



photo: Montgomery Planning

Complete State Roads: Montgomery County

Promoting bicycling infrastructure and protections for vulnerable road users on and along Maryland state highways in Montgomery County.

This initiative is a project of the Washington Area Bicyclist Association, generously supported by funding from the Langenkamp Family and the Bega Memorial Fund for Bicycling Safety.



WABA
WASHINGTON AREA
BICYCLIST ASSOCIATION

EXECUTIVE SUMMARY

Complete Streets are designed for safe use and mobility for people who walk, bike, scoot, or use transit, a mobility device, cars, or trucks. The Washington Area Bicyclist Association's (WABA's) Complete State Roads–Montgomery County (CSR–MC) work provides guidance for transforming major state roads in Montgomery County into complete streets. The majority of roadways that make up the High Injury Network in Montgomery County are state roads

Maryland policy states, “the State Highway Administration (SHA) shall make accommodations for bicycling and walking a routine and integral element of planning, design, construction, operations and maintenance activities as appropriate.” Montgomery County in turn commits “to ensure cyclists of all ages and abilities are comfortable and safe riding to transit stations, employment centers, shops, public facilities and other destinations in Montgomery County,” affirming state policy.

Safety, mobility, equity, transit access, and bicycle-network completeness are key, as are Maryland's and Montgomery County's

Vision Zero commitments and availability of federal, state, and local funding for planning, design, and construction.

We ask Montgomery County and Maryland officials to move aggressively on *active* bikeway and pedestrian improvement opportunities aligned with transformational transit projects:

- » **US 29:** Timely construction of master-planned bikeways from Silver Spring to Burtonsville.
- » **MD 586/Veirs Mill Road:** Timely BRT-linked construction of master-planned bikeways connecting downtown Wheaton and the Rockville Metrorail station.
- » **MD 97/Georgia Avenue:** Aggressive scheduling of pedestrian and bicycle improvements along the full extent of the road from Washington, DC north, including all master-planned bikeways.
- » **MD 193/University Boulevard:** Reiteration of the county and state commitments to separated bike lanes from MD 320 where the Purple Line turns south to its terminus in Kensington, with aggressive scheduling of those improvements.

- » **MD 355:** Timely BRT-linked construction of master-planned bikeways, including across Rockville and Gaithersburg.
- » **MD 187/Old Georgetown Road:** Preservation, improvement and extension of existing side paths.
- » **MD 650/New Hampshire Avenue:** Timely BRT-linked construction of master-planned bikeways involving collaboration with Prince George's County and the City of Takoma Park.

We propose an additional focus on several developing opportunities and one completion opportunity:

- » **MD 190/River Road:** Bikeway and pedestrian improvements from the Washington, DC border, northwest across the Capital Beltway/I-495 to Seven Locks Road.

- » **MD 185, Connecticut Avenue:** Designation of southern-end bikeways and creation of master-planned bikeways for the middle and northern segments.
- » **Purple Line Corridor:** bikeways on MD 193/University Blvd. and MD 320/Piney Branch Road and connecting to the Silver Spring Green Trail.
- » **MD 200/the Intercounty Connector:** Gap-filling to complete a continuous bikeway route.

The CSR-MC initiative arms officials and community members with information needed to understand and advance critical bicycle-network, road-user safety, and transit-boosting infrastructure improvements aligned with major planned and underway transportation infrastructure work.

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INTRODUCTION

Commitment

Between 2015 and 2019, Montgomery County experienced “1,419 collisions that resulted in 1,461 serious injuries and 163 fatalities to drivers, passengers, pedestrians, and bicyclists... People biking and walking represented 45% of fatal collisions.”¹ The county experience 48 fatalities, including 14 pedestrians and 4 bicyclists, in 2022 alone.²

Montgomery Planning reports, “Most serious injuries and fatalities are located along the county’s arterials, such as Georgia Avenue, Old Georgetown Road, and Veirs Mill Road. While bicycle and pedestrian crashes are less frequent than motor vehicle crashes, they are more likely to result in a serious injury or fatality.” These arterials – overall, the majority of roadways that make up the High Injury Network in Montgomery County³ – are Maryland state roads.

Montgomery County has committed to Vision Zero⁴ “to eliminate serious and fatal collisions on County roads for vehicle occupants (drivers and passengers), pedestrians, and bicyclists by the end of 2030.” Maryland similarly has a goal of zero roadway fatalities and serious injuries, also by 2030.⁵

The State of Maryland has embraced complete streets – designed for safe use and mobility for people who walk, bike, scooter, or use a mobility device, transit, a car, or a truck – as its route to achieving Vision Zero. WABA endorses this commitment. Our Complete State Roads–Montgomery

County (CSR-MC) initiative lays out a plan for transforming County’s state highways into complete streets, prioritizing routes based on user safety, traffic volume, network connectivity, and transportation equity.

Policy and Goals

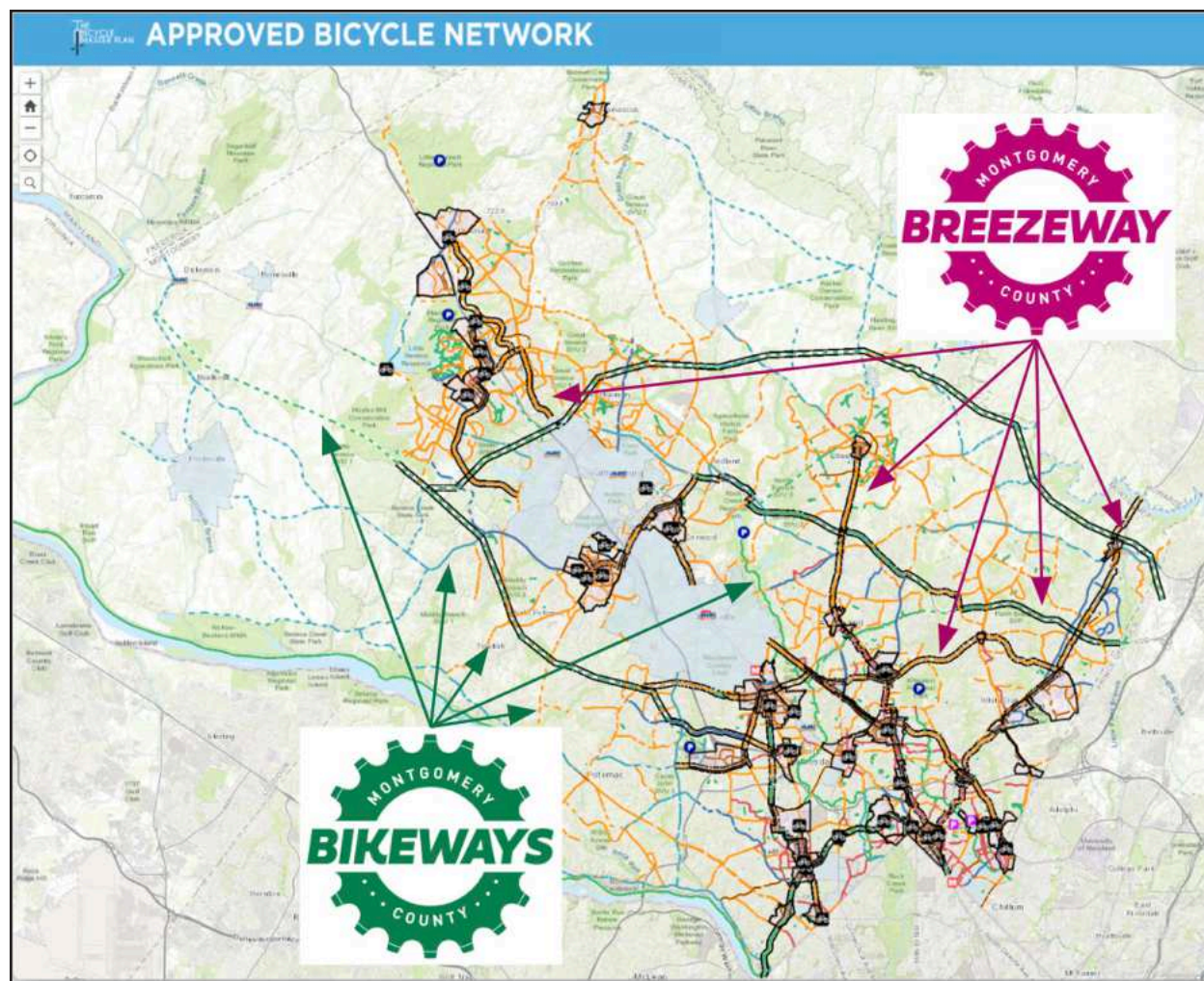
The starting point for this initiative is the Maryland State Highway Administration (SHA)’s Policy for Accommodating Bicycles and Pedestrians on State Highways.⁶ The policy states, “the State Highway Administration (SHA) shall make accommodations for bicycling and walking a routine and integral element of planning, design, construction, operations and maintenance activities as appropriate.” The SHA commits that “all projects shall evaluate opportunities to improve bicycle accommodations... both on-road (including marked bicycle lanes and shared lane applications) and off-road facilities... It is SHA’s intent to provide bicycle accommodations on all roadways under its jurisdiction where bicycles are allowed” (albeit subject to certain design waivers).

