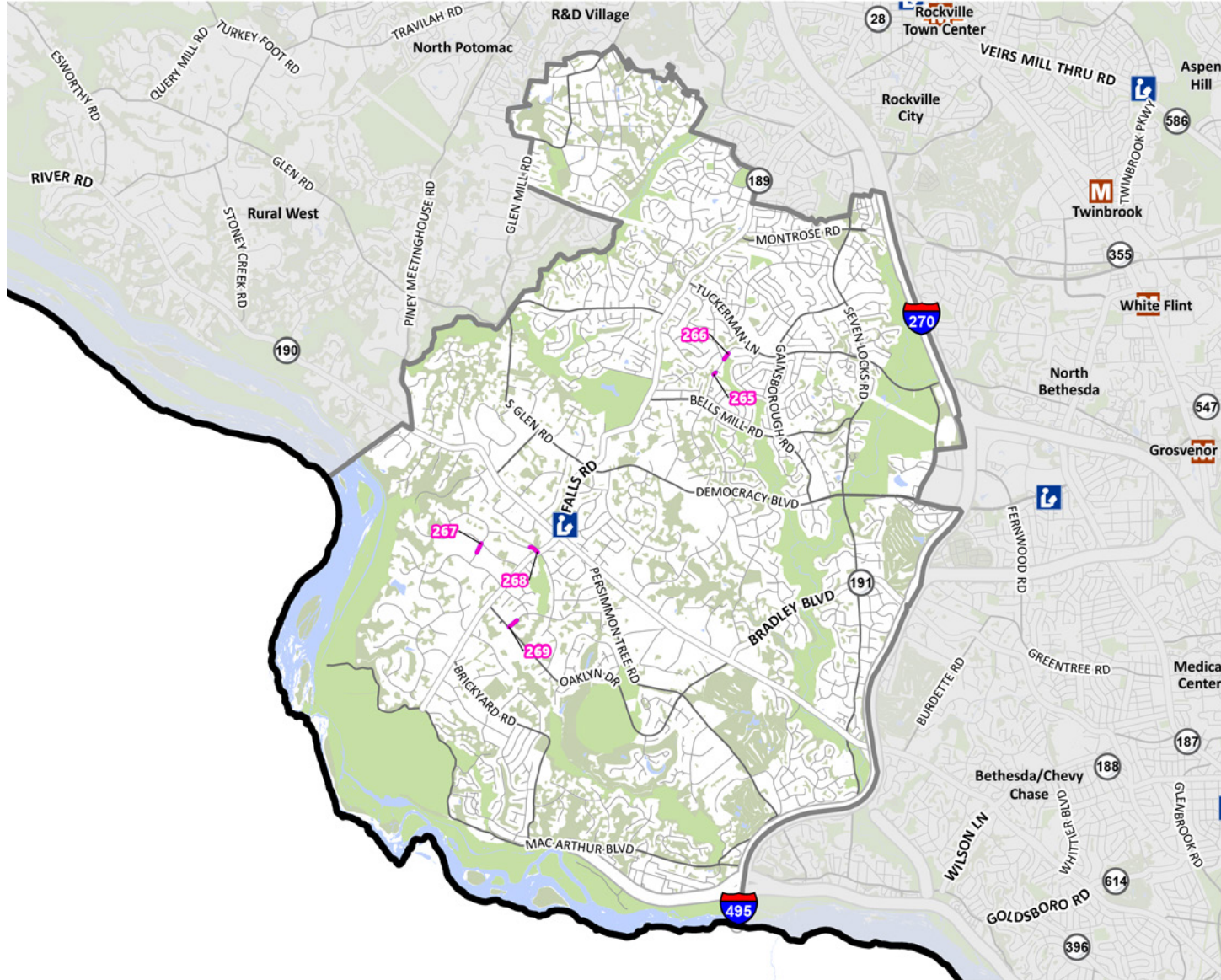
Olney Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- L Libraries



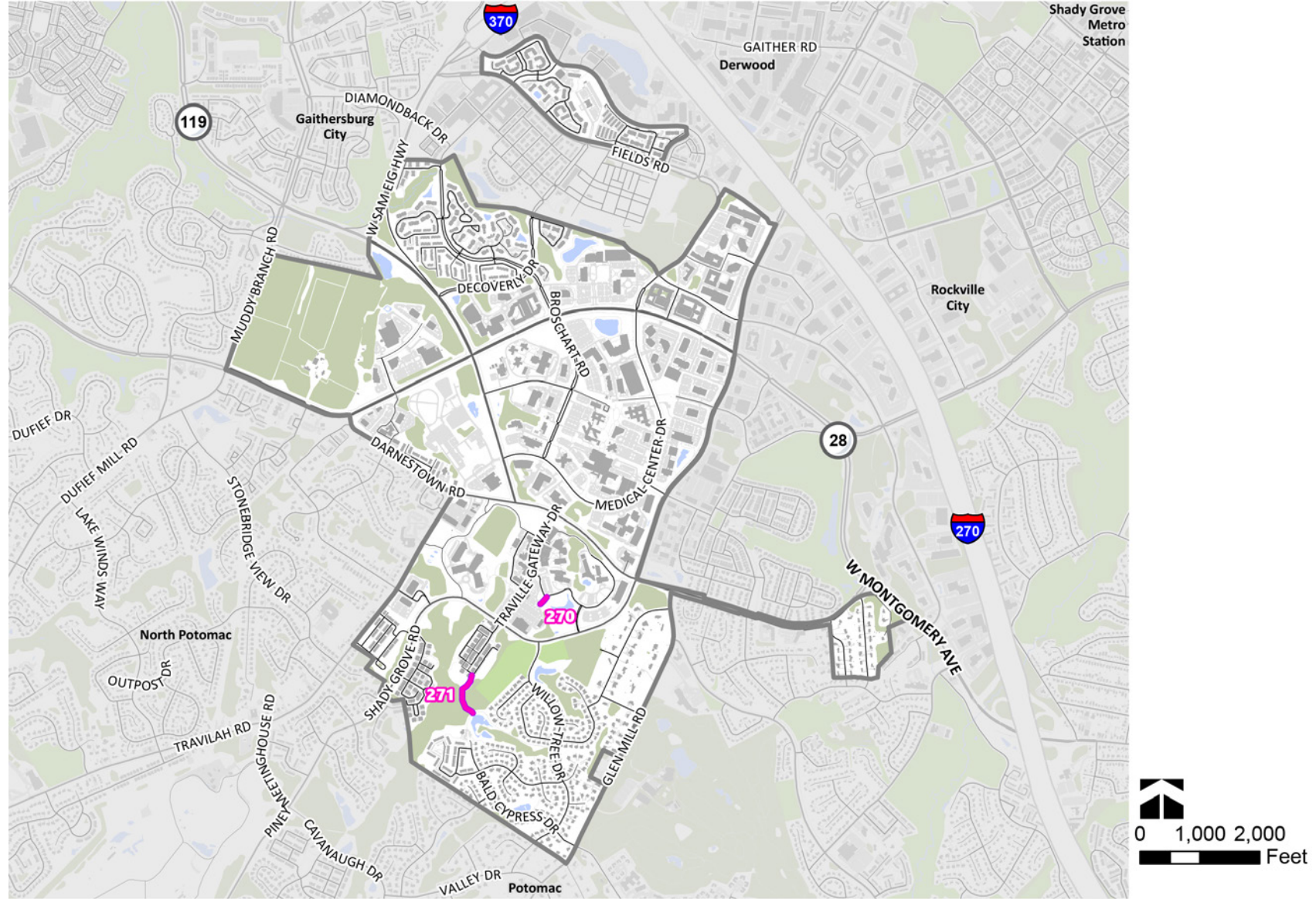
Potomac Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- L Libraries
- M Metro Stations



R&D Village Policy Area

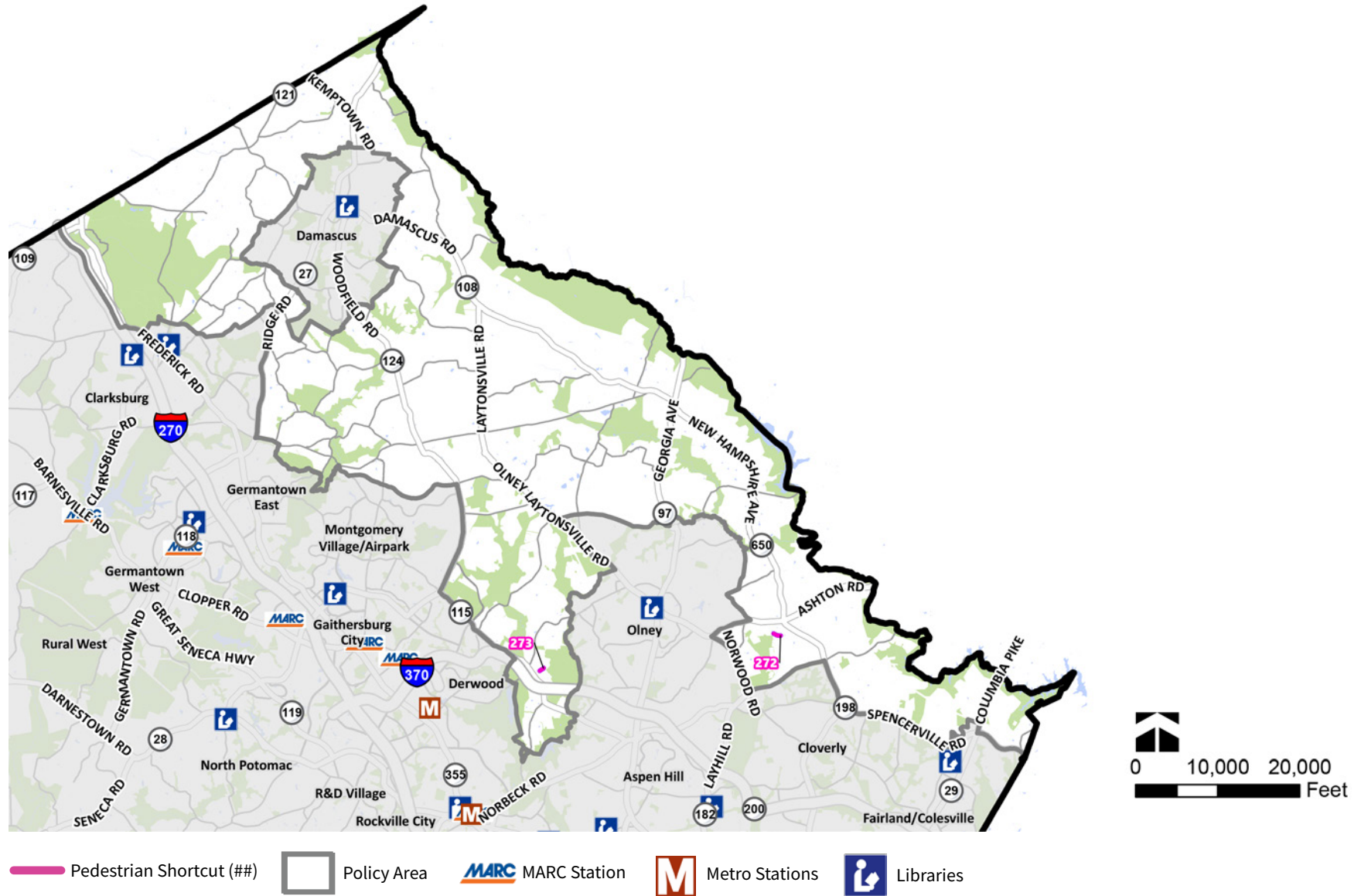


 Pedestrian Shortcut (##)

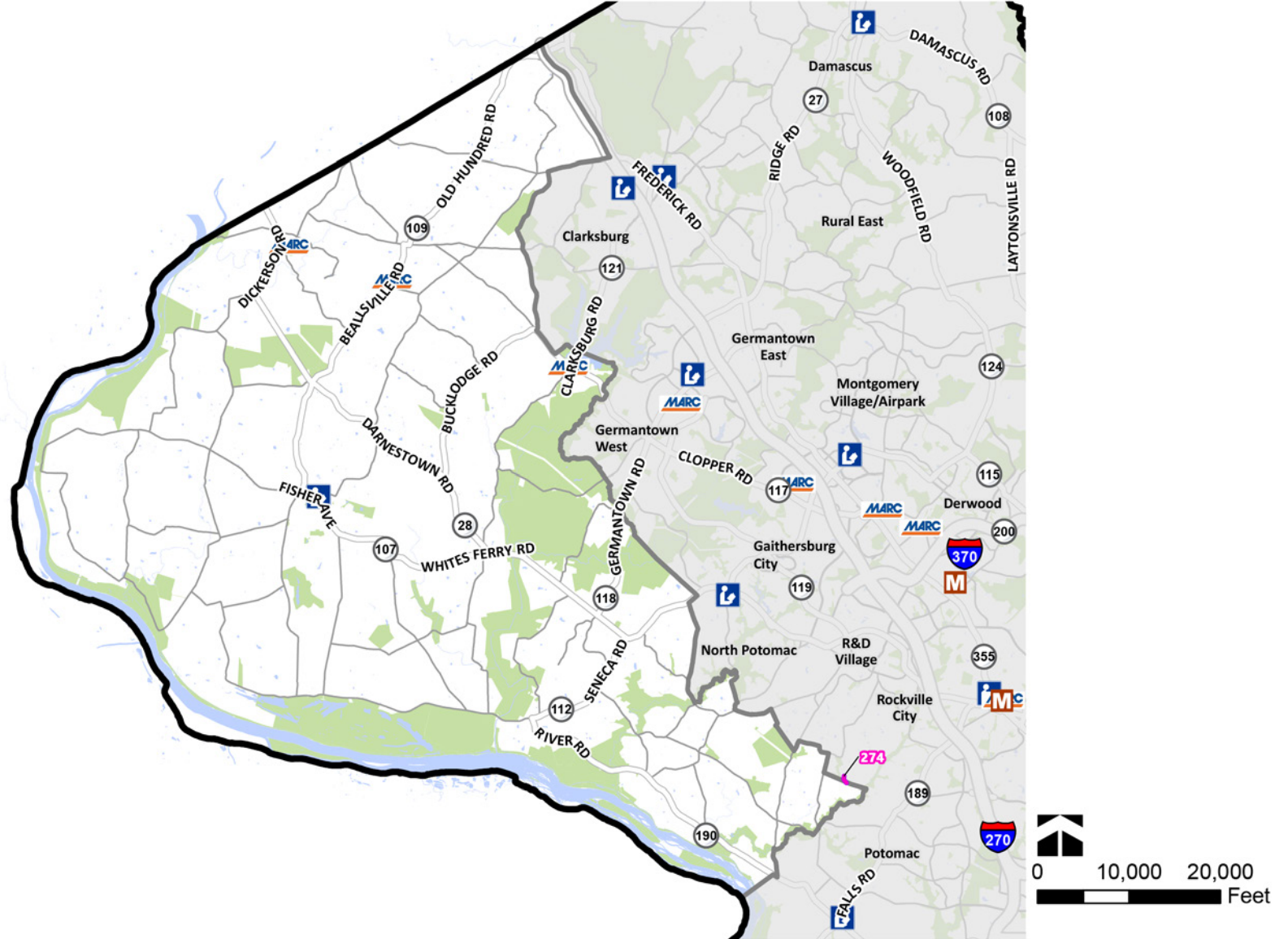
 Policy Area



Rural East Policy Area



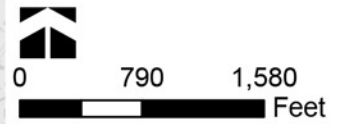
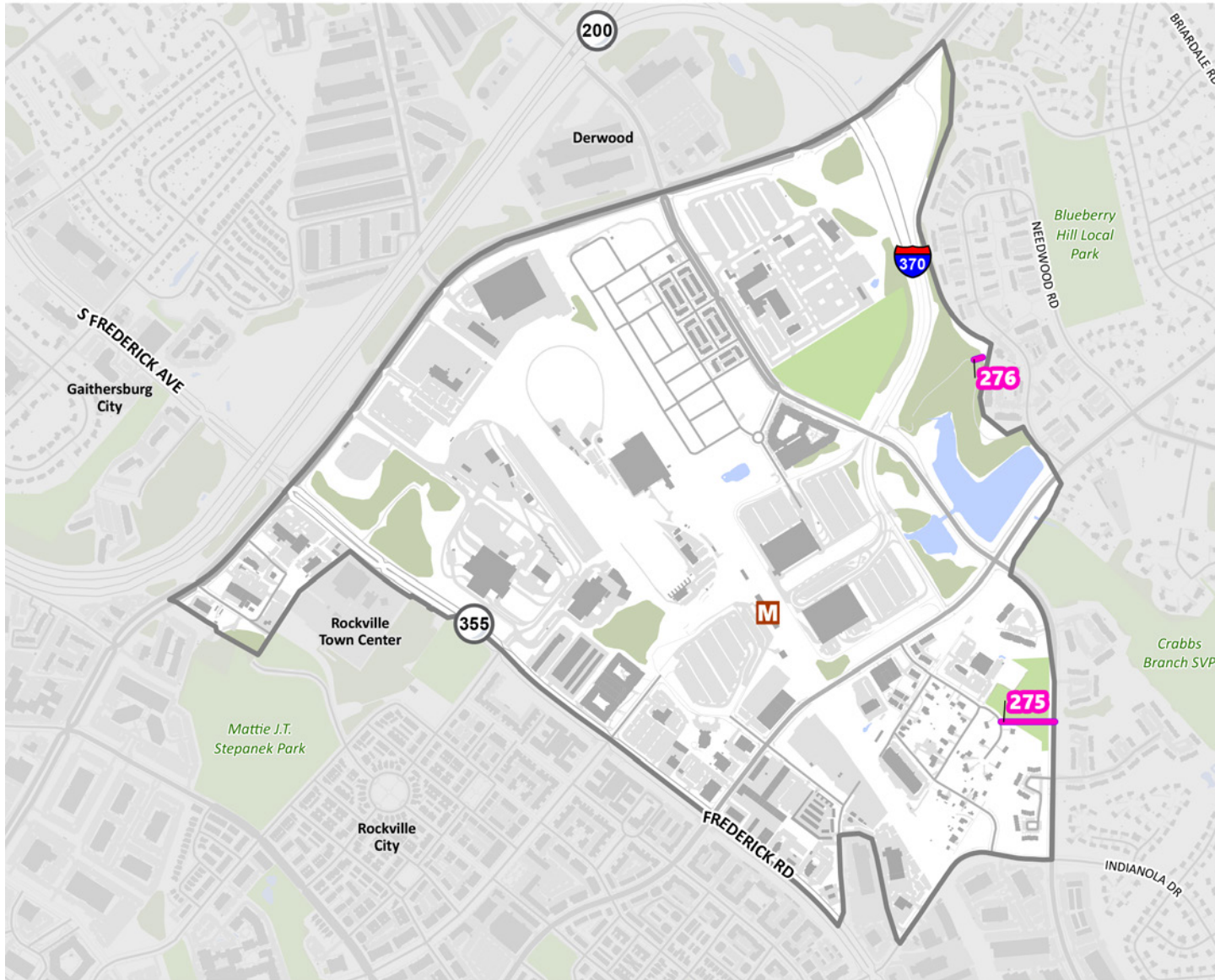
Rural West Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC MARC Station
- M Metro Stations
- i Libraries



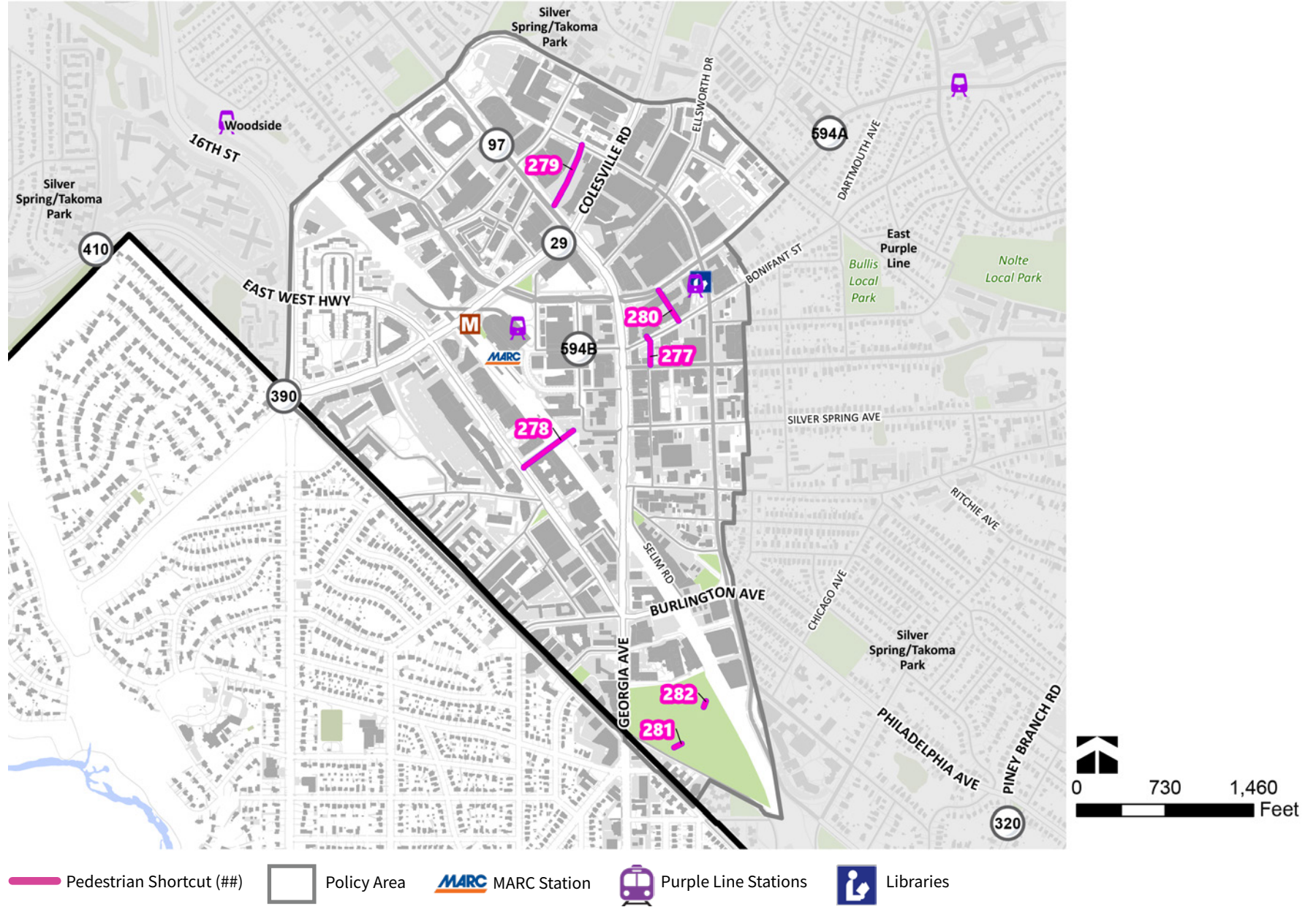
Shady Grove Metro Station Policy Area



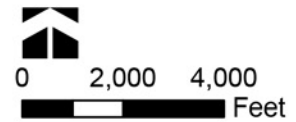
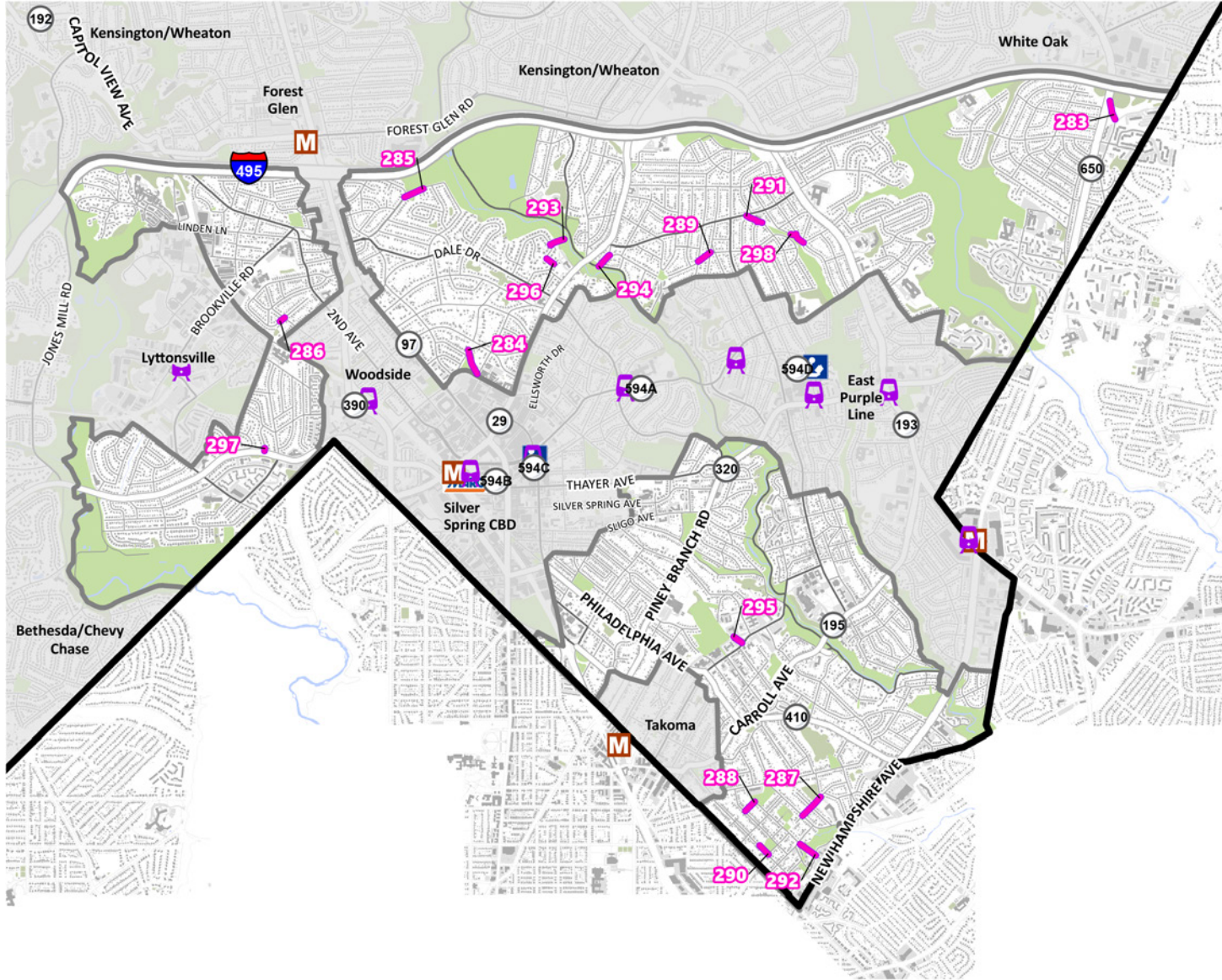
- Pedestrian Shortcut (##)
- Policy Area
- Metro Stations



Silver Spring CBD Policy Area



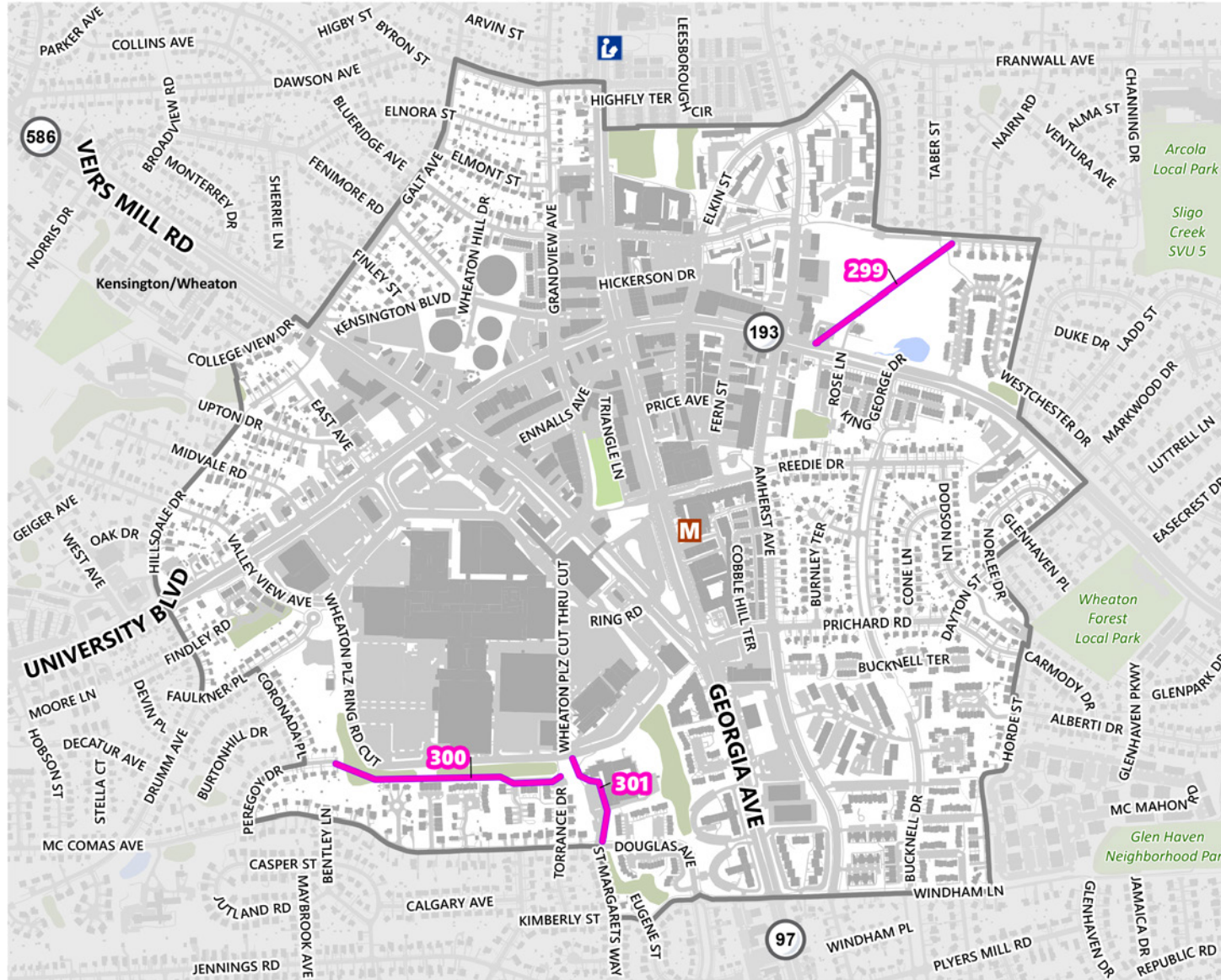
Silver Spring/Takoma Park Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- Purple Line Stations
- M Metro Stations
- Libraries



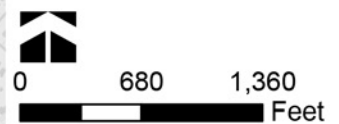
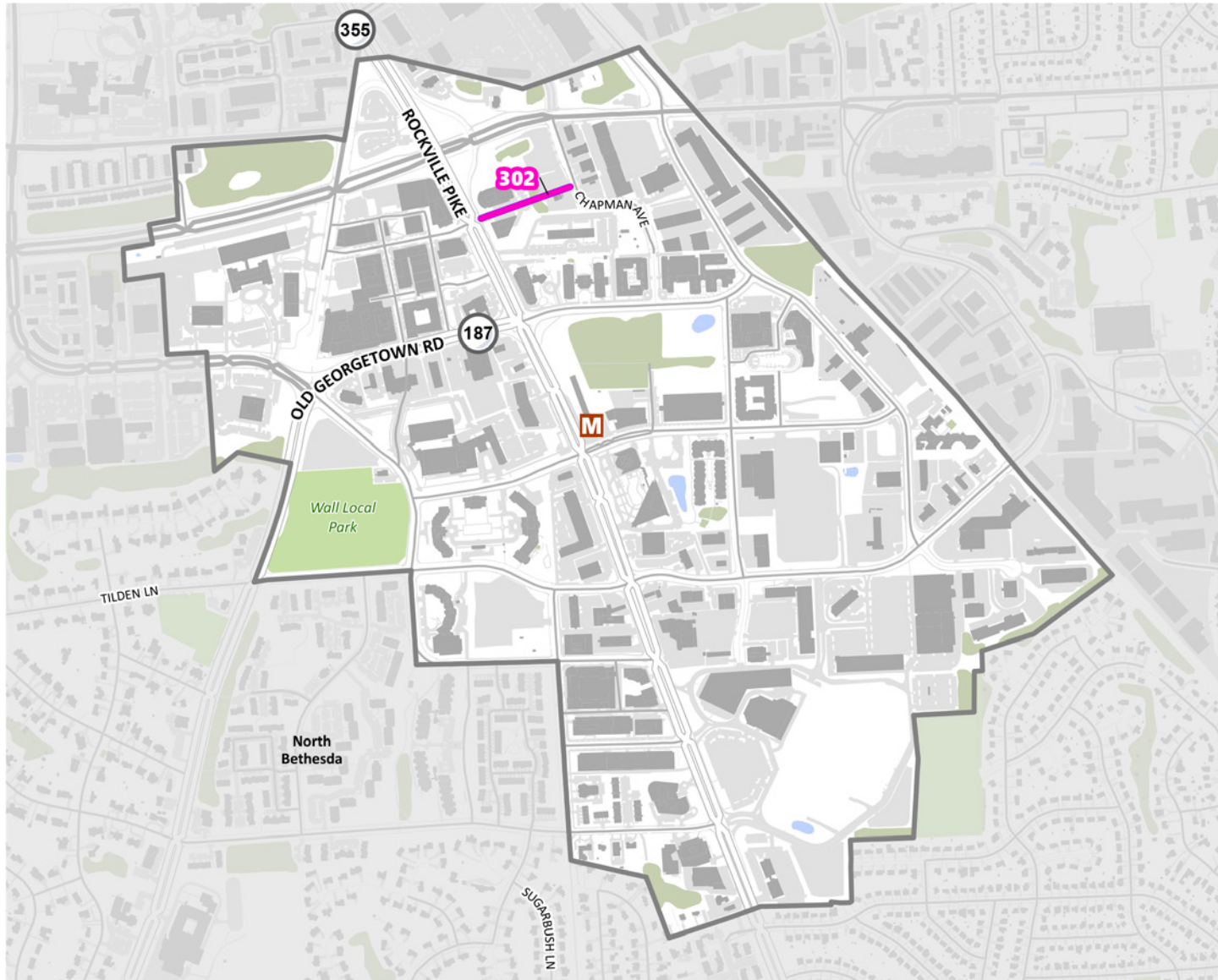
Wheaton CBD Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- M Metro Stations
- b Libraries