The Complete State Roads initiative covers state routes identified in the Montgomery County Bicycle Master Plan,⁷ which in turn is “a key element in Montgomery County’s Vision Zero commitment. Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all. The Bicycle Master Plan’s goal – and therefore a goal incorporated into the Complete State Roads



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For more information about this initiative, contact Seth Grimes, Maryland Organizer
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Montgomery County's planned network: breezeways (black), trails (green), and sidepaths & separated lanes (orange).

initiative – is “to ensure cyclists of all ages and abilities are comfortable and safe riding to transit stations, employment centers, shops, public facilities and other destinations in Montgomery County.”

Additionally, we know that Montgomery County⁸ and the State of Maryland⁹ value equity. In a transportation context, equity means that who you are doesn't limit how you get around. In an equitable transportation system, your identity and experience – your race, gender, or ability; how much money you have, and where you

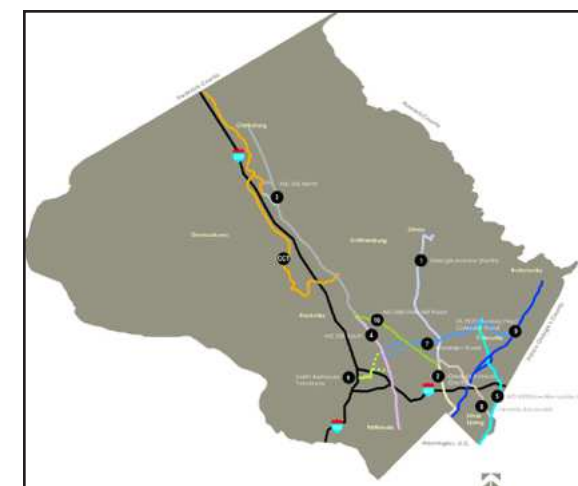
live – don't affect whether you can use safe, comfortable multimodal transportation options.

Coverage

What roads does the initiative prioritize? Major transportation corridors, which support local and longer-distance travel by car, surface transit, and bicycle, traversing, connecting residential and commercial areas and forming a framework for Montgomery County mobility.

We build on a new Bicycle Master Plan concept, the Breezeway Network, a high-capacity system of arterial bikeways that connect major activity centers. Several Breezeway Network routes travel along or cross Maryland state highways, in particular MD 97/Georgia Ave, MD 187/Old Georgetown Road (part), MD 193/University Blvd, MD 355/Wisconsin Ave-Rockville Pike (part), MD 586/Veirs Mill Road, US 29/Colesville Road-Columbia Pike, and the MD 200/Intercounty Connector. Other Breezeway routes follow county roads or utilize off-road trails.

Many of the Breezeways which are on or along state highways intersect Bus Rapid Transit (BRT) corridors. Flash, Montgomery County's BRT network¹⁰, is “a limited-stop, branded bus service currently planned for 5 corridors within Montgomery County... The service will also improve passenger transit mobility and bicycle and pedestrian improvements along the corridors will make it easier and safer to get to Flash stations.” All Montgomery County BRT corridors – MD 586 /Veirs Mill Road; MD 355/Wisconsin Ave/Rockville Pike/Frederick Pike(part);



Caption: Montgomery County's planned Bus Rapid Transit (BRT) corridors

MD 187/North Bethesda (part); and US29 – have planned bikeways and are priorities.

Priorities reflect that bikeway improvements are slated for installation alongside BRT and Purple Line facilities. It's essential that this work remain linked and concurrent.

Next Priorities

Two major roads that have long challenging segments: Connecticut Avenue/MD 185, the southern segment of which, south of Kensington, is unfriendly to bicyclists, and New Hampshire Avenue/MD 650, which although a BRT corridor crosses into Prince George's County with a City of Takoma Park segment. We recommend completion of master-planned bikeways work on these roadways and remedial planning to add bikeways not currently planned.

Certain smaller arterials are next priorities, given the significant bicycle and pedestrian traffic they carry or could support if they were appropriately redesigned and remediated. These include River Road/MD 190, Bradley Blvd./MD 191, Metropolitan Ave, Forest Glen Road/MD192, and Sandy Spring Road/MD 198, and Spencerville Road.

Montgomery County Municipalities

Finally, certain state roads cross Rockville and Gaithersburg, municipalities with planning authority independent of Montgomery County's. Rockville published a Bikeway Master Plan¹¹ in 2017 that includes crosstown routes, along MD 355 and MD 586-MD 28, that continue major county-planned bikeways. Gaithersburg's bikeways

planning is less well articulated but appears to include, per a 2019 Parks, Recreation, and Culture Master Plan Element,¹² a paved path

for the full extent of MD 119, maybe 50% of MD 124, the western 75% of MD 117, and 25% of MD 355.

DEFINING THE VISION

Our Mission

WABA envisions a just and sustainable transportation system where walking, biking, and transit are the best ways to get around. This vision – factoring in the diverse needs of Montgomery County residents, workers and employers, schools, businesses, and visitors – overlaps Montgomery County’s, which includes the commitment that “we will reduce traffic congestion by improving transit options, supporting Metro, encouraging telecommuting and implementing common-sense road improvements... We plan to enhance opportunities for walking, biking, and creating neighborhood gathering places” with planning to reduce the number of pedestrian-involved traffic crashes.

A Bikeway Network

Montgomery County’s Bicycle Master Plan (BMP) “sets forth a vision for Montgomery County as a world-class bicycling community, where people in all areas of the County have access to a comfortable, safe and connected bicycle network, and where bicycling is a viable transportation option that improves our quality of life.” It cites four principles, “continuity, connectivity, convenience, and completeness,” as a “transferrable idea for Montgomery County.”¹³

These lead us to envision a bikeway network, an interconnected system of bike lanes, paths, trails, and bikeable (low-speed, low-traffic) streets that will allow individuals of all abilities to travel long and short distances by bicycle, whether for business or pleasure, whether for a complete trip or as part of a multi-modal trip incorporating transit use.

Prioritization and Sequence

Our motivation is to address road-user safety, traffic volume, network connectivity, and transportation equity..

We recommend a project-implementation sequence that factors in these elements and prioritizes, as a practical matter, projects already planned or soon to be constructed, including transit development (e.g., the Purple Line and bus lanes). Another key element is availability of project funding in the state or county capital budget and availability of specific funding sources such as federal grants. Certainly, the sequence may be altered to respond to new opportunities and emerging local conditions, for instance, the availability of federal funding that may be applied in a certain area or for a certain type of project, which would move beneficiary projects up in sequence.

Let’s start with priority factors, again, road-user safety, traffic volume, network connectivity, and transportation equity. They include:

1. High-Volume Breezeways and Corridors, with Access

Many of the roads that form Montgomery County’s Breezeway Network are Maryland state highways. The Montgomery County Bicycle Master Plan describes them this way (p. 70):

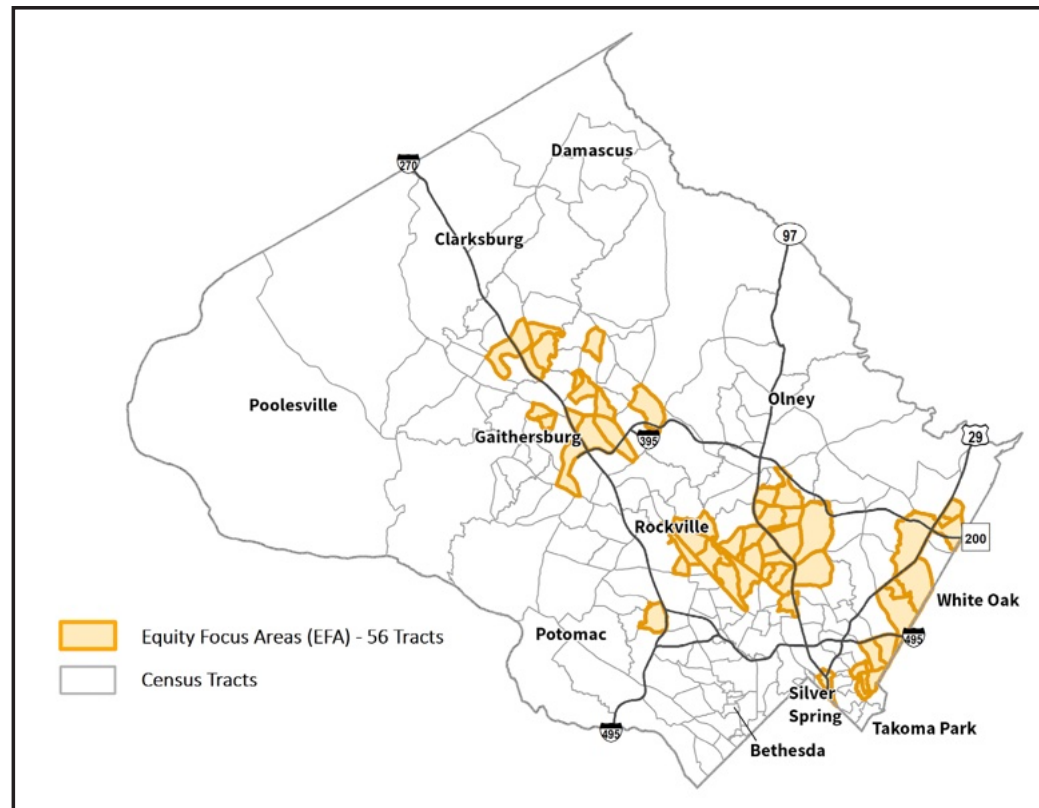
The Breezeway Network corridors are the arterials of the bikeway network in that they are envisioned to carry a large number of bicyclists. While many trips on the Breezeway Network will be for longer, faster trips to central business districts (CBDs), transit stations, activity hubs and job centers, these corridors will also be used for shorter and slower trips. The Breezeway Network will comprise trails, sidepaths, separated bike lanes and neighborhood greenways. Local bikeways, including neighborhood greenways, sidepaths, bike lanes and low-volume / low-speed streets, will funnel bicycle traffic to the Breezeways.

a) Transit Corridors: BRT and the Purple Line

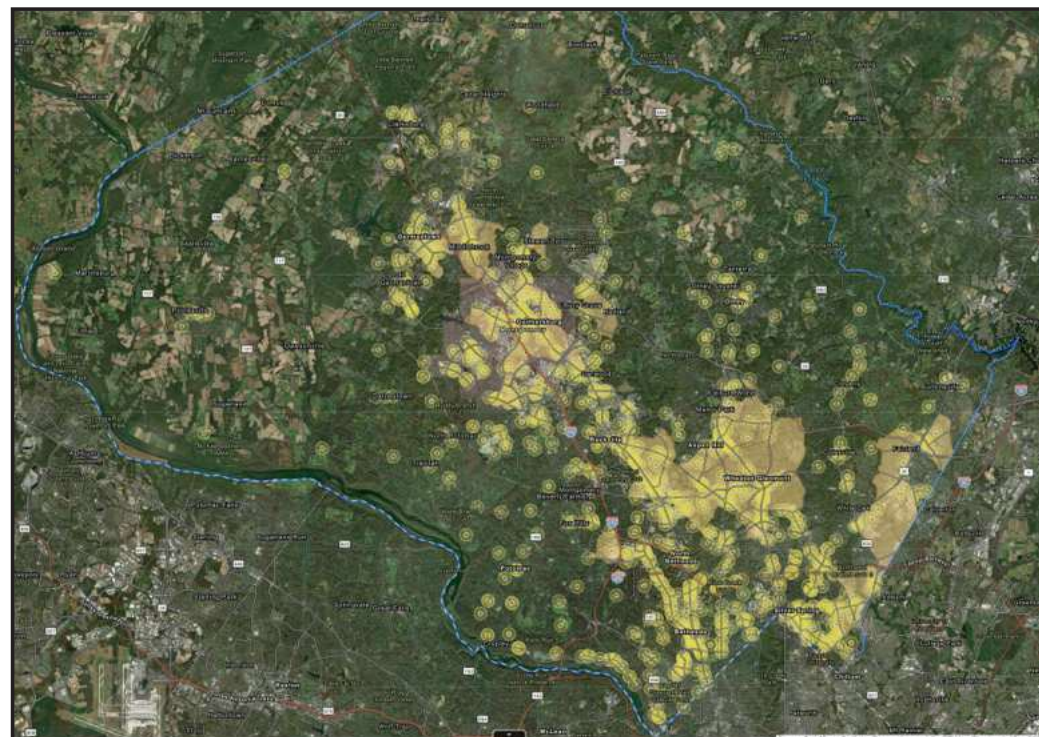
Flash, Montgomery County’s BRT network, is “a limited-stop, branded bus service currently planned for 5 corridors within Montgomery County. The routes have bikeways planned for installation alongside BRT and Purple Line facilities. It’s essential that this work remain linked and concurrent.

b) Local Access for Breezeways and Transit

Arterials and local streets connect residents and businesses both to transit lines and bicycle breezeways and to businesses, schools, and recreation.