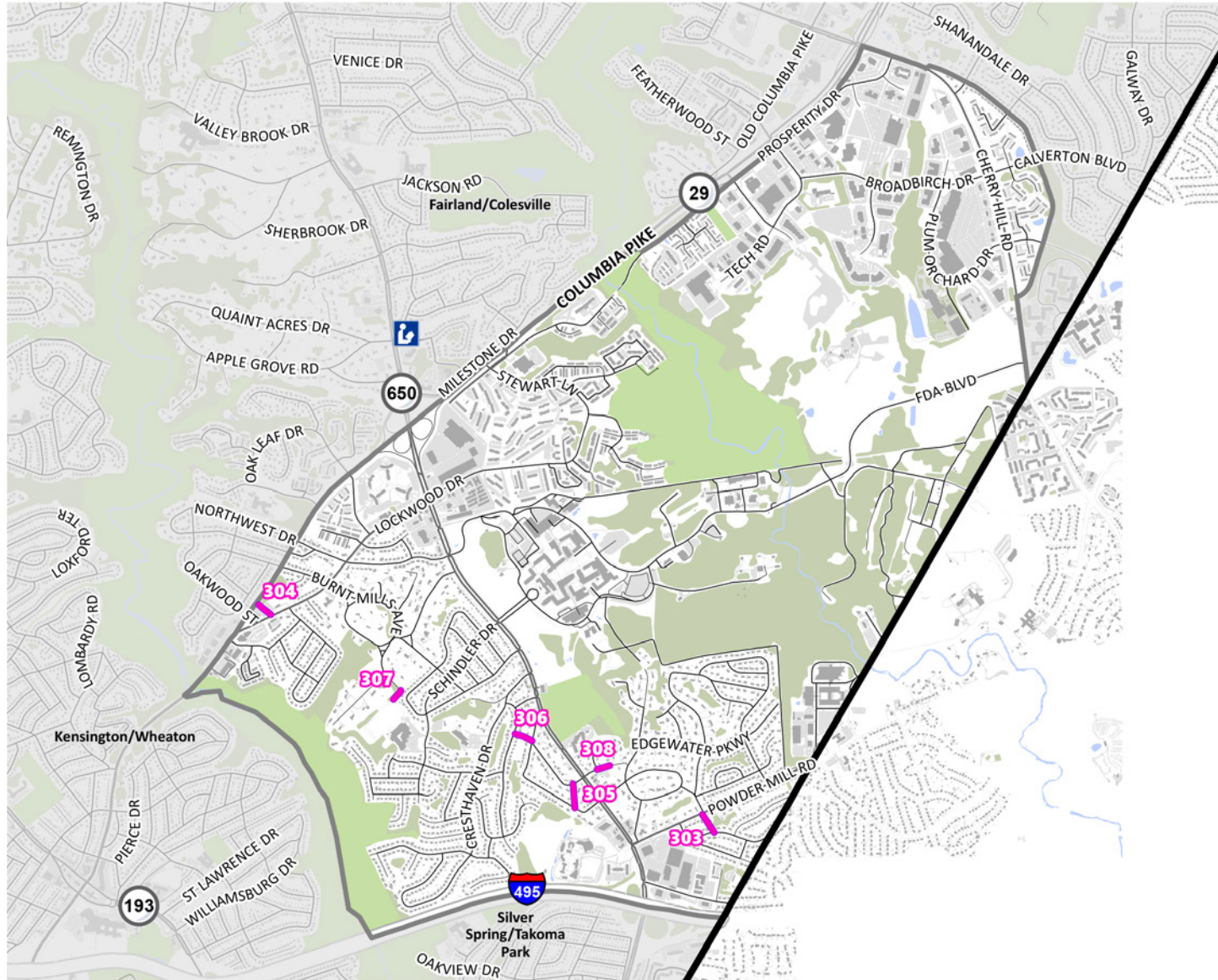
White Flint Policy Area



-  Pedestrian Shortcut (##)
-  Policy Area
-  Metro Stations



White Oak Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- Libraries



Woodside Policy Area



- Pedestrian Shortcut (##)
- Policy Area
- MARC Station
- Purple Line Stations
- Metro Stations



Country Sidepaths

The CSDG identifies the need to include sidepaths—a shared space for walking and bicycling that is typically 10 feet wide—on two country street types: Country Connectors and Country Roads. A comprehensive review of streets in the rural areas of Montgomery County supports the provision of sidepaths along the streets shown in **Table 35** and depicted in subsequent maps. While the Bicycle Master Plan assigns a prioritization level to about half of all bikeway recommendations, the remaining bikeways are not prioritized. For consistency with the Bicycle Master Plan, the sidepath recommendations in **Table 35** are not assigned a prioritization level and therefore are the lowest priority bikeways in the county. Policy area maps start on the next page.

Table 35. New Sidepath Recommendations on Country Roads and Country Connectors

Policy Area	Street Name	From Street	To Street	Facility Type	Bikeway Type
Clarksburg	Piedmont Road	Snowden Farm Parkway	Hawkes Road	Separated Bikeway	Sidepath
Damascus	Gue Road	Ridge Road (MD 27)	Howard Chapel Drive	Separated Bikeway	Sidepath
Damascus	Howard Chapel Drive	Gue Road	Damascus Road (MD 108)	Separated Bikeway	Sidepath
Potomac	South Glen Road	Deep Glen Drive	Falls Road (MD 189)	Separated Bikeway	Sidepath
Rural East (East)	Dorsey Road	Warfield Road	Olney-Laytonsville Road (MD 108)	Separated Bikeway	Sidepath
Rural East (East)	Ednor Road	New Hampshire Avenue (MD 650)	Howard County Line	Separated Bikeway	Sidepath
Rural East (East)	Georgia Avenue (MD 97)	Brookville Road	Utility Corridor #2	Separated Bikeway	Sidepath
Rural East (East)	Griffith Road	Laytonsville Road (MD 108)	Damascus Road (MD 108)	Separated Bikeway	Sidepath
Rural East (East)	New Hampshire Avenue (MD 650)	Utility Corridor #2	Olney-Sandy Spring Road / Ashton Road (MD 108)	Separated Bikeway	Sidepath
Rural East (East)	Tucker Lane	New Hampshire Avenue (MD 650)	Patuxent Drive	Separated Bikeway	Sidepath
Rural East (West)	Hawkins Creamery Road	Woodfield School Road	Hawkins Landing Road	Separated Bikeway	Sidepath
Rural East (West)	Kempton Road (MD 80)	Ridge Road (MD 27)	Frederick County Line	Separated Bikeway	Sidepath
Rural East (West)	Ridge Road (MD 27)	Gue Road	Kempton Road (MD 80)	Separated Bikeway	Sidepath
Rural East (West)	Watkins Road	Ridge Road (MD 27)	Woodfield Road	Separated Bikeway	Sidepath
Rural East (West)	Woodfield School Road	Woodfield Road (MD 124)	Hawkins Creamery Road	Separated Bikeway	Sidepath
Rural West	Darnestown Road (MD 28)	Whites Ferry Road (MD 107)	Seneca Road (MD 112)	Separated Bikeway	Sidepath
Rural West	Esworthy Road	River Road (MD 190)	Seneca Road (MD 112)	Separated Bikeway	Sidepath
Rural West	Germantown Road (MD 118)	Darnestown Road (MD 28)	Great Seneca Creek (Northern Branch)	Separated Bikeway	Sidepath
Rural West	Seneca Road (MD 112)	Esworthy Road	Darnestown Road (MD 28)	Separated Bikeway	Sidepath
Rural West	Spring Meadows Drive	Darnestown Road (MD 28)	Seneca Road (MD 112)	Separated Bikeway	Sidepath
Rural West	Whites Ferry Road (MD 107)	Poolesville eastern boundary	Darnestown Road (MD 28)	Separated Bikeway	Sidepath



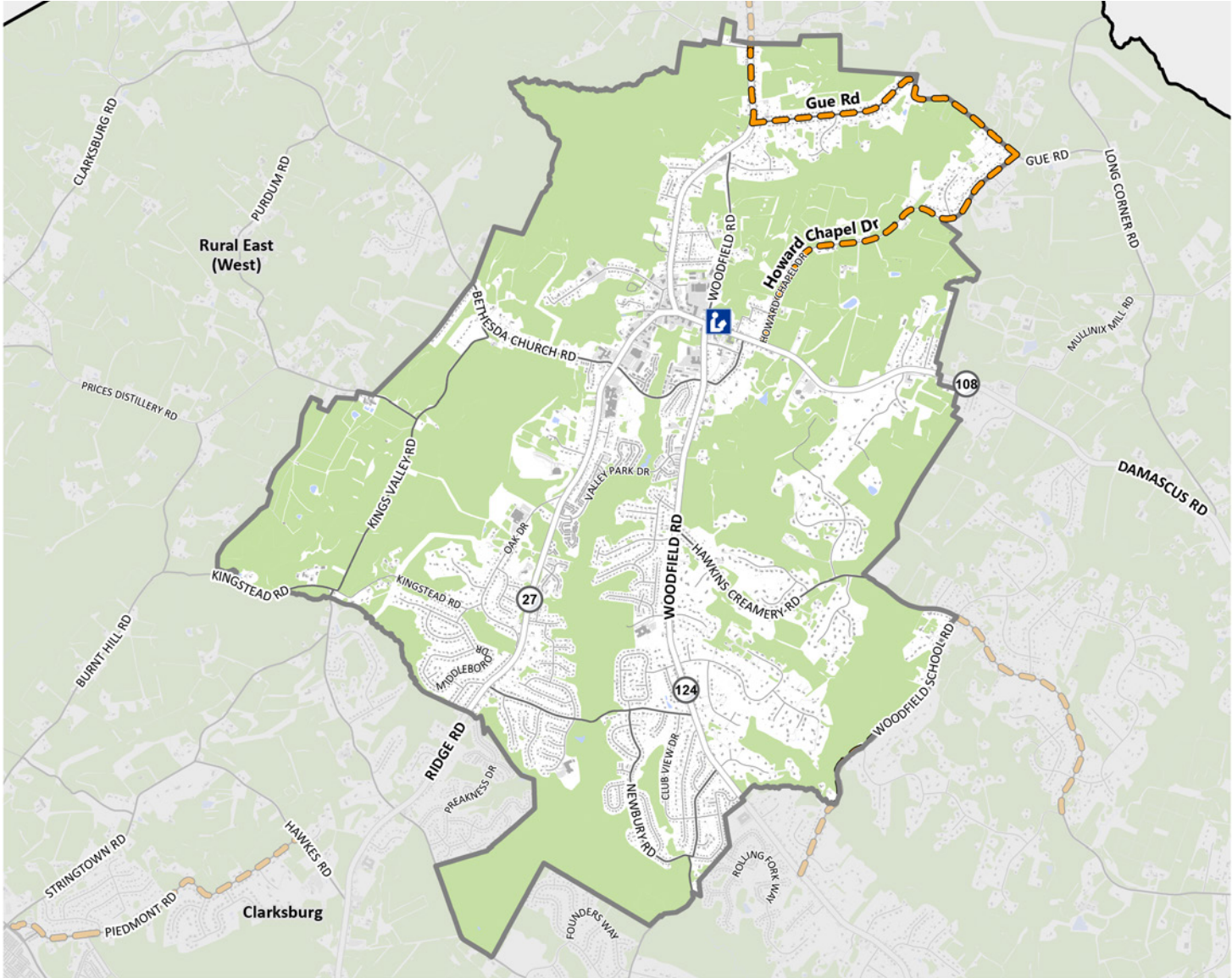
Clarksburg Policy Area



- Country Sidepath
- Policy Area
- MARC Station
- Libraries



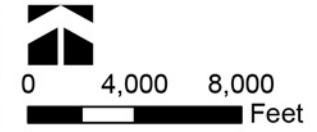
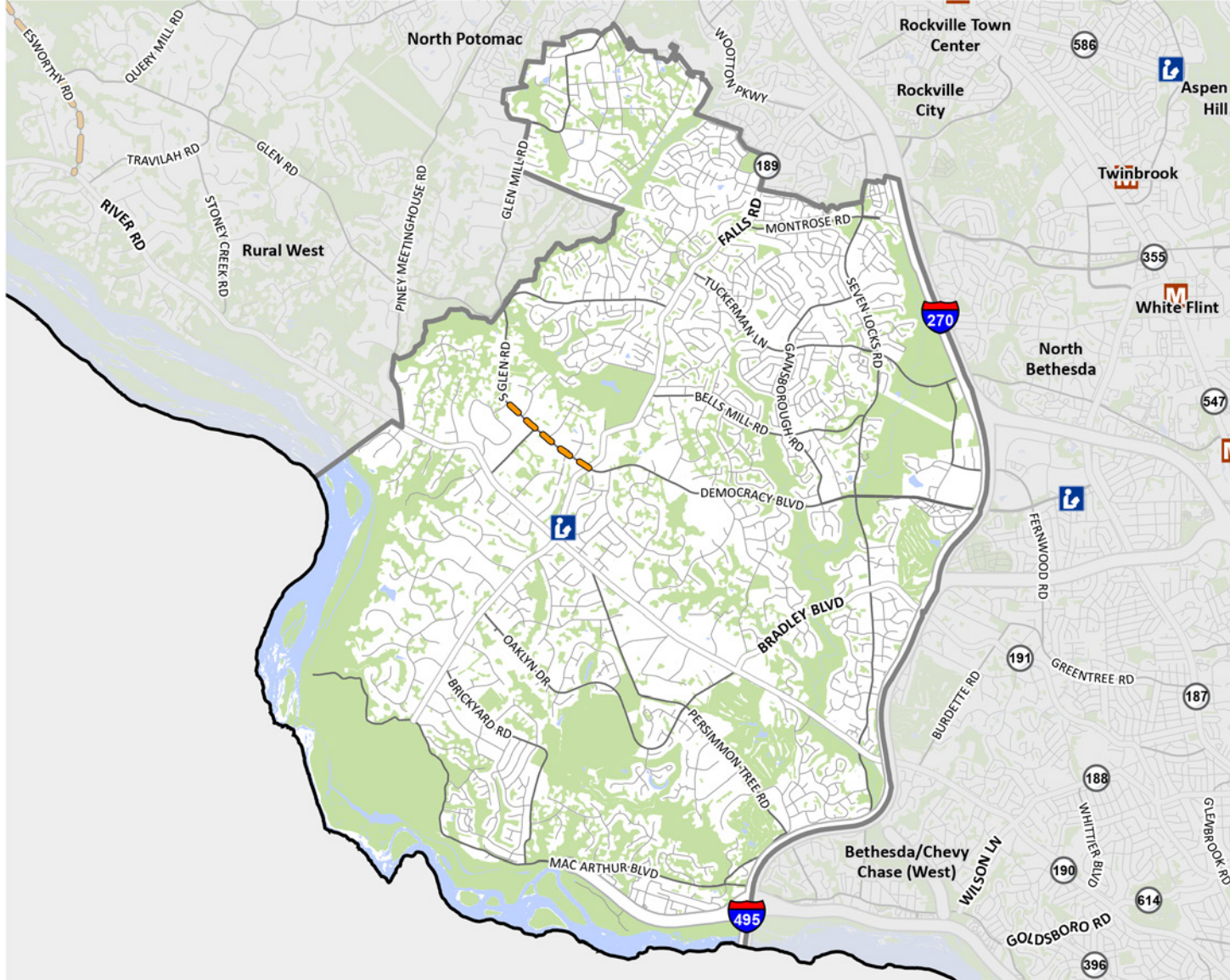
Damascus Policy Area



- Country Sidepath
- Policy Area
- Libraries



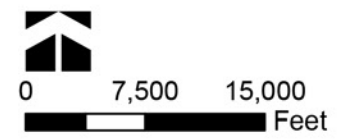
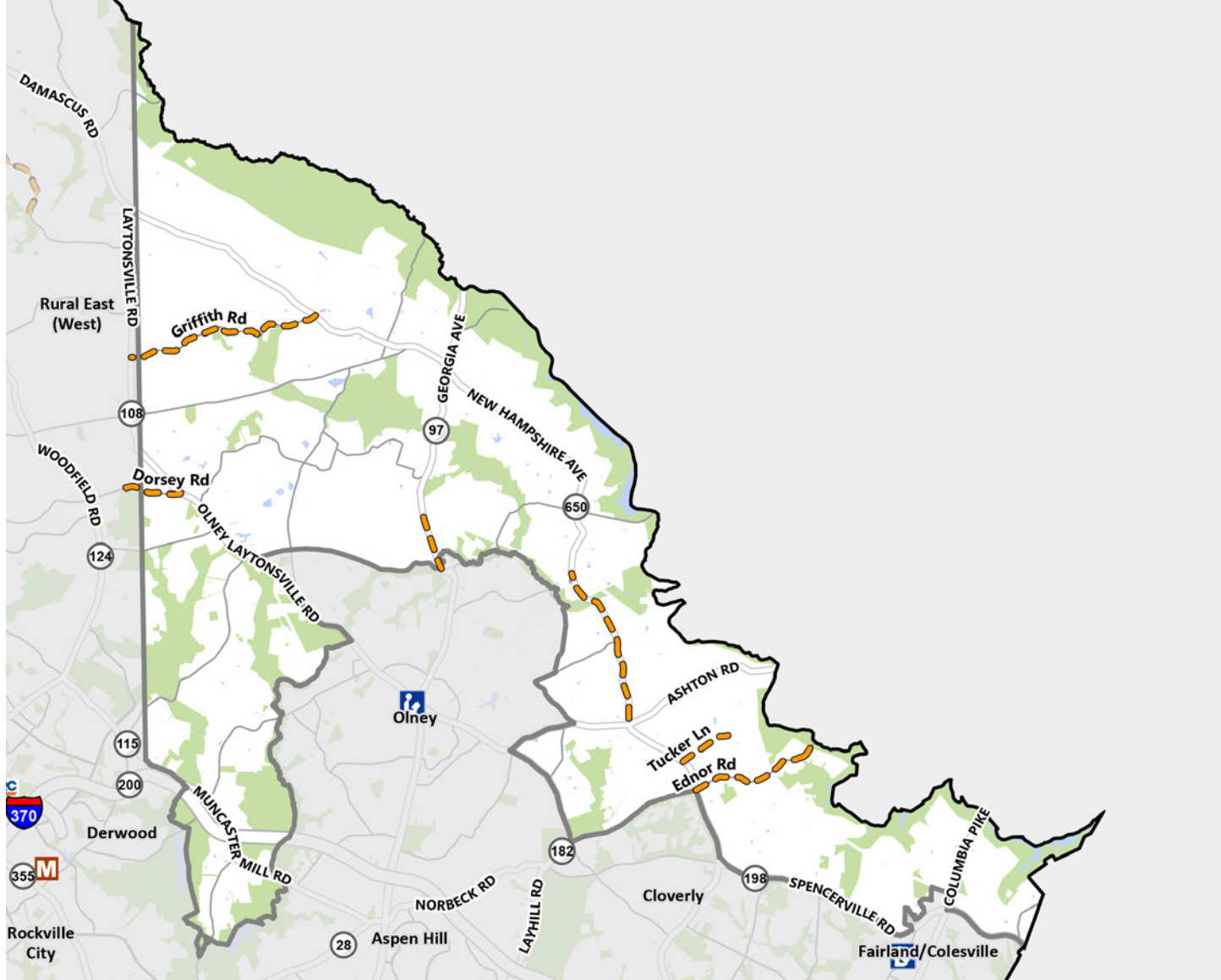
Potomac Policy Area