Montgomery County Equity Focus Areas (EFAs)



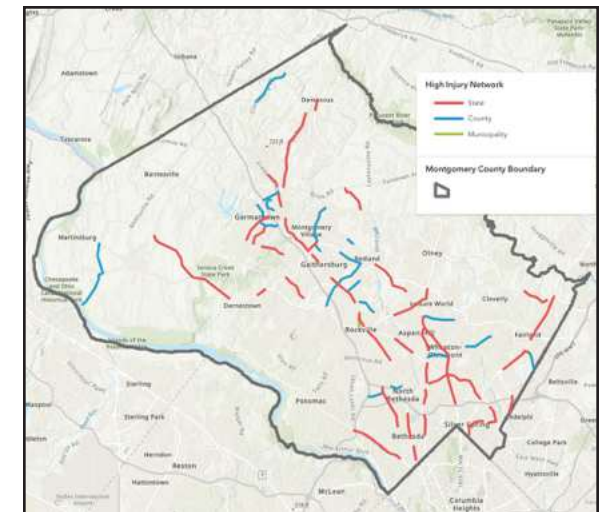
Collisions involving a bicycle, with Equity Focus Areas shown in khaki (light brown)

2. Equity Focus Areas

By investing in Equity Focus Area¹⁴ projects – in “parts of Montgomery County that are characterized by high concentrations of lower-income people of color, who may also speak English less than very well” – the County will enable those who cannot afford to buy and operate automobiles the ability to bike and walk safely, both to arrive at and move within those areas. This will enable those County residents with less economic means to safely bike, walk, access transit and generally move around the County without needing to spend money on gas, parking, and maintenance of a car. It will also make it possible for many people not using cars to safely reach more employment opportunities and commercial centers in the County, and to shop, get their children to school, and access medical services.

Building these projects will also allow many residents to make trips of less than 2-3 miles in length by biking in and around those Equity Focus Areas. This will enable people to go out to eat, go shopping, access entertainment opportunities, visit a doctor and get their kids to school and other activities without having to use a car.

Consider another map view. The second image displays collisions involving a bicycle, with Equity Focus Areas shown in khaki (light brown) patches. The areas are correlated.



The High Injury Network. Maryland state roads are red; county roads are blue

3. Safety

Montgomery County’s Bicycle Master Plan, adopted in 2018, is seen as “a key element in Montgomery County’s Vision Zero plan to eliminate traffic-related fatalities and serious injuries.” This initiative in many ways provides guidance for implementing the master plan, with its safety focus and toolkit, on Montgomery County’s major state roadways.

Considering safety, we note that the majority of roadways that make up the High Injury Network in Montgomery County¹⁵ are state roads (shown in red on the map to the right; county roads are blue).

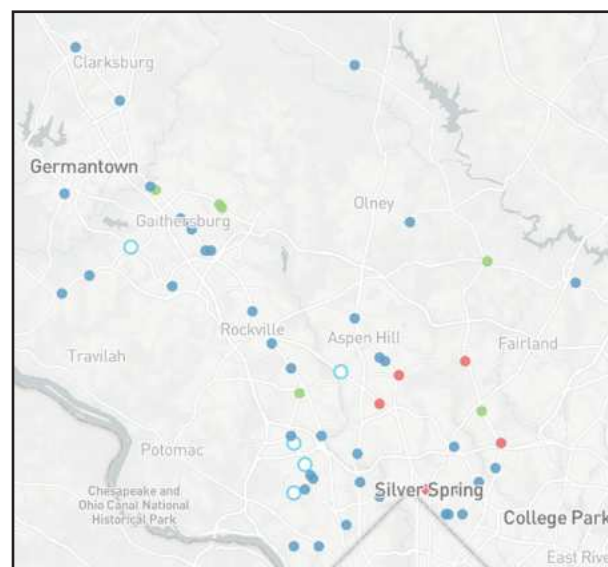
Further, according to the recently-passed Montgomery County Pedestrian Master Plan,¹⁶ “Montgomery Planning’s Predictive Safety Analysis study found that Downtown Boulevards and Town Center Boulevards are the most dangerous street types in the county for pedestrians and must be prioritized for improvements. State highways account for about 45 miles of road in Downtowns and Town Centers, as well as



Pedestrian crash heat map showing injuries and deaths along:
 a) MD 355, North Bethesda—Rockville (left)
 b) MD 97, Wheaton—Aspen Hill (right)
 c) MD 586, Wheaton—Rockville (diagonal)

about 55 miles along master-planned BRT corridors.”

This focused danger is easily seen by looking at a pedestrian crash heat map.¹⁷ In the image above, the red streak to the left is MD 355 from North Bethesda to Rockville. Streaks from the red blob in the lower right – downtown Wheaton – extend northwest



Serious bicycle crashes visualized via the dataMontgomery System.

along Veirs Mill Road/MD 586 and north along Georgia Avenue/MD 97 to Aspen Hill and then northwest on MD 97 to Glenmont.

We see a similar pattern when we look at serious and fatal collisions between motorized vehicles and bicycles and other conveyances. These may be seen at right in an image generated from the dataMontgomery system.¹⁸ The streak running from top left, diagonally to the right, is MD 355. DataMontgomery also offers a heat map display of cyclist-involved crashes.¹⁹

While there are far fewer incidents involving bicycles compared to the number involving pedestrians, the number of serious and fatal collisions involving bicycles will grow steeply if we build out the bikeways network but fail to redesign our roadways for safety.

4. Climate

Finally, climate is also a consideration. Safe, convenient, attractive, and connected bikeways, sidewalks, and trails will encourage walking, biking, and transit use. The resulting significant reduction in vehicle miles traveled will mean large reductions in emissions from cars and less roadway congestion. Building and improving these facilities will help the County achieve its climate goals by reducing the amount of carbon released into the air. Further, by making access to buses, BRT, Metrorail, and the Purple Line safer and more convenient, bike and pedestrian facilities will advance the County’s ability to meet its sustainable transportation goals.

ACHIEVING THE VISION

The Complete State Roads initiative makes recommendations on a road/segment basis. Achieving the larger vision – turning Montgomery County state roads into complete streets as part of a safe and inviting county-wide bikeways network – will require a multi-year joint planning, scheduling, and funding effort involving Maryland and Montgomery County officials, advocates, and community members.

Some opportunities are here and now, associated with funded and in-planning projects. Examples include bike lane and BRT projects on major state routes including Old Georgetown Road, University Blvd., and Veirs Mill Road. However there are always complications, for instance incomplete funding for Veirs Mill Road improvements, and in other cases, local driver resistance.