-  Country Sidepath
-  Policy Area
-  Libraries
-  Metro Stations

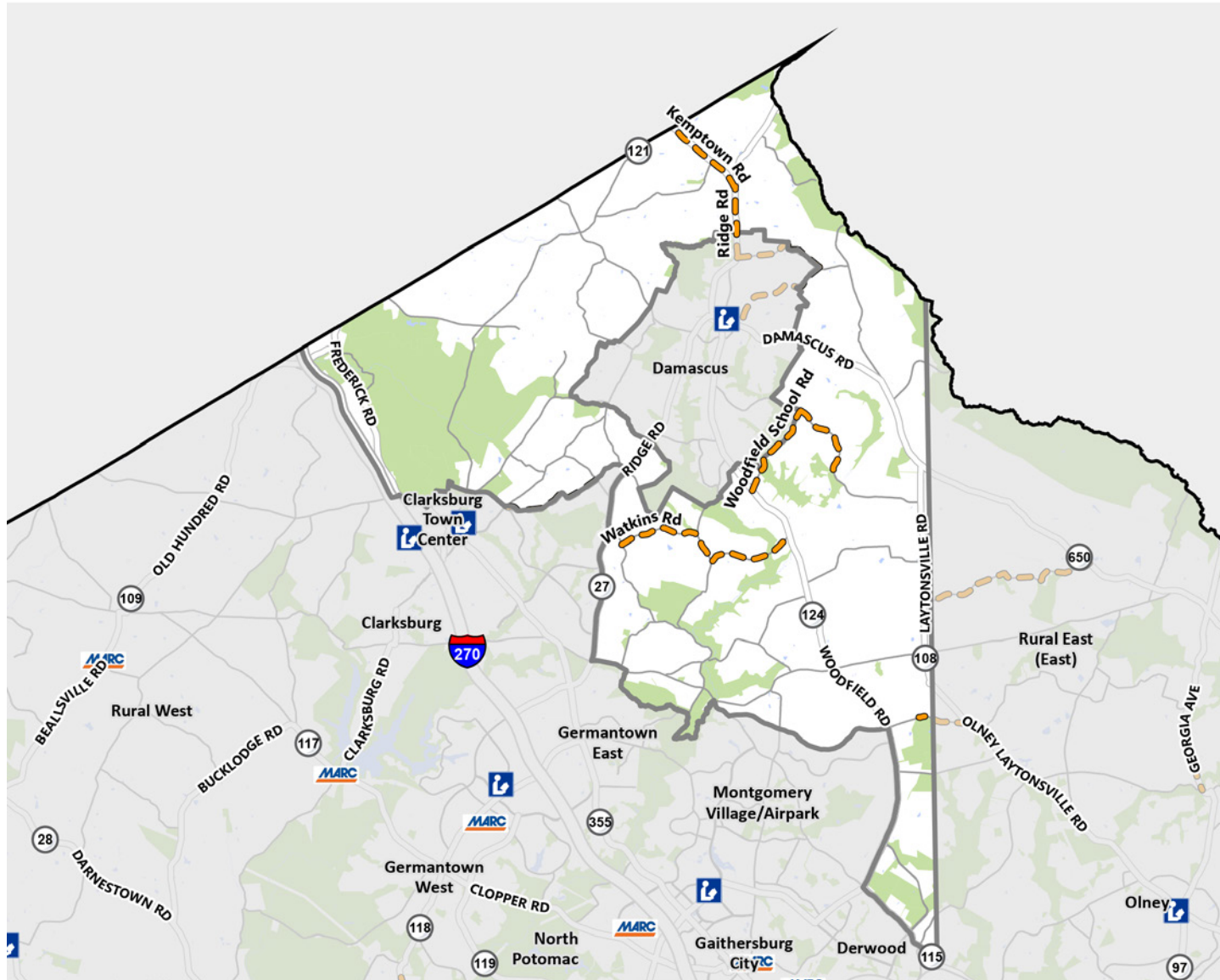


Rural East (East) Policy Area



- Country Sidepath
- Policy Area
- Metro Stations
- Libraries

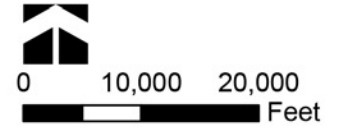
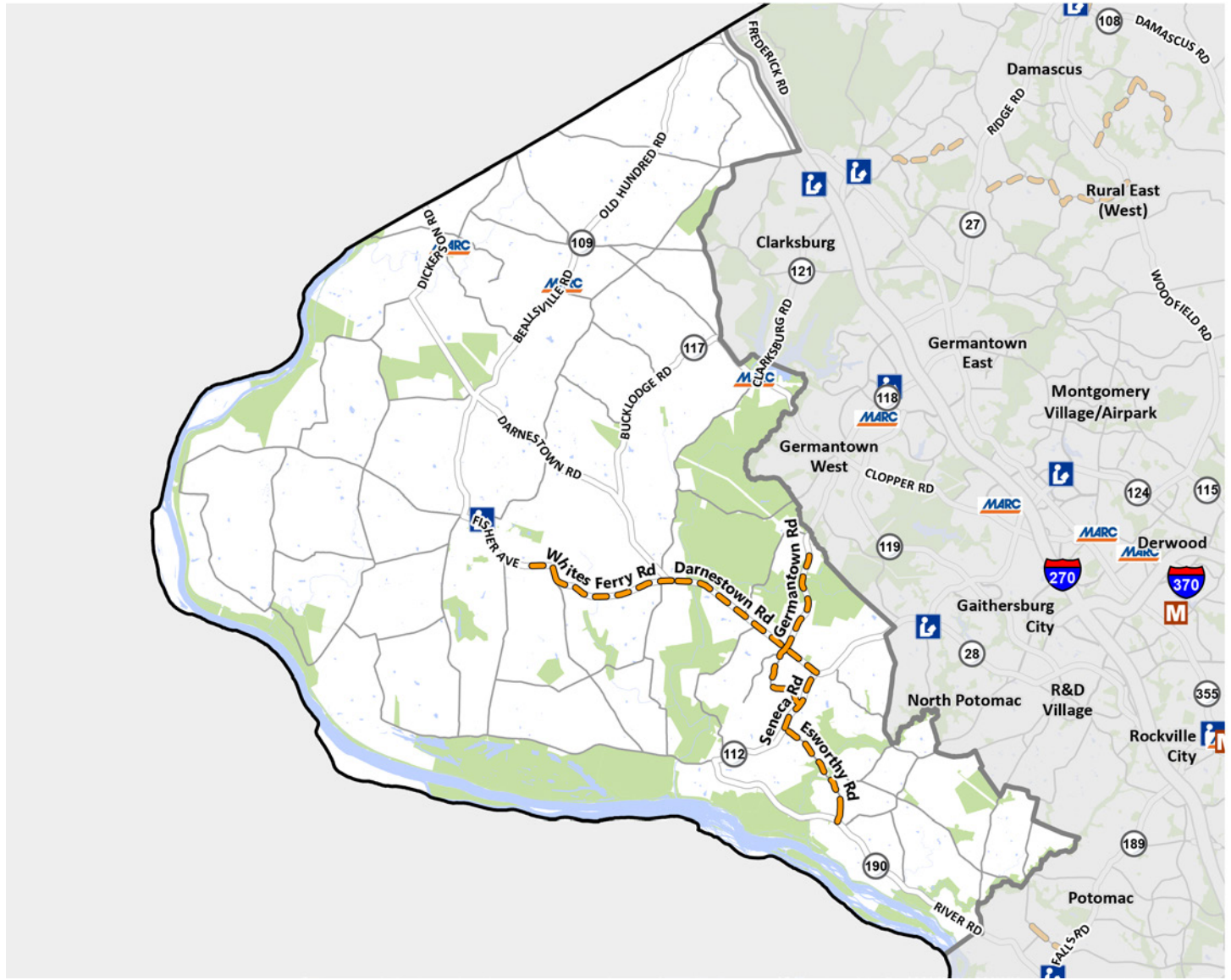
Rural East (West) Policy Area



- Country Sidepath
- Policy Area
- MARC Station
- Libraries



Rural West Policy Area



- Country Sidepath
- Policy Area
- MARC MARC Station
- M Metro Stations
- i Libraries

IMPLEMENTATION



Moving the Pedestrian Master Plan from vision to reality will require effectively implementing the plan's recommendations. This chapter provides specific information about the multiple ways recommendations can be achieved. Each set of recommendations has different implementation opportunities, but all rely on support from county and state agencies, elected officials, advocates, and the community to make the investments and policy changes necessary to realize the plan's goals. Potential approaches for each type of recommendation are discussed on subsequent pages.



Design, Policy, and Programming Recommendations

- **State and County Agency Action**

State and county agencies can implement many recommendations by adopting new processes or changing how they carry out a specific action or how they make decisions about a certain topic. Recommendations about how and where to build sidewalks, traffic signal timing, pedestrian crossing locations, school siting, and other similar topics can be addressed in this manner.

- **County Council Action**

For certain recommendations, it may be appropriate for the County Council to pass legislation to support implementation. This approach is particularly suitable for situations where additional funding is required or the recommendation is a County Council priority. Examples include recommendations to provide dedicated funding for building pedestrian shortcuts and developing additional funding sources for pedestrian projects.

- **State Legislature Action**

A subset of recommendations—those that affect the driver licensing process, vehicle registration, and Automated Traffic Enforcement, for example—will require legislation at the state level to be implemented. This approach will likely require sustained effort by the county's Legislative Delegation and supportive advocates over a number of years to build support and approval.

Moving the
Pedestrian
Master Plan
from Vision to
Reality



Pedestrian Infrastructure Prioritization

- **State and County Agency Action**

The Montgomery County Department of Transportation (MCDOT) and Maryland Department of Transportation can adopt the Pedestrian Master Plan's recommended infrastructure prioritization approach for capital projects involving pedestrian safety and connectivity. This will ensure that projects within the high-priority areas of the county will be designed and constructed before projects in other areas.

- **County Council Action**

As the County Council approves the county's capital budget, it has the ultimate say on how funds are expended.

Complete Streets Design Guide Area Type Designations

- **Pedestrian Master Plan Approval and Adoption**

Per Section 49-31(d) of the CSDG area types are authorized through approved functional plans, such as the Pedestrian Master Plan, or other master plans and area plans.

Pedestrian Shortcuts and Country Sidepaths

- **Capital Projects**

One way that master-planned pedestrian shortcuts and country sidepaths (and all other pedestrian infrastructure) can be built is through the county's capital improvements program (CIP). Montgomery County's capital budget provides the spending authority that county agencies need to implement projects. This six-year program for construction projects and improvements is comprehensively amended on even-numbered years and with less substantial adjustments during odd-numbered years. The capital budget includes funding for both level-of-effort programs (those that provide funding for a specific type of project, like building residential sidewalks) and stand-alone projects (projects that are more complicated, are more expensive, and require more advanced engineering and design).

Many of the recommended pedestrian shortcuts could likely be constructed through a level-of-effort program (Policy Recommendation Key Action B-7b), but some may be more complicated and require a stand-alone CIP item. Country sidepaths will likely require stand-alone CIP items to construct because they tend to be more complex.

- **Development Approvals**

Like many jurisdictions, Montgomery County supplements its capital projects by requiring the construction of pedestrian facilities through the development approval process. Developers are required to construct pedestrian facilities within their site and along their property frontage, as required by



applicable master plans and local law. Master-planned pedestrian shortcuts and country sidepaths can both be constructed in this way. Private construction can result in substantial contributions to the pedestrian network, such as long segments of high-quality sidepath or pedestrian shortcut connections along or through larger-scale development projects.

Additionally, development projects of a certain size are also required to provide additional pedestrian connections within a certain distance of the project frontage through the Local Area Transportation Review process. Through this process, improved pedestrian connections are constructed between development sites and the surrounding community. Depending on which sites are under development, master-planned sidepaths and/or pedestrian shortcuts could be constructed in this manner.

- **Public Facility Construction**

The construction of public buildings—like schools, fire stations, and libraries—is another opportunity to build master-planned sidepaths, pedestrian shortcuts, and other pedestrian infrastructure. These buildings are a significant investment of community resources. Ensuring they can be safely and directly accessed by residents and visitors is essential. The funding and design of these projects should include adjacent master-planned facilities, including pedestrian infrastructure. At a minimum, public projects should provide the same quality and extent of accommodations as private projects. There are also potential opportunities to coordinate construction of these public buildings with other public projects in the area so broader pedestrian infrastructure improvements can be made.





MONITORING



A biennial monitoring program led by Montgomery Planning will track how well the plan vision is being achieved through implementation of plan recommendations and progress meeting performance measure targets identified in the plan's goals and objectives.

Continued monitoring is an important component of the Pedestrian Master Plan for several reasons:

- **Transparency**
It is a basic “good government” measure in line with Montgomery County’s commitment to effective public communication.
- **Accountability**
It makes it easier for community members to effectively advocate about the pedestrian issues important to them. This advocacy can

support increased funding, a more targeted implementation of specific recommendations, and a continued emphasis on improving pedestrian conditions countywide.

- **Reevaluation**
It is an opportunity for the county to understand the obstacles that have slowed plan implementation over the prior two years. This accounting will make it easier to identify an effective path forward for Montgomery Planning and partner agencies to remove these barriers.



Recommendations

Monitoring recommendations track the county's progress in achieving the Pedestrian Master Plan's goals and objectives. These recommendations also identify opportunities to improve the quality of the data collected countywide so decisions on project prioritization and funding can be more equitable.

MO-1: Track implementation of the Pedestrian Master Plan.

The Pedestrian Master Plan contains performance measures to better understand progress toward achieving plan goals over time. A biennial monitoring report would allow planners, elected officials, and members of the public to track progress on Pedestrian Master Plan implementation and help guide future priorities. In conjunction with the Bicycle Master Plan Biennial Monitoring Report, the Pedestrian Master Plan Biennial Monitoring Report would be merged with the Planning Department's Travel Monitoring Report to present a comprehensive review of transportation conditions in the county.

Key Actions:

MO-1a: Develop a Pedestrian Master Plan Biennial Monitoring Report.

Create a monitoring report that is reviewed by the Planning Board and County Council's Transportation and Environmental (T&E) Committee in the fall of odd-numbered years to influence the county's capital budget.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network, Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: Montgomery Planning

MO-1b: Conduct a Biennial Pedestrian and Bicycle Survey.

Conduct a comprehensive pedestrian and bicycle survey every two years to better understand the effects of Pedestrian Master Plan implementation. Data collected will include satisfaction metrics, trip purpose, average distance traveled, and others. The results of the survey will be incorporated in the Biennial Monitoring Report.

Goals: Walking Rates, Comfortable/Connected Pedestrian Network, Pedestrian Safety, Equitable and Just Pedestrian Network

Lead: Montgomery Planning

MO-1c: Conduct a student travel tally annually.

The 2019 MCPS Student Travel Tally is an invaluable tool to increase understanding of student travel patterns. Conducting this travel tally annually will allow policymakers to better understand changes in student travel behavior that may result from improvements to pedestrian infrastructure, programming, and policy.

Goal: Walking Rates

Leads: MCPS, Montgomery Planning



MO-1d: Expand the county's pedestrian count program.

MCDOT and Montgomery Parks maintain a growing network of pedestrian and bicycle counters throughout the county. Expanding the current pedestrian count program to more locations will provide more complete data to understand pedestrian travel patterns just as we do for motor vehicle travel.

Goal: Equitable and Just Pedestrian Network

Leads: MCDOT, Montgomery Parks, Montgomery Planning

MO-1e: Develop a public-facing dashboard that shows sidewalk coverage and other pedestrian metrics.

A regularly updated dashboard would provide transparency in implementation of the Pedestrian Master Plan. The dashboard would include data about PLOC changes over time, comfortable pedestrian connectivity, crashes, sidewalks constructed, and other metrics to provide members of the public with insights into the state of pedestrian activity and infrastructure.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Lead: Montgomery Planning

MO-1f: Consider revisiting the objectives, metrics, and targets for each objective as part of the Pedestrian Master Plan Biennial Monitoring Reports.

As the Pedestrian Master Plan is implemented, there may be opportunities to add or remove objectives, change metrics, and adjust objective targets in response to county policy, changes in existing conditions, and other factors.

Goal: Walking Rates

Lead: Montgomery Planning



MO-2: Conduct a pedestrian 311 equity review.

Pedestrian safety and equity concerns should be addressed equitably. However, studies in other communities have shown that overreliance on 311 reporting to inform safety improvements leads to inequitable outcomes because residents in some communities are less likely to use 311 due to technology issues, lack of time, distrust in government, and other barriers. The key action identifies a path forward to improve equity.

Key Action:

MO-2a: Conduct a study to determine how 311 reporting of pedestrian safety and accessibility concerns is distributed across the county and whether reliance on 311 leads to inequitable outcomes. Identify more equitable alternatives if 311 reporting is found to be inequitable.

Goal: Equitable and Just Pedestrian Network

Lead: County Executive, County Council

MO-3: Assess transportation capital projects post-construction for effectiveness.

To improve stewardship of limited resources and ensure that the county is making investments that provide public benefits, during the initial development of a project, the county should identify goals that projects aim to achieve. Many of the goals may be related to safety, such as reducing pedestrian crashes, run-off-the road crashes, or head-on crashes. For other projects, the goal may be shortening pedestrian trip distance or mitigating the environmental impacts of an existing transportation connection. After project construction, the county should assess whether the project achieved the intended goals and make changes to future projects based on lessons learned.

Key Action:

MO-3a: Identify clear goals for each transportation capital project and evaluate how effective each project is in achieving those goals.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: MCDOT



Example Monitoring Report

An example of the Pedestrian Master Plan Monitoring Report is shown below.