The need on other routes is clear, and officials and advocates are pushing for action, with Georgia Avenue and River Road as examples, but the capacity and funding to undertake the projects is not yet in place. In some cases, unfortunately, planning done in past years doesn’t (completely) cover identified and justified bikeways needs, for instance on Georgia Avenue/MD 97 in downtown Wheaton and Connecticut Avenue/MD 185 from the Washington, DC border to Kensington.

Opportunity Identification, Analysis, and Recommendations

As stated, recommendations are offered on a road/segment basis. This document provide a set of pages for each roadway with

subsections that generally include:

- » Summary description
- » Key facts
- » Detailed characteristics and/or analysis
- » Recommendations: We selectively suggest actions, phasing, funding, and advocacy strategy
- » References

Sections also include bicycle network maps, transit-project images, and other graphical material included to help stakeholders understand conditions, plans, and the opportunity.

Agencies and Stakeholders

Montgomery County’s vision, citing the Bicycle Master Plan, is a county that is “a world-class bicycling community, where people in all areas of the County have access to a comfortable, safe and connected bicycle network, and where bicycling is a viable transportation option that improves our quality of life.” Achieving this vision relies on the Maryland State Highway Administration’s delivering on its intent to provide bicycle accommodations on all roadways under its jurisdiction where bicycles are allowed.

Involved agencies, then, include Montgomery Planning (M-NCPPC), the Montgomery County Department of Transportation (MCDOT), and the State Highway Administration (SHA). Workplans and operating and capital budgets are proposed by the agencies, under the direction of Montgomery County Executive

Marc Elrich and Governor Wes Moore, and adjusted and approved by the Montgomery County Council and Maryland General Assembly.

The State Highway Administration, of course, is that agency responsible for state roads in Montgomery County (with the exception of the Intercounty Connector/ MD 200, a toll road). The SHA's Context Driven approach²⁰ is the foundation of improvements to be made. Possible improvements on a given road affect people who walk, bike, and travel by car or bus. They may include lane-width reduction, bicycle lanes, speed-limit reduction, and other improvements. Context-zone assignments and certain improvements undertaken are shown in the image below.

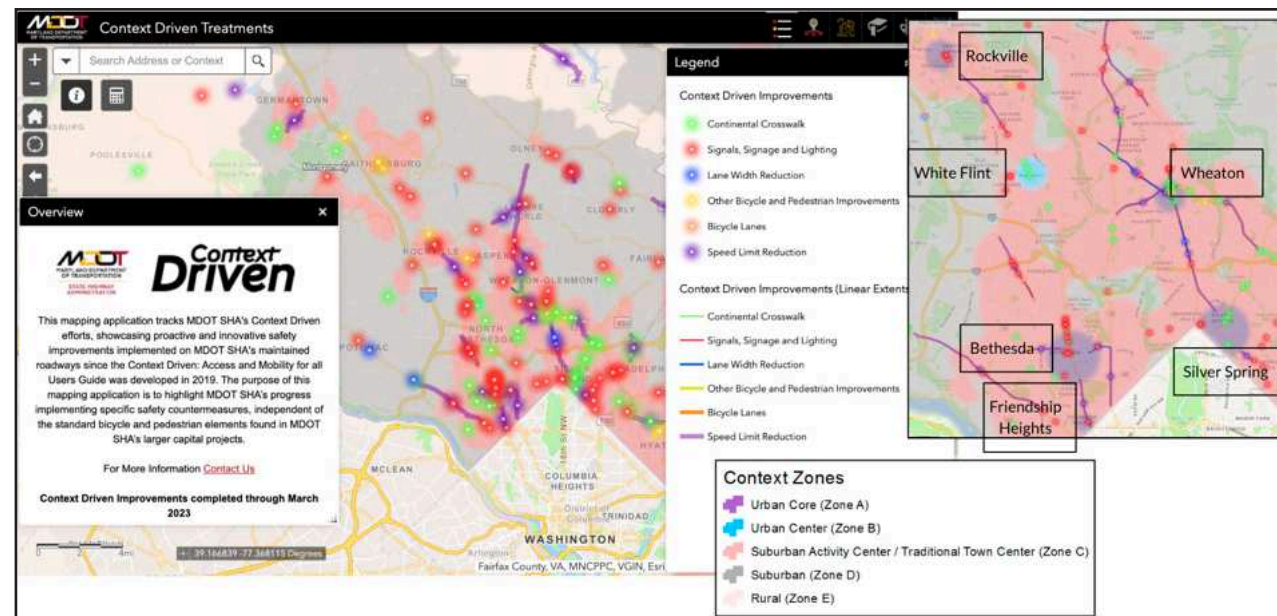
The agencies and planning authorities propose policy and create plans, at the county level requiring County Council approval, and the County Council and General Assembly also enact laws that

regulate transportation.

Monitoring and Assessment

As noted, achieving the Complete State Roads vision will require a multi-year joint planning, scheduling, and funding effort involving Maryland and Montgomery County officials, advocates, and community members. It would be sensible to assess progress periodically and refocus to account for evolving conditions and emerging opportunities.

We envision a periodic, yearly survey, on a road/segment basis, of work accomplished – including completeness and safety and mobility impact – and an assessment of changed conditions and funding possibilities for roads/segments where improvements have not yet been undertaken.



Context and treatments in Montgomery County

COMPLETE STATE ROADWAY ANALYSES AND RECOMMENDATIONS

For this initiative's analyses and recommendations, we divide state roadways into several categories.

PRIORITY STATE ROADWAYS

- » US 29/Colesville Road, Columbia Pike
- » MD 97/Georgia Avenue
- » MD 187/Old Georgetown Road
- » MD 190/River Road
- » MD 193/University Blvd.
- » MD 200/Intercounty Connector
- » MD 355/Wisconsin Avenue, Rockville Pike, Frederick Pike (includes Rockville and Gaithersburg segments)
- » MD 586, Veirs Mill Road
- » MD 650, New Hampshire Avenue

PRIORITY TRANSIT RIGHT OF WAY

- » Purple Line Corridor (Montgomery County): MD 193/University Blvd., MD 320/Piney Branch Road, Capital Crescent Trail