		2022	Target	Source
Goal 1: Increase Walking Rates in Montgomery County				
Pedestrian Trips as a Percentage of All Trips	Overall	7.5%	12.0%	MWCOG Regional Travel Survey
	Urban	11.3%	22.0%	
	Transit Corridor	7.3%	12.0%	
	Exurban/Rural	4.6%	7.0%	
Percentage of Residents who Commute on Foot (including by Transit)	Countywide	1.8% (12.8%)	3.0% (30%)	U.S. Census ACS "Means of Transportation to Work"
Percentage of Pedestrian (including Transit) Commuters to TMDs	Downtown Bethesda	2.6% (11.6%)	10% (40%)	TMD Commuter Surveys
	Downtown Silver Spring	2.4% (11.1%)	10% (50%)	
	Friendship Heights	2% (7.9%)	4% (35%)	
	Greater Shady Grove	0.1% (4.5%)	1.5% (7%)	
	North Bethesda	1.2% (5.6%)	4% (25%)	
	White Oak	--	2% (10%)	
Percentage of People Walking to Access Transit	Red Line	--	50.0%	TBD
	Brunswick Line	--	10.0%	
	Purple Line	--	70.0%	
Percentage of Students Walking (including Transit) to School	Elementary	16% (16.7%)	50% (55%)	MCPS Student Travel Tally
	Middle	11% (12.5%)	30% (35%)	
	High	8% (11%)	15% (25%)	



		2022	Target	Source
Percentage of Students Walking (including Transit) from School	Elementary	19% (19.6%)	55% (60%)	MCPS Student Travel Tally
	Middle	15.5% (17.8%)	40% (45%)	
	High	12.2% (20.8%)	20% (35%)	
Pedestrian Satisfaction	Overall	52%	75.0%	Countywide Pedestrian Survey
	Access to Retail, Restaurants, Parks, etc.	44%	60.0%	
	Amount of Sidewalks Along Route	44%	60.0%	
	Width of Sidewalks	44%	60.0%	
	Shading by Trees or Buildings	39%	50.0%	
	How Often Driveways Cross Sidewalks	35%	50.0%	
	Distance between Sidewalks and Cars	31%	50.0%	
	Snow Removal	28%	50.0%	
	Speed of Cars along Sidewalks and Paths	21%	50.0%	
	Distance to Cross the Street	49%	60.0%	
	Time to Cross the Street at Pedestrian Signals	47%	65.0%	
	Number of Marked Crosswalks	46%	65.0%	
	Wait Time for a Pedestrian Walk Signal	44%	60.0%	
	Number of Places to Safely Cross the Street	42%	60.0%	
	Drivers Stopping for Me When I Cross the Street	34%	50.0%	
	Places to Stop Partway while Crossing	33%	50.0%	
	Number of Vehicles Cutting across the Crosswalk	22%	50.0%	
	Overhead Lighting along Sidewalks and Pathways	32%	50.0%	
Overhead Lighting at Crossings	31%	50.0%		



		2022	Target	Source
Goal 2: Create a Comfortable, Connected, Convenient Pedestrian Network in Montgomery County				
Comfortable Connectivity	Pathway Comfort	62%	70%	PLOC Network
	Crossing Comfort	43%	55%	
		Pathway/Crossing		
Comfortable Pedestrian Access to Destinations (Pathway / Crossing)	Elementary Schools	51.1% / 43.4%	80% / 60%	
	Middle Schools	37.9% / 23.4%	65% / 50%	
	High Schools	27% / 12.5%	30% / 20%	
	Parks	69.9% / 35.1%	80% / 40%	
	Red Line	88% / 66.4%	100% / 80%	
	Brunswick Line	89.5% / 72%	90% / 80%	
	Purple Line	75.7% / 69.8%	95% / 90%	
	Libraries	79.5% / 65.6%	85% / 70%	
	Recreation Centers	78.4% / 60%	90% / 70%	
Percentage of Sidewalks that are Shaded by Tree Canopy		28%	40%	Planning Tree Canopy Data/ PLOC Network

		2022	Target	Source
Goal 3: Enhance Pedestrian Safety in Montgomery County				
Pedestrian Fatalities and Serious Injuries		84	0	County Crash Data
Percent of Respondents Satisfied or Very Satisfied with Personal Safety while Walking		52%	75%	Countywide Pedestrian Survey
Pedestrian Crashes		503	N/A	County Crash Data



		2022		Target	Source	
Goal 4: Build an Equitable and Just Pedestrian Network						
Pathways Inaccessible to Persons with Disabilities		TBD		0%	TBD	
		Title I/Focus/High FARMS Designated Schools vs. Non-Designated Schools				
Comfortable Pedestrian Access to Schools (Title I/Focus/High FARMS Designated Schools vs. Non-Designated Schools)	Elementary Schools	Pathways	60.5% / 49.9%	No Disparities	PLOC Network	
		Crossings	47.5% / 39.4%	No Disparities		
	Middle Schools	Pathways	34.8% / 41.6%	No Disparities		
		Crossings	22.8% / 24.2%	No Disparities		
	High Schools	Pathways	26.2% / 27.6%	No Disparities		
		Crossings	8.9% / 16.3%	No Disparities		
			EFA/Non-EFA			
	Purple Line	Pathways	75.4% / 75.9%	No Disparities		
		Crossings	73.4% / 67.3%	No Disparities		
	Red Line	Pathways	92.3% / 86.5%	No Disparities		
		Crossings	64.8% / 66.8%	No Disparities		
	Brunswick Line	Pathways	94% / 87.1%	No Disparities		
		Crossings	80.3% / 69.1%	No Disparities		
	BRT Stations	Pathways	85% / 82%	No Disparities		
		Crossings	63% / 58%	No Disparities		
	Parks	Pathways	83% / 66%	No Disparities		
		Crossings	34% / 34%	No Disparities		
	Libraries	Pathways	83% / 66%	No Disparities		
		Crossings	34% / 34%	No Disparities		
	Recreation Centers	Pathways	77% / 77%	No Disparities		
Crossings		55% / 66%	No Disparities			
Ratio of Severe Injuries and Fatalities per Mile in EFAs vs. Non-EFAs			4.2	1	County Crash Data	
Difference in Pedestrian Satisfaction between People with and without Disabilities			10%	0%	Countywide Pedestrian Survey	





GLOSSARY



Abandonment: An amendment to a plat of subdivision that releases the right-of-way from future public use.

Access Management Study: A study to coordinate regulation and design of access between roadways and land development to systematically improve the safety and efficiency of moving people and goods while reducing conflicts between all modes of transportation using and crossing the roadway, including cars, heavy vehicles, transit, bicycles, and pedestrians.

Accessibility: People with a disability are afforded the opportunity to acquire information, engage in interactions, and enjoy services in a similar amount of time and effort as people without a disability.

- **ADA Accessibility Guidelines:** Accessibility standards issued under the Americans with Disabilities Act (ADA) that apply to places of public accommodation, commercial facilities, and state and local government facilities in new construction, alterations, and additions.
- **Architectural Barriers Act Accessibility Standards:** Federal requirements to ensure that buildings and facilities are accessible to and usable by persons

with disabilities.

- **Maryland Accessibility Code:** The section (Chapter 09.12.53) of the Maryland code that provides for the accessibility and usability of buildings and facilities by individuals with disabilities.
- **Public Rights-of-Way Accessibility Guidelines (PROWAG):** A draft set of guidelines that will address access to sidewalks and streets, crosswalks, curb ramps, pedestrian signals, on-street parking, and other components of public rights-of-way.

Accessible Pedestrian Signals (APS): Devices that communicate information about the WALK and DON'T WALK intervals at signalized intersections and midblock crossings in non-visual formats to pedestrians who are blind or who have low vision.

Annual Sidewalk Program: Montgomery County's funding program to retrofit sidewalks on roadways where none have previously existed. The projects under the Annual Sidewalk Program are derived from resident requests and are installed without the guidance of an engineer.



Automated Traffic Enforcement (ATE): Infrastructure involving video cameras and other sensors used to police speed and other traffic safety infractions in an impartial way.

Bus Rapid Transit (BRT): A high-quality and high-capacity bus-based transit system that delivers fast, comfortable, reliable, and cost-effective transit service.

Capital Improvement 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. See Montgomery County's Capital Improvements Program at montgomerycountymd.gov/omb/.

Complete Streets Design Guide (CSDG): A guide for designing, operating, and maintaining streets to provide safe accommodations for all users, including people who walk, bicycle, use transit, and drive motor vehicles. Learn more: montgomeryplanning.org/planning/transportation/complete-streets/

Conflict Point: A location where motor vehicles, pedestrians, and bicycles cross paths.

Corral: An on-street or off-street space designated for parking micromobility devices such as bicycles and scooters.

County Code: Montgomery County's collection of written laws located at: codelibrary.amlegal.com/codes/montgomerycounty/

- **Chapter 49 (Road Code):** The section of Montgomery County's code that addresses road design standards.
- **Chapter 59 (Zoning Code):** The section of Montgomery County's code that addresses what can be built on a particular parcel of land.

Crossing Locations:

- **Controlled Crossing:** A location where a sidewalk or designated walkway intersects a roadway at a location where traffic control (traffic signal or STOP sign) is present.
- **Midblock Crossing:** A marked crossing located in between two crossings.

- **Protected Crossing:** A crossing designed to improve the safety and comfort of pedestrians and bicyclists crossing the street with traffic control devices, such as full traffic signals and Pedestrian Hybrid Beacons, that prohibit conflicting left turns and through vehicular movements.
- **Uncontrolled Crossing:** A location where sidewalks or designated walkways intersect a roadway at a location where no traffic control (traffic signal or STOP sign) is present.

Curbside Management Plan: A plan that guides the use of space along the street curb, including loading and unloading passengers and freight, motor vehicle and bicycle parking, parklets, outdoor dining, etc.

Dockless Vehicle: A shared-mobility vehicle that is available to the public to rent in public space, does not require any specialized installations of equipment other than the vehicle itself, and can be located and unlocked using a smartphone application or by manually entering a customer's account number.

Easement: A contractual agreement to gain temporary or permanent use of, and/or access through, a property.

Equity Focus Area (EFA): Parts of Montgomery County that are characterized by high concentrations of lower-income people of color, who may also report speaking English less than "very well." Learn more: montgomeryplanning.org/planning/equity-agenda-for-planning/the-equity-focus-areas-analysis/

Forest Conservation Plan: A document that outlines the specific strategies for retaining, protecting, and reforesting or afforesting areas on a site, pursuant to the 1991 Maryland Forest Conservation Act. Forest Conservation Plans are approved by the Planning Board with conditions that are binding on applicable private and public development, and certain land-disturbing activities. Learn more: montgomeryplanning.org/development/development-applications/forest-conservation-plan/

Impervious Surface: Any surface that prevents or significantly impedes the infiltration of water into the underlying soil, including structures, buildings, patios, decks, sidewalks, compacted gravel, pavement, asphalt, concrete, stone, brick, tile, swimming pools, and artificial turf.



Leading Pedestrian Interval (LPI): An approach to traffic signalization that allows pedestrians or bicyclists to enter the intersection in advance of vehicles traveling in the same direction.

Marked Crosswalk: Pavement markings that indicate the preferred location for pedestrians to cross the street and help motorists identify areas to look for pedestrians. Marked crosswalks may be located at intersections or midblock locations.

- **Continental Style Crosswalk:** A type of high-visibility marked crosswalk that uses pavement markings that are parallel to the motor vehicle path of travel.
- **High-Visibility Crosswalk:** A type of marked crosswalk that uses enhanced pavement markings to improve the visibility of pedestrians to approaching motorists.
- **Ladder-Style Crosswalk:** A type of high-visibility marked crosswalk that uses pavement markings that are both parallel and perpendicular to the motor vehicle path of travel.
- **Transverse Edge Line:** Crosswalk markings that are perpendicular to the motor vehicle path of travel that indicate the preferred location for pedestrians to cross the street.

Maryland Manual of Uniform Traffic Control Devices (MdMUTCD): The combined document of the national set of traffic control device standards and guidance promulgated by Federal Highway Administration (FHWA) rulemaking on December 16, 2009, and Maryland Supplement to the MUTCD.

Master Plan: Comprehensive amendments to the General Plan for the Maryland-Washington Regional District (“On Wedges and Corridors”) that provide detailed and specific land-use and zoning recommendations for specific areas of the county. They also address transportation, the natural environment, urban design, historic resources, public facilities, and implementation techniques.

Neighborhood Connector: Short paths that provide critical connection in the residential walking and bicycling network. They create shortcuts and often bypass or minimize the amount of travel along higher-stress streets.

Paper Street: A dedicated public right-of-way for a road or street that has not been built.

Passive Detection: A means of detecting the presence of pedestrians in a stationary or moving state at the curbside and/or in a pedestrian crossing by means other than those requiring physical actuation by the pedestrian.

Pedestrian Clear Zone: The primary portion of the sidewalk that is intended to be free from landscaping, street furniture, structures, or furnishings.

Pedestrian Clearance Interval: The pedestrian clearance time is intended to allow pedestrians who started crossing a street during the walk interval to complete their crossing.

Pedestrian Crossing Phase Configuration: At signalized intersections, pedestrian phases can be configured as recall or pushbutton actuated.

- **Pedestrian Recall:** A traffic signal function in which the pedestrian crossing phase is triggered automatically, without the need to push a button to request the right-of-way.
- **Pushbutton Actuation:** A traffic signal function in which the pedestrian crossing phase is triggered manually by pushing a button to request the right-of-way.

Pedestrian Level of Comfort (PLOC): A methodology that captures how comfortable it is to walk and roll in different conditions in Montgomery County. Learn more here: mcatlas.org/pedplan/

Predictive Safety Analysis: Montgomery Planning’s study that estimates the expected number of crashes at a given roadway segment or intersection based on the attributes and context of that location. This analysis then allows the county to prioritize where and how to invest in safety improvements most effectively through capital projects, development approvals, and master planning. Learn more: montgomeryplanning.org/planning/transportation/vision-zero/predictive-safety-analysis/

Raised Crossing: Crosswalks at sidewalk-level (also known as continuous sidewalks) that span the entire width of the roadway.



Right-of-Way (ROW): A strip of land intended for use by the public. A public right-of-way is occupied or intended to be occupied by a road, bikeway, sidewalk, path, or transit facility, as well as any ancillary facilities such as storm drains and stormwater management facilities. Public utilities such as electric transmission lines, telephone lines, cable TV lines, gas mains, water mains, and sanitary sewers may be permitted in the public right-of-way. A public right-of-way may be obtained by dedication as part of the development process or purchased in whole or in part by a public agency.

Right Turn on Red (RTOR): A principle of law permitting vehicles at a traffic light showing a red signal to turn into the direction of traffic nearer to them when the way is clear, without having to wait for a green signal.

Safe Routes to School (SRTS): Programs that aim to make it safer for students to walk and bike to school and encourage more walking and biking where safety is not a barrier.

Special Protection Area (SPA): A geographic area where existing water resources and related environmental features are of high quality or unusually sensitive. In these areas, proposed land uses would threaten the quality or preservation of those resources if special water quality protection measures were not put in place. SPAs are designated by the County Council under Section 19-62(a) of the Montgomery County Code. Learn more: montgomeryplanning.org/planning/environment/water-and-wetlands/special-protection-areas/

Speed Governor: A device installed in a vehicle to limit the top speed that vehicle can achieve.

Streeterery: A dining concept to create additional restaurant seating outdoors, especially with the use of temporary street closures.

Student Travel Tally: A quick, in-class survey that provides valuable information on student travel patterns, including arrival and departure mode of transportation.

Traffic Calming: Physical changes to a street or roadway used to improve safety by decreasing traffic speed and volume. Methods of traffic calming include traffic circles, speed humps, and curb extensions.

Vision Zero: A strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, and equitable mobility for all.

Vision Zero 2030 Plan: Montgomery County's plan of activities to eliminate all traffic fatalities and severe injuries by 2030, available here: montgomerycountymd.gov/visionzero



REFERENCES



The following documents were used as resources throughout the development of the Pedestrian Master Plan:

- State and National Design Guidance
 - AASHTO Roadside Design Guide
 - Maryland Manual of Uniform Traffic Control Devices
 - PROWAG
 - NACTO Urban Street Design Guide
- Local Design Guidance
 - Montgomery County Complete Streets Design Guide
- National and International Planning Documents
 - Portland (Oregon) Citywide Pedestrian Plan
 - Portland (Oregon) Regional Active Transportation Plan
 - Charlotte (North Carolina) WALKS Pedestrian Plan
 - Indianapolis/Marion County (Indiana) Pedestrian Plan
 - JCWALKS (Jersey City, New Jersey) Pedestrian Enhancement Plan
 - New York City Pedestrian Safety Study and Action Plan
 - City of Santa Monica (California) Pedestrian Action Plan
 - Seattle (Washington) Pedestrian Master Plan
 - London (United Kingdom) Walking Action Plan
 - Melbourne (Australia) Walking Plan
 - District of North Vancouver (Canada) Pedestrian Master Plan

ACKNOWLEDGMENTS

Tanya Washington, Acting Director*

Gwen Wright, Director*

Countywide Planning and Policy Division

Jason Sartori, Chief

David Anspacher, Supervisor

Eli Glazier, Lead Planner

Jesse Cohn-McGowan, Transportation Planner*

Jon Ryder, Transportation Planner

Russell Provost, GIS Planner*

Juan Jose Castro Cerdas, Transportation Planner*

Lauren Pepe, Transportation Planner*

Lily Murnen, Transportation Planner

Steve Aldrich, Engineer

Arnita Jackson, Administrative Support

Legal Office

Matthew Mills

Emily Vaias

Research and Special Projects Division

Pamela Zorich*

Communications Division

Bridget Broullire, Chief

Deborah Dietsch*

Darrell Godfrey

Laurence King

Kevin Leonard*

Christopher Peifer

Christine Ruffo

George Lettis

Nick Frymark

Dior Kane

Information Technology & Innovation Division

Chris McGovern

Melissa Noakes

Erik Westbrook

*Former staff members

COUNTY COUNCIL RESOLUTION

Resolution No.: 20-300
Introduced: October 10, 2023
Adopted: October 10, 2023

**COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION
OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT
WITHIN MONTGOMERY COUNTY, MARYLAND**