MIXED PRIORITY STATE ROADWAYS

- » MD 185/Connecticut Avenue

SECOND CATEGORY STATE ROADWAYS

- » MD 27/Ridge Road

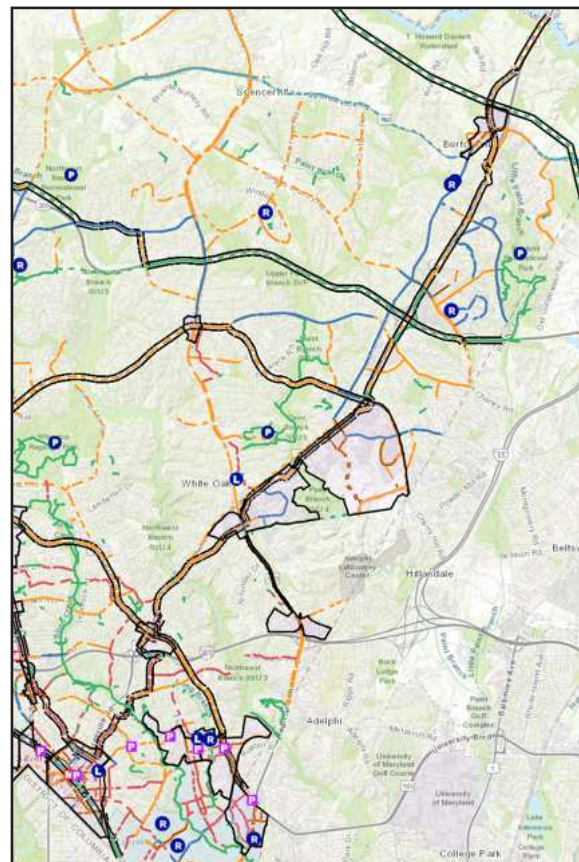
- » MD 28/Norbeck Road, (Rockville streets), Shady Grove Road, Darnestown Road
- » MD 108
- » MD 112/Seneca Road
- » MD 115/Muncaster Mill Road
- » MD 117
- » MD 118/Germantown Road
- » MD 124/Quince Orchard Road (includes Gaithersburg segment)
- » MD 182/Layhill Road
- » MD 188/Wilson Lane
- » MD 189/Falls Road (includes Rockville segment)
- » MD 191/Bradley Blvd.
- » MD 192/Metropolitan Ave, Forest Glen Road
- » MD 198/Sandy Spring Road, Spencerville Road
- » MD 320/Piney Branch Road
- » MD 390/16th Street
- » MD 410/East-West Highway
- » MD 614/Goldsboro Road
- » MD 911/First Street (Rockville)

US 29, COLESVILLE ROAD, COLUMBIA PIKE

US 29 traverses Montgomery County heading north-northeast from the District of Columbia, through downtown Silver Spring, Four Corners, White Oak, and Burtonsville, to the border with Howard County.

KEY FACTS

US 29 is an in-service Flash Bus Rapid Transit (BRT) route.²¹ MCDOT recently completed a US 29 Mobility and Reliability Study²² “to identify improvements to the US 29 Flash that would improve corridor travel time, increase pedestrian and bicycle access, and improve reliability for all transportation modes along the corridor. Based on this study, the median bus lane hybrid alternative has been selected to move into design.”



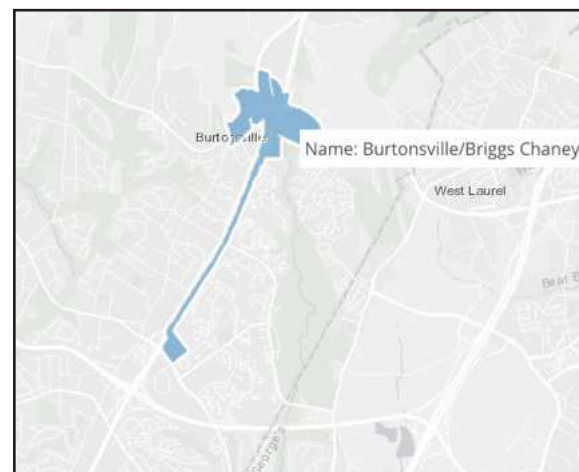
A bicycling breezeway defined in the Montgomery County Bicycle Master Plan runs on or parallel to the full extent of US 29, from the Georgia Avenue intersection in downtown Silver Spring to the Howard County line.

US 29, and the bicycle breezeway, crosses major trails and other breezeway routes:

- » Georgia Ave/MD 97 in downtown Silver Spring
- » Sligo Creek Trail
- » University Blvd/MD 193
- » Randolph Road
- » Intercounty Connector (ICC)/MD 200
- » Burtonsville to Great Seneca Creek off-road trail

US 29, and the bicycle breezeway, traverses the following equity focus areas:

- » downtown Silver Spring
- » Four Corners
- » White Oak and northeast of White Oak
- » Burtonsville



The US 29 corridor south of and including Burtonsville is a Maryland Enterprise Zone.

PLANNED PEDESTRIAN AND BICYCLE IMPROVEMENTS

Montgomery County’s proposed FY24 budget includes Planned Pedestrian and Bicycle Improvements.²³

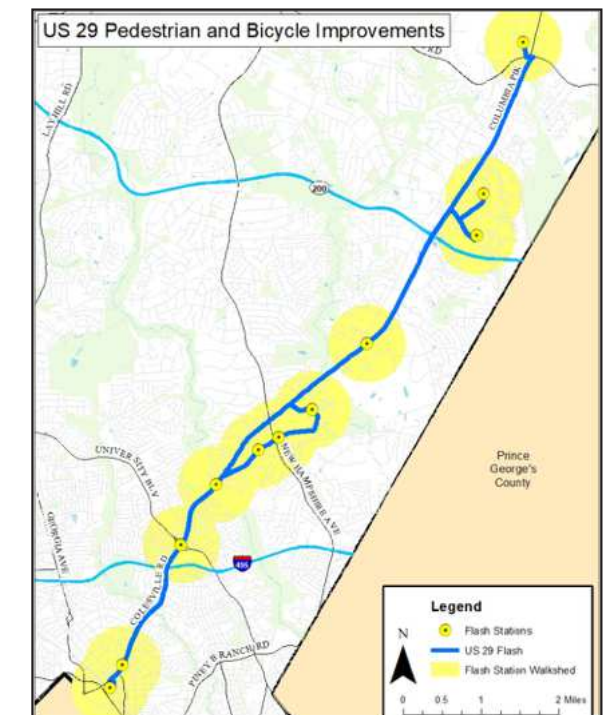
“This project funds the design and construction of pedestrian and bicycle improvements to Flash stations along the US 29 corridor. First and last mile connections to Flash BRT stations along US 29 were identified as part of the US 29 Mobility and Reliability Study²⁴ effort. These sub projects would expand and improve the existing pedestrian and bicycle network by filling gaps and upgrading existing facilities. Potential projects could include new and upgraded crosswalks and pedestrian signals, new and upgraded curb ramps, new and



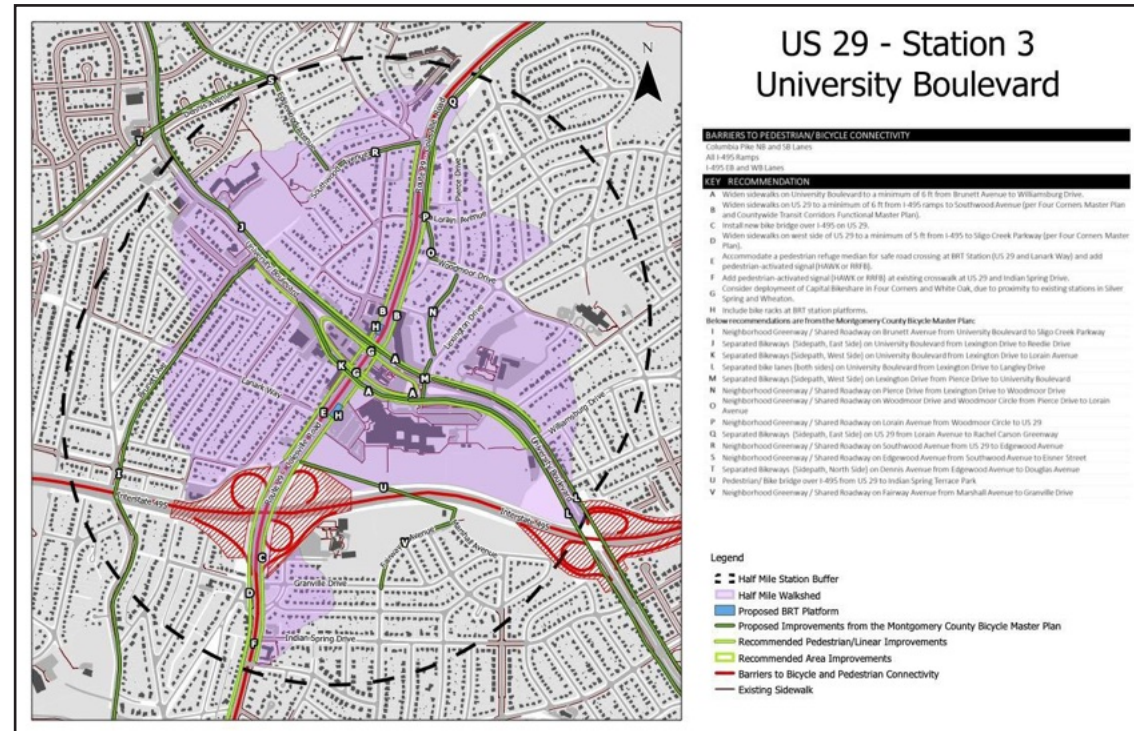
US 29 will have dedicated bus rapid transit lanes, but design of master-planned bikeways has lagged