By: County Council

SUBJECT: Approval of May 2023 Pedestrian Master Plan

1. On May 26, 2023, the Montgomery County Planning Board transmitted to the County Executive and the County Council the May 2023 Planning Board Draft of the Pedestrian Master Plan.
2. The May 2023 Planning Board Draft of the Pedestrian Master Plan contains the text and supporting maps for a comprehensive amendment to the *Master Plan of Highways & Transitways*, the *Bicycle Master Plan* (2018), the *Rustic Roads Functional Master Plan* (2023), the *Preservation of Agricultural and Rural Open Space Functional Master Plan* (1980), the *Purple Line Functional Plan* (2010), the *Countywide Transit Corridors Functional Master Plan* (2013), the *Intercounty Connector Limited Functional Master Plan Amendment: Bikeways and Interchanges* (2009), and *Thrive Montgomery 2050* (2022), as amended. This plan also amends the following area master plans, as amended: the *10 Mile Creek Area Limited Amendment* (2014), the *Ashton Village Center Sector Plan* (2021), the *Aspen Hill Master Plan* (1994), the *Aspen Hill Minor Master Plan Amendment* (2015), the *Bethesda Downtown Sector Plan* (2017), the *Bethesda-Chevy Chase Master Plan* (1990), the *Boyd's Master Plan* (1985), the *Burtonsville Commercial Crossroads Neighborhood Plan* (2012), the *Capitol View and Vicinity Sector Plan* (1982), the *Chevy Chase Lake Sector Plan* (2013), the *Clarksburg Master Plan and Hyattstown Special Study Area* (1994), the *Cloverly Master Plan* (1997), the *Damascus Master Plan* (2006), the *East Silver Spring Master Plan* (2000), the *Fairland Master Plan* (1997), the *Forest Glen/Montgomery Hills Sector Plan* (2020), the *Four Corners Master Plan* (1996), the *Friendship Heights Sector Plan* (1998), the *Gaithersburg and Vicinity Master Plan* (1996), the *Germantown Employment Area Sector Plan* (2009), the *Germantown Master Plan* (1989), the *Glenmont Sector Plan* (2013), the *Great Seneca Science Corridor Master Plan* (2010), the *Greater Lyttonsville Sector Plan* (2017), the *Grosvenor/Strathmore Metro Area Minor Master Plan* (2018), the *Kemp Mill Master Plan* (2001), the *Kensington Sector Plan* (2012), the *Kensington/Wheaton Master Plan* (1989), the *Long Branch Sector Plan* (2013), the *MARC Rail Communities Sector Plan* (2019), the *Montgomery Village Master Plan* (2016), the *North and West Silver Spring Master Plan* (2000), the *North Bethesda/Garrett Park Master Plan* (1992), the *Olney Master Plan* (2005), the *Potomac Subregion Master Plan* (2002), the *Rock Spring Sector Plan* (2017), the *Sandy Spring/Ashton Master Plan* (1998), the *Sandy Spring Rural Village Plan* (2015), the *Shady Grove Minor Master Plan* (2021), the *Shady Grove Sector Plan* (2006), the

1

Page 2

Resolution No.: 20-300

Silver Spring Downtown and Adjacent Communities Plan (2022), the *Takoma/Langley Crossroads Sector Plan* (2012), the *Takoma Park Master Plan* (2000), the *Twinbrook Sector Plan* (2009), the *Upper Rock Creek Master Plan* (2004), the *Veirs Mill Corridor Master Plan* (2019), the *Westbard Sector Plan* (2016), the *Wheaton CBD Sector Plan* (2012), the *White Flint Sector Plan* (2010), the *White Flint 2 Sector Plan* (2018), the *White Oak Master Plan* (1997), and the *White Oak Science Gateway Master Plan* (2014).

3. On July 25, 2023, the County Council held a public hearing on the May 2023 Planning Board Draft of the Pedestrian Master Plan, which was referred to the Council's Transportation and Environment Committee for review and recommendations.
4. On September 11 and 18, 2023, the Transportation and Environment Committee held worksessions to review the May 2023 Planning Board Draft of the Pedestrian Master Plan.
5. On September 26, 2023, the County Council reviewed the May 2023 Planning Board Draft of the Pedestrian Master Plan and the recommendations of the Transportation and Environment Committee.

Action

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following resolution:

The Planning Board Draft of the Pedestrian Master Plan, dated May 2023, is approved with revisions. County Council revisions to the Planning Board Draft of the Pedestrian Master Plan are identified below. Deletions to the text of the Plan are indicated by [brackets], additions by underlining. Montgomery County Planning Department staff may make additional, non-substantive revisions to the Master Plan before its adoption by the Maryland-National Capital Park & Planning Commission.

All page references in this section are consistent with the page numbering in the print version of the Planning Board Draft of the Pedestrian Master Plan.

Page 3 Add the following as the second-last paragraph:

Creative funding strategies and dedicated revenue sources may be helpful in implementing the plan's recommendations.

Page 9 Add a paragraph at the end of the page as follows:

The Montgomery County Planning Department will track progress in implementing the Pedestrian Master Plan's vision using a biennial monitoring report and interactive website. The two tools will document how the county is

2

implementing the plan recommendations and striving to achieve the plan's performance measure targets.

Page 11 Add a sentence after the second sentence in the introductory paragraph as follows:

Improved pedestrian access is also vital to promote economic development in the county.

Page 11 Update the Objective 1.2 data point and source year.

Countywide, 3.0% (30.0% including the use of public transportation)¹ of residents will commute on foot, up from 2.2 [1.8%] (17 | 12.8) in [2019] 2021.

Page 12 Update the Objective 1.3 data point and source year.

The percentage of people who commute on foot (including the use of public transportation) to a Montgomery County Transportation Management District (TMD) will be:

- 10.0% (40.0% including the use of public transportation) in the Bethesda TMD, up from 2.6 [4.9%] (11.6 | 23.9%) in [Fiscal Year 2019] Fall 2022
- 10.0% (50.0%) in the Silver Spring TMD, up from 2.4 [4.8%] (11.1 | 36.4%) in [Fiscal Year 2019] Fall 2022
- 4.0% (35.0%) in the Friendship Heights TMD, up from 2.2 [2.3%] (7.9 | 27.0%) in [Fiscal Year 2019] Fall 2022
- 1.5% (7.0%) in the Greater Shady Grove TMD, up from 0.1 [0.9%] (4.5 | 5.1%) in [Fiscal Year 2019] Fall 2022
- 4.0% (25.0%) in the North Bethesda TMD, up from 1.2 [1.3%] (5.6 | 14.8%) in [Fiscal Year 2019] Fall 2022
- 2.0% (10.0%) in the White Oak TMD, up from N/A (N/A) in [Fiscal Year 2019] Fall 2022

Page 15 Update the Objective 2.1 data point and source year.

Comfortable pedestrian connectivity will be:

- 70.0% for pathways, up from 62.0 [58.0%] in [2020] 2023
- 55.0% for crossings, up from 43.0 [44.0%] in [2020] 2023

Page 15 Update the Objective 2.2 data point and source year.

Comfortable pedestrian access to schools (pathway/crossing) will be:

- 80.0%/60% for elementary schools, up from 55.1 [40.0%] 43.4 [32.0%] in [2020] 2022

- 65.0%/50% for middle schools, up from 37.9 [21.0%] 23.4 [13.0%] in [2020] 2022
- 30.0%/20% for high schools, up from 27.0 [7.0%] 12.5 [5.0%] in [2020] 2022

Page 16

Update the Objective 2.3 data point and source year.

Comfortable pedestrian access to parks (pathway/crossing) will be:

- 80.0%/40.0% for parks, up from 69.9 [71.0%] 35.1 [34.0%] in [2020] 2023
- 85.0%/70.0% for libraries, up from 79.5 [77.0%] 65.5 [62.0%] in [2020] 2023
- 90.0%/70.0% for recreation centers, up from 78.4 [79.0%] 60.0 [62.0%] in [2020] 2023

Page 16

Update the Objective 2.4 data point and source year.

Comfortable pedestrian access to transit stations (pathway/crossing) will be:

- 100.0%/80.0% for WMATA Metro Red Line stations, up from 88.0 [86.0%] 66.4 [66.0%] in [2020] 2023
- 90.0%/80.0% for MARC Brunswick Line stations, up from 89.5 [84.0%] 72.0 in [2020] 2023
- 95.0%/90.0% for MDOT Purple Line stations, up from 75.7 [79.0%] 69.8 [79.0%] in [2020] 2023

Page 17

Update the Objective 3.1 data point and source year.

Pedestrian fatalities and severe injuries will be reduced to zero, down from [80] 84 in [2019] 2022

Page 18

Update the Objective 4.2 data points.

Title 1/Focus/High FARMS-designated ("designated") schools will be as comfortable to access as non-designated schools. [Currently, the following disparities exist:]

Destination School Type	Percentage of Trips to Each School Type Along Completely Comfortable Pathways and Crossings			
	Pathways		Crossings	
	Title I/Focus and High FARMS Rate Schools	All Other Schools	Title I/Focus and High FARMS Rate Schools	All Other Schools
Elementary Schools	[43.0] 60.5%	[36.0] 49.9%	[34.0] 47.5%	[30.0] 39.4%
Middle Schools	[18.0] 34.8%	[20.0] 41.6%	[11.0] 22.8%	[14.0] 24.2%
High Schools	[6.0] 26.2%	[7.0] 27.6%	[3.0] 8.9%	[7.0] 16.3%

Page 19 Update the Objective 4.3 data points. Transit stations will be as comfortable to access from Equity Focus Areas (EFAs) (Figure 2) as from outside EFAs. [Currently, the following disparities exist and are **bolded**:]

- WMATA Metro Red Line stations
 - Pathways ([88.0] **92.3%** comfortable EFA/[85.0] **86.5%** non-EFA)
 - Crossings ([73.0] **64.8%** comfortable EFA/[80.0] **66.8%** non-EFA)
- MARC Brunswick Line stations
 - Pathways ([88.0] **94.0%** comfortable EFA/[83.0] **87.1%** non-EFA)
 - Crossings ([79.0] **80.3%** comfortable EFA/[69.0] **69.1%** non-EFA)
- MDOT Purple Line stations
 - Pathways ([73.0] **75.4%** comfortable EFA/[81.0] **75.9%** non-EFA)
 - Crossings ([73.0] **73.4%** comfortable EFA/[80.0] **67.3%** non-EFA)
- Montgomery County BRT Stations
 - Pathways ([82.0] **85.0%** comfortable EFA/[85.0] **82.0%** non-EFA)
 - Crossings ([58.0] **63.0%** comfortable EFA/[63.0] **58.0%** non-EFA)

Page 19 Update the Objective 4.4 data points. Parks, libraries, and recreation centers will be as comfortable to access from EFAs (Figure 2) as from outside EFAs. [Currently, the following disparities exist and are **bolded**:]

- Parks
 - Pathways ([83.0] **71.0%** comfortable EFA/[66.0] **69.0%** non-EFA)
 - Crossings ([34.0] **36.0%** comfortable EFA/[34.0] **35.0%** non-EFA)
- Libraries
 - Pathways ([77.0] **80.0%** comfortable EFA[,] **77.0%** non-EFA)
 - Crossings ([55.0] **61.0%** comfortable EFA[,] **66.0%** non-EFA)

- Recreation Centers
 - Pathways ([82.0] **83.0%** comfortable EFA[,] **77.0%** non-EFA)
 - Crossings ([49.0] **48.0%** comfortable EFA[,] **68.0%** non-EFA)

Page 20 Update the Objective 4.5 data points and source year.

Eliminate the disparity in the rate of pedestrian fatalities and severe injuries between EFAs (Figure 2) and non-EFAs. In [2020] **2022**, there were [4.8] **4.2** times more severe pedestrian injuries and fatalities inside EFAs than outside them.

Page 25 Update the second and third paragraph within the Mode Share section.

Overall, 7.5% of weekday trips are made by walking (Table 1) and [2.2] **1.8%** of commute trips are made by walking in Montgomery County. Walking rates vary greatly by land use type, with a greater share of trips made by walking in urban areas (11.3%) compared with transit corridors (7.3%) and exurban/rural areas (4.6%). In addition, residents in urban areas make up a greater share of commute trips by walking ([3.7] **3.2%**) than those in transit corridors ([1.8] **1.5%**) or exurban/rural areas ([1.1] **1.0%**).

Walking rates also vary depending on whether an area is an EFA. Residents in EFAs make 9.6% of trips by walking, while residents in non-EFAs make 7.0% of trips by walking. The share of commute trips by walking is only slightly greater in EFAs ([2.4] **1.9%**) than in non-EFAs ([2.1] **1.8%**).

Page 25 Update Table 1 as follows:

Table 1. Pedestrian Mode Share by Area Types

	Total	Land Use Type			Equity Focus Areas	
		Urban	Transit Corridor	Exurban/Rural	EFAs	Non-EFAs
Overall Weekday Trips*	7.5%	11.3%	7.3%	4.6%	9.6%	7.0%
Commute Trips**	[2.2] 1.8%	[3.7] 3.2%	[1.8] 1.5%	[1.1] 1.0%	[2.4] 1.9%	[2.1] 1.8%

* Regional Travel Survey, 2017-2018

** American Community Survey, [2019] **2021** Five-Year Estimates

Note: County mode share (the percentage of trips made by different travel modes) includes Rockville and Gaithersburg.

Page 25 Update the paragraph after Table 1:

While the county’s pedestrian commuter mode share is low, it is higher than all other counties in the region, except Arlington County (Table 2). In urban areas such as the City of Rockville and Silver Spring Census Designated Place, commuter mode share is higher. For instance, the [2019] **2021** American

Community Survey reports that the rate of walking is [3.2] 2.3% in [these areas] Rockville and 2.8% in Silver Spring.⁷

Page 26 Update Table 2 as follows:

Table 2. Commute Mode Share of Jurisdictions in the Metropolitan Washington Region

Jurisdiction	Pedestrian Mode Share
Washington, D.C.	[13.4] <u>6.7%</u>
Arlington County, VA	[5.0] <u>4.3%</u>
Montgomery County, MD	[2.2] <u>1.8%</u>
Frederick County, MD	1.8%
Prince George's County, MD	[2.0] <u>1.7%</u>
Fairfax County, VA	[1.9] <u>1.4%</u>
[Frederick County, MD]	[1.8%]
Howard County, MD	[1.0] <u>0.9%</u>

Source: American Community Survey, [2019] 2021 Five-Year Estimates
 Note: County mode share (the percentage of trips made by different travel modes) includes Rockville and Gaithersburg.

Page 36 Update the last paragraph as follows:

Table 10 summarizes sidewalk mileage by street classification,¹³ as well as where there are sidewalk gaps (sections of missing sidewalk). Countywide, there are [nearly 2,200] about 2,500 miles of sidewalks (primarily on local—or residential—streets) and [218] 220 miles of sidewalk gaps on non-local streets. Many of these gaps are located on roads that connect people to destinations, including major highways, arterials, and primary residential streets.

Page 37 Update Table 10 as follows:

Table 3. Sidewalk Mileage by Street Classification

Street Classification	Street Mileage	Existing Sidewalks (miles)	Sidewalk Gaps (miles)
Controlled Major Highway	19	20	1
Major Highway	159	[214] <u>205</u>	[50] <u>49</u>
Parkway	9	3	0
Arterial	243	[202] <u>205</u>	98
Minor Arterial	48	[62] <u>63</u>	[8] <u>7</u>
Business	50	[79] <u>81</u>	2
Primary Residential	215	[227] <u>228</u>	[56] <u>58</u>
Industrial	7	12	1
Country Road	35	2	3
Rustic Road	149	2	0

Street Classification	Street Mileage	Existing Sidewalks (miles)	Sidewalk Gaps (miles)
Exceptional Rustic Road	40	0	1
Local Streets	2,121	[1,367] <u>1,622</u>	N/A
Total	3,095	[2,193] <u>2,438</u>	220

Page 37 Update Table 11 as follows:

Table 4. Sidewalk Gap Mileage by Street Classification and Land Use

Street Classification	Existing Sidewalks (miles)	Gap Mileage			
		Urban	Transit Corridor	Exurban/Rural	Total
Controlled Major Highway	20	1	0	0	1
Major Highway	[214] <u>205</u>	[5] <u>4</u>	7	38	[50] <u>49</u>
Parkway	3	0	0	0	0
Arterial	[205] <u>202</u>	[7] <u>4</u>	[11] <u>10</u>	[80] <u>84</u>	98
Minor Arterial	[62] <u>63</u>	[1] <u>0</u>	2	5	[8] <u>7</u>
Business	[79] <u>81</u>	2	0	0	2
Primary Residential	[227] <u>228</u>	[4] <u>3</u>	[7] <u>8</u>	[45] <u>47</u>	[56] <u>58</u>
Industrial	12	0	0	1	1
Country Road	2	0	0	3	3
Rustic Road	2	0	0	0	0
Exceptional Rustic Road	0	0	0	1	1
Local Streets	[1,367] <u>1,622</u>	N/A	N/A	N/A	N/A
Total	[2,193] <u>2,438</u>	[20] <u>14</u>	27	[173] <u>179</u>	220

Page 39 Update the first paragraph as follows:

As Table 12 highlights, local streets tend to have narrower sidewalks: [61] 62% of sidewalks along local streets are less than five feet wide. While higher classification streets tend to have wider sidewalks, there are still many sidewalks along major highways (23%), arterials (26%), business streets ([18] 17%) and similar streets that are narrower than five feet.

Page 39 Update Table 12 as follows:

Table 5. Sidewalk Width by Street Classification

Street Classification	Mileage	Sidewalk Width			
		3.5' to < 5'	>= 5' to < 8'	>= 8' to < 10'	>= 10'
Controlled Major Highway	20	17%	40%	38%	5%

Street Classification	Mileage	Sidewalk Width			
		3.5' to < 5'	>= 5' to <8'	>=8' to <10'	>=10'
Major Highway	[214] 205	23%	54%	[19] 18%	5%
Parkway	3	3%	[46] 47%	[10] 8%	[41] 42%
Arterial	[205] 202	26%	47%	[25] 24%	3%
Minor Arterial	[62] 63	[57] 56%	[39] 40%	3%	1%
Business	[79] 81	[18] 17%	[57] 58%	14%	[11] 12%
Primary Residential	[227] 228	74%	21%	5%	0%
Industrial	12	14%	68%	12%	6%
Country Road	2	0%	18%	82%	0%
Rustic Road	2	0%	[96] 97%	0%	[4] 3%
Exceptional Rustic Road	0	48%	52%	0%	0%
Local Street	[1,367] 1,622	[61] 62%	[32] 31%	5%	[3] 2%
Total Mileage	[2,193] 2,438	[1,175] 1,328	[784] 851	[189] 196	[67] 63

Source: Pedestrian Level of Comfort Analysis

Page 39 Update the last paragraph as follows:

As Figure 11 indicates, sidewalks in EFAs tend to be somewhat narrower than sidewalks in other areas of the county. In EFAs, [58] 59% of sidewalks are between three and a half and five feet wide, while [51] 53% of sidewalks outside EFAs are in this category. At the other end of the spectrum, non-EFA sidewalks are more likely to be between eight and 10 feet ([10] 2% vs. 5%) and greater than 10 feet (3% vs. 2%).