upgraded sidewalks, and new and upgraded bicycle facilities. Projects that improve ADA access will be prioritized. Added State Aid will support improvements north of Randolph Road.”

Currently funded (FY24) are improvements around US 29 Flash stations for Colesville Road/Columbia Pike, Lockwood Drive, Stewart Lane, Castle Boulevard, Briggs Chaney Park and Ride, and Burtonsville Park and Ride. These are in state legislative District 14. Improvements in District 20 – the Burnt Mills area, Four Corners (University Blvd.), and Colesville Road inside the Beltway are not currently funded.



Montgomery County has designed priority areas around US 29 BRT stations but has not funded pedestrian and bicycle improvements around most of them



A Montgomery County Bicycle Pedestrian Priority Area is covers a half-mile radius around the University Blvd. BRT station

RECOMMENDATIONS

Coordinate with MCDOT, the Montgomery County Council, Maryland SHA, and advocates to ensure creation of bikeways and pedestrian improvements concurrent with BRT bus lane/roadway improvements. Support narrowed motor-vehicle lanes and create planned sidepaths.

Promote Montgomery County’s planned Pedestrian and Bicycle Improvements, which are focused on BRT stations, with:

- » Funding for improvements around US 29 Flash stations that are not covered in the FY24 budget.
- » Extension to fill gaps between stations and cover the full extent of US 29.

Press for solutions crossing the Capital Beltway/I-495 and then University Blvd./MD 193 in Four Corners. The Beltway crossing will be highly challenging, and two-lane BRT will limit Four Corners possibilities .

Pursue SHA or other construction of a Northwest Branch bikeway bridge.

Explore addition of bikeways on Colesville Road from downtown Silver Spring north to the Beltway, to the Bicycle Master Plan.

MD 97, GEORGIA AVENUE

Georgia Avenue crosses into Montgomery County from the District of Columbia as MD 390 and then picks up the MD 97 designation from Colesville Road when the two roads intersect. Georgia Avenue/MD 97 then continues north, crossing into Howard County north of Brookville after passing through Wheaton, Glenmont, and Aspen Hill, past Leisure World, and then Olney.

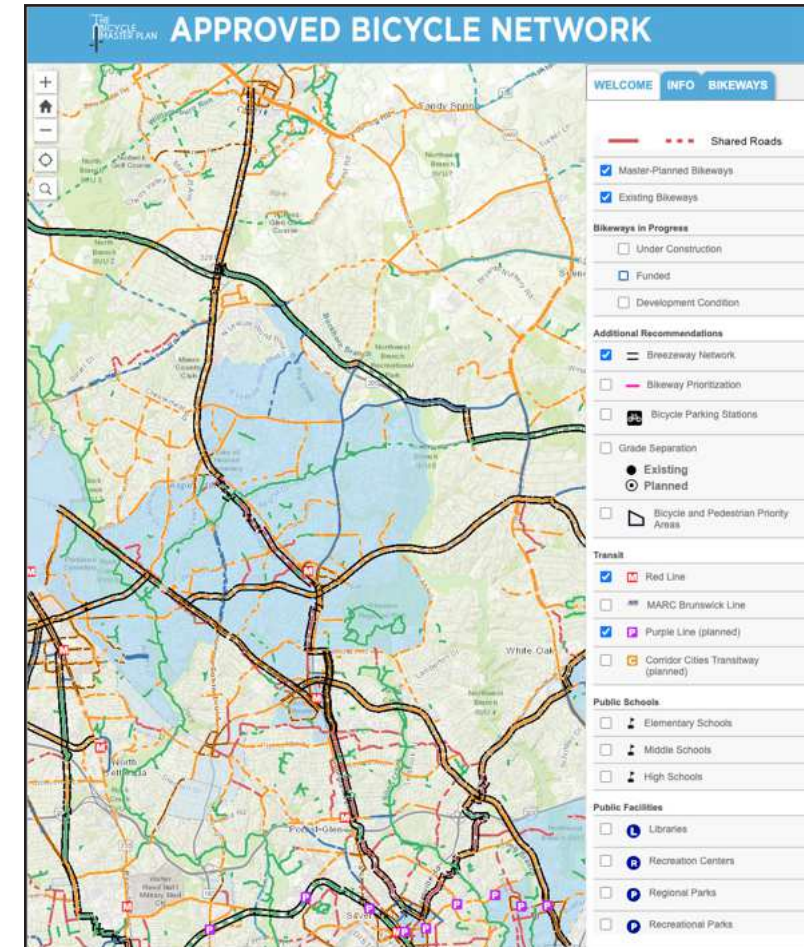
KEY FACTS

MD 97 is a recommended transit corridor and master-planned Bus Rapid Transit (BRT) route. A southern segment would run from the Washington, DC border to Wheaton and a northern segment from Wheaton to Olney.

A bicycling breezeway defined in the Montgomery County Bicycle Master Plan parallels Georgia Avenue from downtown Silver Spring and then, from two blocks southeast of Connecticut Avenue, runs along Georgia Avenue to Olney. Georgia Avenue has master-planned sidepaths north of Arcola and for segments south of Arcola.

MD 97 intersects major trails and breezeway routes:

- » Metropolitan Branch Trail
- » US 29 corridor breezeway
- » Veirs Mill Road/MD 586
- » University Blvd/MD 193
- » Randolph Road
- » Intercounty Connector (ICC)/MD 200
- » Burtonsville to Great Seneca Creek off-road trail



Georgia Avenue/MD 97 traverses Montgomery County equity focus areas:

- » downtown Silver Spring
- » downtown Wheaton
- » Glenmont
- » Aspen Hill

Georgia Ave/MD 97 sidepaths do not continue through downtown Wheaton even though downtown Wheaton is a BiPPA. See below for an image from the June 2015 Wheaton CBD BiPPA Report²⁵ that indicates 5.5’ separated bike lanes on MD 97. If these lanes are not built, bicyclists will have to rely

on sidewalks for safe access to Georgia Avenue businesses and amenities, which is a significant planning deficiency.