Page 39 Update Figure 11 to reflect adjusted data values.

Page 40 Update the second paragraph as follows:

Of the [2,193] 2,438 miles of county sidewalks, most ([58] 51%) have at least a six-foot buffer between the sidewalk and the street. However, nearly half (47%) of sidewalks along major highways like Georgia Avenue are missing buffers. By contrast, [20] 19% of arterial sidewalks, 11% of primary residential sidewalks, and [20] 19% of local street sidewalks are missing buffers (Table 13).

Page 40 Update Table 13 as follows:

Table 6. Street Buffer Width by Street Classification

Street Classification	Buffer Width		
	No Buffer	Less than Six Feet	Six Feet or Greater
Controlled Major Highway	3%	[66] 74%	[31] 23%
Major Highway	47%	[30] 34%	[23] 19%
Parkway	4%	[25] 36%	[70] 61%
Arterial	20%	[29] 35%	[70] 45%
Minor Arterial	21%	[27] 34%	[52] 45%
Business	[29] 28%	[32] 44%	[39] 28%
Primary Residential	11%	[17] 23%	[72] 66%
Industrial	[15] 14%	[25] 27%	[61] 59%
Country Road	0%	4%	96%
Rustic Road	[8] 7%	[18] 33%	[74] 60%
Exceptional Rustic Road	[53] 52%	27%	21%
Local Street	[20] 18%	[16] 26%	[64] 56%

Page 40 Update the third paragraph as follows:

Sidewalks in EFAs are less likely to have buffers than those outside of EFAs. While [28] 27% of sidewalks in EFAs are missing street buffers, only [20] 18% outside are (Figure 12).

Page 40 Update Figure 12 to reflect adjusted data values.

Page 41 Update Table 14 as follows:

Table 7. Sidewalk Buffer by Posted Speed Limit

Posted Speed Limit	No Buffer	Less than Six Feet	Six Feet or Greater
Less than 30 mph	[20] 18%	[17] 26%	[64] 55%
30-40 mph	[28] 27%	[28] 34%	[45] 39%
Greater than 40 mph	[31] 30%	[39] 43%	[30] 27%
Total	[22] 21%	[20] 28%	[58] 51%

Source: Pedestrian Level of Comfort Analysis

Page 41 Update the third paragraph as follows:

There are three different approaches to crosswalks on county roads. Unmarked crossings have no pavement markings to denote the crosswalk. Standard crosswalk markings include stamped concrete, parallel lines, and dashed marking patterns. High-visibility crosswalks have proven pedestrian safety benefits over standard crosswalk markings and include continental, ladder, zebra, and solid

designs. Table 15 summarizes the crosswalk types by street classification. Countywide, [67] 69% of legal crossings are unmarked, while [16] 15% have a standard marked crosswalk and 17% have a high-visibility crosswalk. The highest portion of marked crosswalks (standard or high-visibility) are on high-volume, higher-order roadways, such as controlled major highways, major highways, and parkways.

Page 41-42 Update Table 15 as follows:

Table 8. Crossing Type by Street Classification

Street Classification	Unmarked	Standard	High-Visibility
Controlled Major Highway	[27] 28%	[35] 34%	38%
Major Highway	33%	28%	39%
Parkway	29%	16%	55%
Arterial	47%	[17] 16%	[36] 37%
Minor Arterial	[56] 57%	[16] 15%	28%
Business	28%	24%	[48] 47%
Primary Residential	[70] 69%	14%	[16] 17%
Industrial	[51] 50%	19%	[29] 31%
Country Arterial	100%	0%	0%
Country Road	100%	0%	0%
Rustic Road	[86] 83%	[5] 4%	[10] 13%
Exceptional Rustic Road	89%	11%	0%
Local	[75] 77%	[14] 13%	[11] 10%
Total	[67] 69%	[16] 15%	17%

Source: Pedestrian Level of Comfort Analysis

Page 42 Update Table 16 as follows:

Table 9. Crossing Type by Roadway Speed by Land Use

Posted Speed Limit	Urban			Transit Corridor			Exurban/Rural		
	Unmarked	Standard	High Visibility	Unmarked	Standard	High Visibility	Unmarked	Standard	High Visibility
Less than 30 mph	[67] 64%	[15] 14%	[18] 21%	74%	[16] 15%	11%	[76] 80%	[13] 11%	[10] 8%
30-40 mph	33%	[25] 23%	[43] 44%	[48] 50%	[16] 14%	36%	[63] 67%	[14] 11%	22%
Greater than 40 mph	[20] 21%	[25] 24%	[55] 56%	[30] 29%	[23] 25%	[47] 46%	[43] 47%	26%	[31] 27%

Source: Pedestrian Level of Comfort Analysis

Page 43 Update Figure 13 to reflect adjusted data values.

Page 43 Update the first paragraph as follows:

Montgomery Planning’s PLOC analysis finds that [58] 61% of pathway distance and [44] 42% of crossings crossing distance in the county [are] is comfortable (Table 17). This means they meet either the “very comfortable” or “somewhat comfortable” metrics outlined in the PLOC methodology appendix.

Page 43 Update Table 17 as follows:

Table 10. Overall Pedestrian Comfort on Streets and at Crossings

PLOC Score	Pathway Distance	Crossing [Locations] Distance
Very Comfortable	[24] 25%	[11] 10%
Somewhat Comfortable	[34] 36%	[33] 32%
Uncomfortable	21%	38%
Undesirable	[20] 17%	[17] 19%

Source: Pedestrian Level of Comfort Analysis

Page 43 Update the last two paragraphs as follows:

An analysis of pedestrian conditions along all streets and crossings in the county indicates that there are large areas of the county where it is uncomfortable to walk and many locations where it is undesirable to do so. Figure 14 summarizes pedestrian comfort along pathways. Comfort levels in urban ([65] 67%) and transit corridors ([69] 71%) are greater than in exurban/rural ([48] 52%) areas of the county.

Pathway comfort levels are substantially higher in EFAs ([73] 71%) than non-EFAs ([58] 60%), likely due to where these areas are located and when they were developed.

Page 44 Update Figure 14 to reflect adjusted data values.

Page 44 Update the first paragraph as follows:

Figure 15 summarizes pedestrian conditions at crossings. Overall, only [44] 42% of crossings [locations] are [a] comfortable [walking experience] for pedestrians. Crossings in transit corridors tend to be slightly more comfortable ([47] 45%

comfortable) while crossings in urban and exurban/rural areas tend to be somewhat less comfortable ([40] 41% comfortable).

Page 44 Update Figure 15 to reflect adjusted data values.

Page 45 Update Table 18 as follows:

Table 11. Comfortable Pedestrian Access to Community Destinations and Transit Stations

	Pathway Distance	Crossing Distance
Community Destinations		
Libraries	[77] 79.5%	[62] 65.5%
Recreation Centers	[79] 78.4%	[62] 65.5%
Parks	[71] 69.9%	[34] 35.1%
Transit Stations		
Red Line	[86] 88%	[66] 66.4%
Purple Line	[79] 75.7%	[79] 69.8%
Brunswick Line	[84] 89.5%	72%

Source: Pedestrian Level of Comfort Analysis

Page 46 Update Table 19 as follows:

Table 12. Comfortable Access to Community Destinations and Transit Stations by Area Types

		Community Destinations			Transit Stations		
		Libraries	Recreation Centers	Parks	Red Line	Purple Line	Brunswick Line
Urban	Pathways	[79] 81%	82%	N/A	87%	[79] 76%	83%
	Crossings	[63] 71%	[65] 66%	N/A	[68] 67%	[79] 72%	70%
Transit Corridor	Pathways	[64] 72%	[86] 85%	[61] 63%	[74] 76%	69%	N/A
	Crossings	[65] 45%	[58] 51%	[27] 30%	[48] 51%	82%	N/A
Exurban/Rural	Pathways	[78] 81%	[59] 62%	[81] 76%	N/A	N/A	[92] 91%
	Crossings	[34] 40%	[53] 46%	[42] 41%	N/A	N/A	89%

Note: The approach for calculating access to destinations for land use type is based on where the community destination or transit station is located (urban area, transit corridor, etc.).

Source: Pedestrian Level of Comfort Analysis

Page 46 Update the third paragraph as follows:

Comfortable access to community destinations and transit stations also varies by whether the walkshed (the distance around the destination from which people

walk) is within an EFA. Table 20 illustrates that crossing comfort tends to be worse in EFAs, while pathway comfort is better. [While Red Line station connectivity is more comfortable in EFAs, Purple Line station connectivity is worse.]

Page 46 Update Table 20 as follows:

Table 13. Comfortable Access to Community Destinations by EFA Status

		Community Destinations			Transit Stations		
		Libraries	Recreation Centers	Parks	Red Line	Purple Line	Brunswick Line
EFAs	Pathways	[77] 80%	[82] 83%	[83] 71%	[88] 92%	[73] 75%	[88] 94%
	Crossings	[55] 61%	[49] 48%	[34] 36%	[59] 65%	73%	[79] 80%
Non-EFAs	Pathways	[77] 79%	77%	[66] 69%	[85] 87%	[81] 76%	[83] 87%
	Crossings	[66] 67%	[68] 65%	[34] 35%	[68] 67%	[80] 67%	69%

Note: The approach for calculating access to destinations for EFAs is based on where residences within the walksheds for each community destination or transit station within or outside of an EFA.

Source: Pedestrian Level of Comfort Analysis

Page 46-47 Update the fourth paragraph as follows:

Table 21 shows that walking to elementary schools tends to be more comfortable,¹⁷ with [40] 50% comfortable access walking along streets, and [32] 43% comfortable access at crossings. In contrast, walking tends to be the least comfortable to high schools, with only [7] 27% comfortable access along pathways and [5] 13% comfortable access at crossings.

Page 47 Update Table 21 as follows:

Table 14. Comfortable Pedestrian Access to School

School Types	Streets	Crossings
Elementary Schools	[40] 55%	[32] 43%
Middle Schools	[21] 38%	[13] 23%
High Schools	[7] 27%	[5] 13%

Source: Pedestrian Level of Comfort Analysis

Page 48 Update Table 22 as follows:

Table 15. Comfortable Pedestrian Access to School by Area Types and Designation

Public Facility	Land Use Type						Title I/Focus and High FARMS Rate Schools			
	Urban		Transit Corridor		Exurban/Rural		Yes		No	
	Pathways	Crossings	Pathways	Crossings	Pathways	Crossings	Pathways	Crossings	Pathways	Crossings
Elementary Schools	[30] 36%	[24] 28%	[46] 56%	[38] 51%	[36] 50%	[39] 54%	[43] 60%	[34] 47%	[36] 50%	[30] 39%
Middle Schools	[15] 12%	[3] 6%	[16] 28%	[11] 21%	[26] 38%	[19] 33%	[18] 35%	[11] 23%	[20] 42%	[14] 24%
High Schools	[5] 9%	[5] 11%	[14] 23%	[6] 15%	[6] 14%	[5] 11%	[6] 27%	[3] 9%	[7] 28%	[7] 16%

Source: Pedestrian Level of Comfort Analysis

Page 51 Update the third paragraph as follows:

While users of all transportation modes suffer fatalities and severe injuries, pedestrians are particularly vulnerable. Figure 18 shows pedestrians were only involved in 4% of total crashes between 2015 and [2020] 2022, but they accounted for 27% of severe injuries and fatalities. Pedestrian crashes disproportionately result in severe injuries and fatalities because while motor vehicles provide drivers and passengers protection from crashes, pedestrians do not have similar protection. A collision between vehicles may result in minor injuries to passengers, but a crash involving a pedestrian is more likely to result in a severe injury or a fatality.

Page 52 Update the third paragraph as follows:

Figure 20 depicts roadway mileage, pedestrian crashes, and pedestrian fatalities and severe injuries by land use type. While over half (54%) of the roadway miles in the county are in exurban/rural areas, these areas only comprise 11% of pedestrian crashes and [13] 12% of pedestrian severe injuries or fatalities. In contrast, urban areas only comprise 21% of roadway miles, while making up about two thirds of pedestrian crashes (68%) and pedestrian severe injuries and fatalities ([65] 62%).

Page 53 Update Figure 20 to reflect adjusted data values.

Page 53 Update the first paragraph as follows:

While data are not available to indicate whether low-income residents of color are disproportionately impacted by pedestrian crashes, Figure 21 shows that streets in EFAs have higher crash rates. While EFAs contain only 14% of roadway miles in the county, they account for [40] 41% of all pedestrian crashes and [44] 45% of pedestrian crashes that result in a fatality or severe injury. Additionally, Black Montgomery County residents had an emergency room admission rate for motor vehicle crashes 136% higher than Asian/Pacific Islander residents and 104% higher than white, non-Hispanic residents.

Page 53 Update Figure 21 to reflect adjusted data values.

Page 53 Update the second paragraph as follows:

Beyond land use types, the safety analysis zooms into the specific locations and street types where crashes occur. Table 24 shows that pedestrian crashes along a street (rather than at an intersection) are disproportionately likely to result in a severe injury or fatality. At the same time, while [21] 19% of pedestrian crashes happen in parking lots, they are less likely to be severe or fatal. The difference between these two crash types may be due to motor-vehicle speed, as motor vehicles are likely traveling faster when they collide with pedestrians along street segments than in parking lots.

Page 54 Update Table 24 as follows:

Table 16. Pedestrian Crashes by Location

Location	Percent of Pedestrian Crashes	Percent of Pedestrian Severe Injuries and Fatalities (KSI)
Signalized Intersection	[26] 21%	[26] 21%
Stop-Controlled Intersection	[6] 5%	[5] 4%
Uncontrolled Intersection	[13] 20%	[16] 21%
Along a Street	27%	[37] 38%
Off-road	[4] 5%	2%
Parking Lot	[21] 19%	10%
Driveway	4%	[4] 3%
Total	100%	100%

Note: Data include crashes in Rockville and Gaithersburg.

Page 54 Update the first paragraph as follows:

Higher classification roads such as controlled major highways and major highways, as well as business streets, disproportionately account for pedestrian crashes resulting in severe injuries or fatalities. Table 25 shows that while controlled major highways, major highways, and business streets make up 8% of roadway mileage, they account for [58] 57% of pedestrian crashes and [64] 63% of pedestrian severe injuries and fatalities.

Page 54 Update Table 25 as follows:

Table 17. Pedestrian Crashes by Roadway Type

Street Classification	Percent of Roadway Miles	Percent of Pedestrian Crashes	Percent of Pedestrian Severe Injuries and Fatalities (KSI)
Controlled Major Highway	1%	3%	5%
Major Highway	5%	33%	[39] 40%
Parkway	0%	0%	0%
Arterial	8%	11%	[9] 11%
Minor Arterial	2%	5%	3%
Business	2%	[22] 21%	[20] 18%
Primary Residential	7%	16%	15%
Industrial	0%	1%	0%
Country Arterial	2%	0%	0%
Country Road	1%	0%	0%
Rustic & Exceptionally Rustic	6%	0%	[1] 0%
Local	67%	10%	[7] 8%
Total	100%	100%	100%

Page 55 Update Table 26 as follows:

Table 18. Pedestrian KSI by Area Type by Roadway Type

Street Classification	Urban		Transit Corridor		Rural		Total	
	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI	% Roadway Mileage	% KSI
Controlled Major Highway	0.4%	[4] 3%	0.2%	1%	0.1%	0%	0.6%	5%
Major Highway	2.0%	[25] 27%	1.3%	[10] 9%	1.8%	4%	5.0%	[39] 40%
Arterial	1.8%	6%	1.2%	[2] 3%	4.7%	[1] 2%	7.7%	[9] 11%
Country Arterial	0.0%	0%	0.0%	0%	1.8%	0%	1.8%	0%
Minor Arterial	0.5%	[1] 2%	0.6%	1%	0.5%	0%	1.5%	3%
Business	1.6%	[20] 18%	0.0%	0%	0.0%	0%	1.6%	[20] 18%
Country Road	0.0%	0%	0.0%	0%	1.1%	0%	1.1%	0%
Industrial	0.0%	0%	0.1%	0%	0.1%	0%	0.2%	0%
Parkway	0.0%	0%	0.1%	0%	0.2%	0%	0.3%	0%

Local	13.6%	[3] 4%	19.4%	2%	34.3%	1%	67.4%	[7] 8%
Primary Residential	1.3%	7%	1.9%	5%	3.7%	3%	6.8%	15%
Exceptional Rustic Road	0.0%	0%	0.0%	0%	1.3%	0%	1.3%	0%
Rustic Road	0.1%	0%	0.1%	0%	4.6%	1%	4.7%	1%

Page 56 Update Figure 22 to reflect adjusted data values.

Page 56 Update the first paragraph as follows:

While fewer pedestrian crashes occur in the overnight hours, those crashes are more likely to result in severe or fatal injuries (Figure 23). For instance, while 13% of pedestrian crashes between 6:00 a.m. and 9:59 p.m. are severe or fatal, that percentage jumps to [28] 29% between 10:00 p.m. and 5:59 a.m. In addition to increased vehicle speeds common at night due to reduced congestion and lighting-related visibility issues, impairment may also play a role in the increased likelihood of fatal and severe crashes during these time periods.

Page 56 Update Figure 23 to reflect adjusted data values.

Page 57 Update Figure 24 to reflect adjusted data values.

Page 59 Update the first bullet under Walking Rates and Satisfaction as follows:

- **Overall and commute walking rates are higher in EFAs:** Residents in EFAs make 9.6% of trips by walking compared with 7.0% of trips by walking in non-EFAs. The share of commute trips by walking is only slightly greater in EFAs ([2.4] 1.9%) than non-EFAs ([2.1] 1.8%).

Page 59 Update the first two bullets under A Comfortable, Connected, Convenient Pedestrian Network as follows:

- Crossing comfort accessing community destinations tends to be worse in EFAs, while pathway comfort is better. [While Red Line station connectivity is more comfortable in EFAs, Purple Line station connectivity is worse.]
- Title I/Focus elementary schools have more comfortable access than their more affluent counterparts. Pathway comfort for Title I/Focus Schools is [7] 10% greater than it is for other elementary schools ([43] 60% vs. [36] 60%). Crossing comfort is [4] 8% greater ([34] 47% vs. [30] 39%).

Page 60 Update the first bullet under Pedestrian Safety as follows:

- Crashes and injuries are overrepresented in EFAs. While EFAs contain only 14% of roadway miles in the county, they account for [40] 41% of all

pedestrian-involved vehicular crashes and [44] 45% of such crashes that result in a fatality or severe injury.

Page 61 Update the first paragraph as follows:

The Existing Conditions chapter of the Pedestrian Master Plan described deficiencies in the pedestrian experience in great detail using data sources developed specifically for this plan. This chapter provides recommendations to address the county's current shortcomings identified in the Existing Conditions chapter. The recommendations should be considered in further detail by multiagency partnerships such as the Vision Zero Action Plan and the Climate Action Plan for further refinement and consideration. New and expanded programs will be considered by this and future councils in the context of the County's overall capital and operating funds. Recommendations are in the following five categories:

Page 64-67 Update Table 28 to reflect changes on Pages 69-130.

Page 69 Update the first paragraph under Recommendation B-1 as follows:

The CSDG recommends sidewalks on both sides of the street with adequate buffers from traffic. However, the county's busiest roads lack about [220] 225 miles of sidewalk (on one or both sides of the road), about 54% of sidewalks do not meet the minimum widths (five feet), and about [22] 21% lack a buffer from traffic. With the need for new and reconstructed sidewalks far exceeding the county's capacity to build them, the following key actions help build more sidewalks faster.

Page 70 Update the first paragraph under Key Action B-1d as follows:

Currently, [41] 39% of pedestrian pathway mileage in the county is rated as "uncomfortable" or "undesirable," based on Montgomery Planning's PLOC metric. To improve the comfort of walking, this recommendation establishes a minimum comfort standard of "somewhat comfortable" for new and reconstructed sidewalks as part of capital improvement and private development projects. This ensures that future sidewalks and pedestrian pathways are designed and constructed to be navigable and comfortable. Note that sidewalk reconstruction does not include maintenance projects to eliminate tripping hazards.

Page 71 Remove Key Action B-1f and associated text.

Page 72 Remove Key Action B-1g and associated text.

Page 72 Change the title of Key Action B-1h as follows:

B-1[h]: Document deviations from Complete Streets Design Guide streetscape default widths where applicable.

Page 73 Change the title of Key Action B-1i as follows:

B-1[i]: Update state curb height standards to 6" in areas with pedestrian activity.

Page 74 Update the first paragraph under Key Action B-2b as follows:

In Suburban and Country areas of the county where providing a pedestrian crossing phase via pedestrian recall in every signal cycle may have detrimental effects on traffic flow, passive detection provides an option that eliminates the need to push a button while minimizing impacts to traffic. Using sensors, the signal detects an approaching pedestrian and adds a phase to the signal cycle so that pedestrian can safely cross the street. Pushbuttons may still be provided to assist visually impaired users with navigating crossings.

Page 75 Update the first paragraph under Recommendation B-3 as follows:

High-quality street crossings connect communities and make it easier to access local destinations like schools, parks, and transit stops. The county PLOC analysis found that while the majority of the pathways in the county are comfortable ([58] 61%), only [44] 42% of street crossings are comfortable. Coupled with 46% satisfaction with the number of marked crosswalks and 42% satisfaction with the number of places to safely cross the street in the Countywide Pedestrian Survey, it is clear that street crossings countywide need to be improved. The key actions below achieve the recommendation by encouraging more intuitive curb ramp and crosswalk design, enhancing pedestrian right-of-way while crossing, and supporting the installation of more direct pedestrian crossing locations.

Page 78 Update Key Action B-3e and associated text as follows:

[Pursue] Consider a modification of Maryland Code §21-502 to indicate that the driver of a vehicle must stop for pedestrians waiting to cross the street, not just those already in the crosswalk.

Currently, state law requires pedestrians to enter the street at a crosswalk at an uncontrolled intersection to gain the right-of-way and cause drivers to stop. In practice, this creates situations where drivers maintain elevated speeds through marked and unmarked crosswalks, frightening pedestrians into waiting until there is a gap in traffic before taking the opportunity to cross the street. To support improved driver yielding, additional signage in advance of crosswalks should be installed across the county, particularly at locations where there may be sight distance issues.

Precedent: [Virginia law] Ann Arbor, Michigan and Boulder, Colorado both require[s] drivers to yield to pedestrians “at” a crosswalk, not “in” a crosswalk.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network, Pedestrian Safety

Lead: State Delegation

Update the first paragraph under Key Action B-4d as follows:

Montgomery County’s rail and bus rapid transit corridors (Figure 25) pass through both Urban and Suburban areas, but existing guidance for the Boulevard street type in the CSDG does not recommend adequate target speeds and protected crossing spacing along existing and planned transitways—features necessary to enhance pedestrian safety, improve pedestrian comfort, and shorten walking trips. As transit corridors such as Georgia Avenue, Veirs Mill Road, and University Boulevard account for [10] 9% of fatalities and severe injuries but only 1.3% of roadway miles, more frequent protected crossings and lower target speeds are needed on these roads to achieve Vision Zero.

Update Key Action B-4e as follows:

Promote redevelopment to [C] create a grid of streets and alleys along transit corridors with block sizes based on the protected crossing standards of the Complete Streets Design Guide.

Update the first paragraph under Key Action B-4f as follows:

A comprehensive pedestrian wayfinding system—a network of signs providing distance and direction to destinations—will increase walking by helping residents, employees, and visitors understand what is accessible nearby on foot. A similar effort to develop bikeway wayfinding is under development jointly by the Planning Department and MCDOT.

Remove Key Action B-4g and the associated text.

Change the title of Key Action B-4h as follows:

B-4[h]g: Provide public seating, restrooms, and other pedestrian amenities in Downtowns, Town Centers, and priority park locations and along Boulevards.

Change the title of Key Action B-4i as follows:

B-4[i]h: Update horizontal alignment standards in Chapter 50 of the County Code.

Update the first paragraph beneath Key Action B-6b as follows:

Tree canopy is lacking along many sidewalks in Montgomery County. While programs like Tree Montgomery and Reforest Montgomery exist to plant trees on private property, it can be a challenge to plant, maintain, and replace necessary shade trees within the public right-of-way along sidewalks. Consolidating funding sources and investing more in street tree preservation, maintenance, and planting within the right-of-way—while eliminating barriers to replacing [trees that have been removed] street trees, such as stump removal—will be a significant investment in future pedestrian comfort along the county’s sidewalks.

Update Key Action B-7f and the associated text as follows:

[Offer monetary] Consider a program of monetary and technical support to Homeowners Associations, Condominium Associations, and commercial properties for providing pedestrian connections through their property and reconfiguring existing parking lots to be more pedestrian friendly.

Many residential communities and commercial areas were constructed at a time when pedestrians were not prioritized. While today, pedestrians are a larger priority and Montgomery Planning and county agencies work with those pursuing private development projects on pedestrian-friendly site and frontage design, there are not many opportunities currently to encourage property owners who are not pursuing redevelopment to make pedestrian-friendly changes. This key action would provide a sum of money annually to support two types of important projects:

- 1) The provision of pedestrian shortcut connections and through-block connections across common areas of Homeowners Association and Condominium Association property—where these connections would improve pedestrian access to local businesses, transit, and community destinations.
- 2) The reconfiguration of parking lots to be more pedestrian friendly—reducing the number and severity of conflicts between motor vehicles and pedestrians

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety

Leads: DHCA, CCOC [MCDOT], County Executive, County Council

Support: MCDOT

Update Key Action B-7g and the associated text as follows:

B-7g: [Fund] include off-site pedestrian and bicycle access improvements to transit stations as part of the main capital project or through a parallel effort.

Non-motorized access to transit stations should be an essential component of their construction. These investments can provide substantial public benefits, including reduced transportation emissions and increased economic development, but poor pedestrian and bicycle connectivity in the surrounding area makes it difficult for these projects to reach their full potential ridership. Non-motorized access should be a higher priority than motorized access. "Off-site" is defined as improvements that are not directly connected to the transit station, but fill a gap within the transit station walkshed. The transit station walkshed should be defined as part of the initial planning and design process for the capital project.

Related Effort: Vision Zero Action Plan

Goals: Comfortable/Connected Pedestrian Network, Walking Rates

Leads: MCDOT, MDOT SHA, County Council

Page 94-95 Replace the entirety of Recommendation B-10 and associated text with the following text:

B-10: Facilitate the transformation of state highways to support Montgomery County's transportation and land use priorities as articulated in adopted plans, guidelines, and policies.

Thrive Montgomery 2050, the county's General Plan, envisions transforming activity centers and growth corridors into safe, comfortable, and irresistible multimodal environments. Although serious injury and fatal pedestrian collisions are more frequent in suburban areas, Montgomery Planning's Predictive Safety Analysis study found that Downtown Boulevards and Town Center Boulevards have the highest rate of crashes involving pedestrians.

Improving the safety, attractiveness, and walkability in these locations is critical to the success of these centers. State highways account for about 45 miles of road in Downtowns and Town Centers, as well as about 55 miles along master-planned BRT corridors (review Table 33 and associated maps of Downtown and Town Center areas). Along these roadways and all other state highways countywide, it is recommended that the State Highway Administration:

- 1) Incorporate local master plan recommendations, local design standards, and local policies into SHA's funding allocations as well as planning and design for roadway maintenance, reconstruction, new construction, and operations; and
- 2) Expedite review and facilitate implementation of infrastructure changes to state highways being implemented through county and municipal projects and/or implemented as part of land development or redevelopment projects.

Key Actions:

B-10a: Explore ways to formalize State Highway Administration incorporation of local master plans, policies, and standards for the design and operation of state highways in Montgomery County.

Differing design standards, policies, and priorities at the State Highway Administration are a potential obstacle to achieving the goals for Montgomery County articulated in *Thrive Montgomery 2050*, area and functional master plans, the adopted Montgomery County Complete Streets Design Guide, the *Vision Zero Action Plan* and the *Climate Action Plan*. These documents express local priorities for the design and function of state highways, particularly for bus rapid transit corridors and in Downtowns and Town Centers.

Aligning SHA's design standards, policies and priorities for activities within Montgomery County with these County-adopted local plans, policies, and standards, will support the implementation of *Thrive Montgomery 2050* and facilitate implementation of the Pedestrian Master Plan. There are many avenues through which this can be achieved, including updates to SHA program, policies and standards, changes to the state code to bring state and local practices into alignment, or establishing a written agreement about relevant plans, policies and design standards between the county and the state.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: State Delegation, County Executive

B-10b: Find opportunities to expedite the State Highway Administration's review of public and private projects.

The State Highway Administration reviews design plans for public and private projects that affect the state rights of way. For these projects to proceed to construction, SHA comments must be addressed, the design drawings must be approved, and an SHA Access Permit provided. However, the current SHA review process has no time limits within which SHA must approve or reject a permit application. Uncertain review timelines can lead to project delays, slowing the construction of important pedestrian, bicycle and transit improvements.

Expediting SHA's review process by establishing reasonable deadlines, similar to those required of Montgomery County agencies for regulatory review, will likely reduce delay and more quickly advance needed safety and accessibility improvements faster.

Goals: Comfortable/Connected Pedestrian Network, Walking Rates, Pedestrian Safety, Equitable and Just Pedestrian Network

Leads: State Delegation, County Executive

Page 101 Update Key Action P-1c as follows:

P-1c: [Develop] Consider developing legislation to create a new class of commercial driver's license required to operate vehicles with identified pedestrian safety and visibility issues.

Page 102 Update the first paragraph below Key Action P-1d as follows:

Over time, rules and regulations governing the transportation system change, and new roadway striping, signage, facilities, and signalization approaches are implemented. However, unless a Maryland driver's license has expired for a year or more, there is no requirement to retake either the driving skills or knowledge tests upon license renewal. A knowledge testing requirement, with the option to retake as many times as necessary to pass, would provide an opportunity to bring drivers up to date on changes to the transportation system and relevant laws and regulations since their last license renewal between five and eight years earlier. This would result in better driving and increased safety for all road users. Efforts should be taken to ensure this new requirement does not place an undue burden on the Motor Vehicle Administration. [Additionally, each year the county should notify all county households identifying changes to traffic rules and regulations that have taken effect over the past year.]

Page 102 Change the title of Key Action P-1e as follows:

P-1[e]f: Study requiring or incentivizing the use of pedestrian detection systems in vehicles registered in Montgomery County.

Page 102 Add Key Action P-1e and associated text as follows:

P-1e: Annually notify all county households of changes to traffic rules and regulations that have taken effect over the past year.

Over time, rules and regulations governing the transportation system change, and new roadway striping, signage, facilities, and signalization approaches are implemented. To help ensure county residents are aware of these changes, and to improve safety for everyone using the transportation system, annual notice of these changes should be provided.

Goal: Pedestrian Safety
Lead: County Executive

Page 114 Remove Key Action P-7d and the associated text.

Page 115 Replace the entirety of Key Action P-8b and associated text as follows:

P-8b: Consider developing strategies for equitable in-person traffic enforcement activities.

While there are many benefits to automated enforcement, it is not present everywhere traffic infractions take place and cannot detect certain types of infractions. Of particular relevance to this master plan are violations of the pedestrian right-of-way, stop sign compliance, and other pedestrian-vehicle conflicts. Strategies should be developed to ensure this life-saving enforcement activity takes place and occurs in a fair and equitable fashion.

Goal: Pedestrian Safety

Leads: County Executive, MCPD, County Council, Montgomery Parks

Page 118-119 Update Key Action EA-1d and the associated text as follows:

EA-1d: Construct the pedestrian clear zone using [Portland cement concrete, in line with] materials approved by MCDOT's Design Standards and Specifications.

Brick sidewalks present more tripping and slippage hazards than Portland cement concrete, pavers, and some other materials. [Portland cement concrete is a superior sidewalk material, as it is more durable and results in fewer tripping hazards and slippage than bricks, pavers, and other materials.] All future sidewalks should use [this material] MCDOT-approved materials in the pedestrian clear zone, which is a portion of the area within the streetscape's active zone between the street buffer and the frontage zone. The pedestrian clear zone should be free of obstructions of any kind. Other paving materials may be used outside the pedestrian clear zone and in historic districts, as appropriate.

Goals: Equitable and Just Pedestrian Network, Comfortable/Connected Pedestrian Network

Leads: MCDOT, MCDPS, Montgomery Planning

Page 128 Update Key Action EA-9a as follows:

EA-9a: [Require] Consider requiring [anyone] any construction worker who works in the public right-of-way to take ADA training and maintain ADA certification. [Implement] Consider implementing penalties for observed ADA non-compliance during construction or maintenance that deviates from what was approved on right-of-way permits. Approved right-of-way permits should be easily accessible so members of the public can understand what has been approved.

Page 129 Remove Key Action F-1a and associated text.

Page 129 Remove Key Action F-1b and associated text.

Page 130 Change the title of Key Action F-1c as follows:

F-1[c]a: Consider potential legislation to tie vehicle registration fees to safe vehicle design.

Page 148 Revise the paragraph prior to Table 33 as follows:

As part of the Phase 2 transition, the following table and maps identify the county’s Downtowns, Town Center, Suburban, Industrial and Country areas. Future master plans, sector plans and functional plans are encouraged to modify these boundaries based on the definitions in the CSDG. The Area Type Designations govern the location, relative priority, and dimension of the streetscape elements identified in the Complete Streets Design Guide. The designation of these areas through the Pedestrian Master Plan does not supersede land use or site design requirements identified through existing area master and sector plans or existing county policies.

Page 148-149 Add text as a note at the bottom of Table 33 as follows:

The Downtown interim designation and boundary for the Life Sciences (Great Seneca) area and the designation and boundary for the Traville/USG Town Center will be reviewed when the County Council takes up the Great Seneca Plan: Connecting Life and Science. The designation and area boundary for Briggs Chaney Town Center and Briggs Chaney Industrial Area will be reviewed when the County Council takes up the Fairland and Briggs Chaney Master Plan. The designation and area boundary for Four Corners Town Center will be reviewed when the County Council takes up the University Boulevard Corridor Plan.

Page 152 Add text as a note at the bottom of the map as follows:

The Downtown interim designation and boundary for the Life Sciences (Great Seneca) area and the designation and boundary for the Traville/USG Town Center will be reviewed when the County Council takes up the Great Seneca Plan: Connecting Life and Science.

Page 161 Add text as a note at the bottom of the map as follows:

The designation and area boundary for Briggs Chaney Town Center will be reviewed when the County Council takes up the Fairland and Briggs Chaney Master Plan.

Page 172 Add text as a note at the bottom of the map as follows:

The designation and area boundary for Four Corners Town Center will be reviewed when the County Council takes up the University Boulevard Corridor Plan.

Page 199 Add text as a note at the bottom of the map as follows:

The Downtown interim designation and boundary for the Life Sciences (Great Seneca) area and the designation and boundary for the Traville/USG Town Center

will be reviewed when the County Council takes up the Great Seneca Plan: Connecting Life and Science.

Page 207 Add text as a note at the bottom of the map as follows:

The designation and area boundary for Briggs Chaney Industrial Area will be reviewed when the County Council takes up the Fairland and Briggs Chaney Master Plan.

Page 278-282 Update the Example Monitoring Report to reflect changes made on Pages 11-20.

General

All illustrations and tables included in the Plan will be revised to reflect the District Council changes to the Planning Board Draft of the Pedestrian Master Plan (May 2023). The text and graphics will be revised as necessary to achieve and improve clarity and consistency, to update factual information, and to convey the actions of the District Council. Graphics and tables will be revised and re-numbered, where necessary, to be consistent with the text and titles.

This is a correct copy of Council action.



Sara R. Tenenbaum
Clerk of the Council

MONTGOMERY COUNTY'S
PEDESTRIAN 
PLAN

APPROVED AND ADOPTED FALL 2023

 **Montgomery Planning**

MontgomeryPlanning.org/WalkingHere