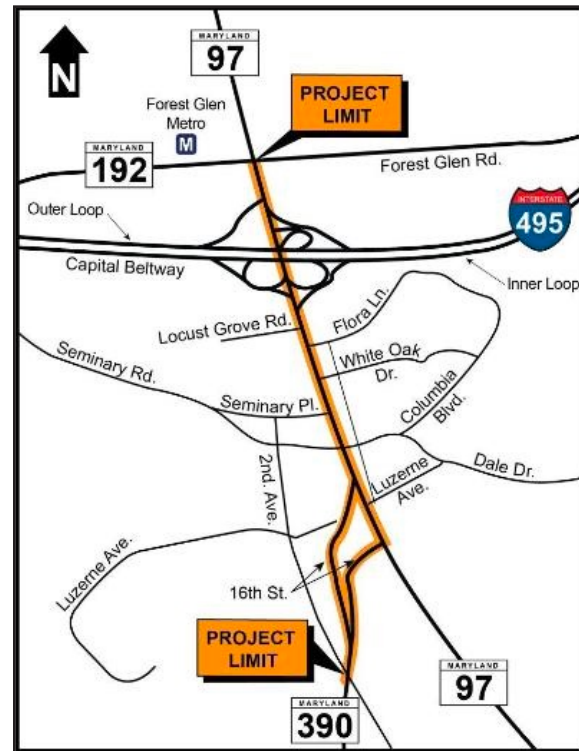
SAFETY

Many serious and fatal collisions drivers of motorized vehicles hitting pedestrians and cyclists have occurred on Georgia Avenue in recent years. These include the October 25, 2022 hit-and-run collision that killed nineteen-year-old William Villavicencios, who was walking his bicycle when he was struck.

Bicycle infrastructure (south to north)

- » **Washington, DC, across downtown Silver Spring to Grace Church Road in Woodside:** No bicycle facilities are planned for Georgia Avenue. Fenton Street and Woodland Drive would provide an alternative, parallel route one block east of Georgia Avenue, and 2nd Avenue would provide an alternative, parallel route two blocks west.
- » **16th Street to Forest Glen Road (Montgomery Hills):**²⁶ “MDOT SHA will redesign a nearly one-mile section of MD 97 between 16th Street (MD 390) and Forest Glen Road (MD 192), enhancing

and prioritizing access and safety for bicyclists and pedestrians... The selected alternative will significantly calm traffic by narrowing lanes, adding a raised landscaped median and installing ADA-compatible sidewalks on both sides of the road, as well as a two-way bicycle track on the west side of Georgia Avenue.” See also the MDOT SHA project page²⁷.



- » **Silver Spring to Glenmont breezeway:** “Along the state highway (MD 97) between the Glenmont Metrorail Station and Ellsworth Drive in Silver Spring. It consists of trails, two-way separated bike lanes, sidepaths and neighborhood greenways on the west side of Georgia Avenue, north of Arcola Avenue and on the east side of Georgia Avenue, south of Arcola Avenue. Major infrastructure projects include grade separated crossing of I-495 and I-495 ramps on the east side of Georgia Avenue.”

- » Quoting the county proposed FY24 budget, the “Amherst Avenue Bikeway, the first Wheaton BiPPA project, a two-way separated bikeway on the west side of Amherst Avenue from Arcola Avenue to Windham Lane, is currently underway with planning anticipated to be completed in FY24. Construction is anticipated to begin in FY25.”²⁸
- » **Glenmont to Olney breezeway:** “Along the state highway between Olney-Laytonsville Road in Olney and the Glenmont Metrorail Station. It consists of trails, two-way separated bike lanes, sidepaths, and neighborhood greenways on the west side of Georgia Avenue, extending along parallel streets where the detour is minimal. Major infrastructure projects include:
 - » Crossing at the Georgia Avenue-Randolph Road interchange.
 - » Crossing at the planned Norbeck Road interchange.”
- » **MDOT is pursuing a Brookeville Bypass**²⁹ that “includes a new 0.7-mile, two-lane highway with bicycle-compatible shoulders between north of Goldmine Road and south of Holiday Drive.”

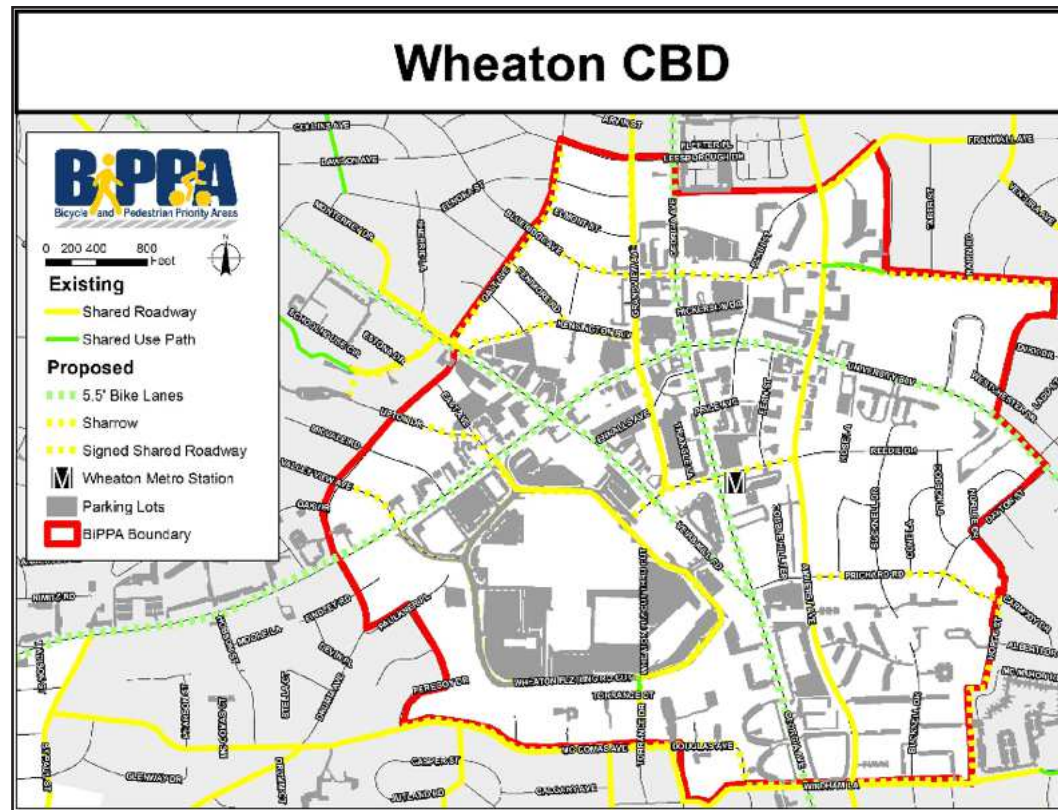


TRANSIT INFRASTRUCTURE

- » Wayne Avenue to 16th Street.³⁰ “Metro is working in partnership with Montgomery County Department of Transportation (MCDOT) to launch a tactical bus lane along the Georgia Ave Corridor, between 16th St NW & Wayne Ave.”

RECOMMENDATIONS

- » Amend the Montgomery County Bicycle Master plan to add Georgia Avenue bikeway facilities through downtown Silver Spring, between a) Eastern Avenue NW (the Washington, DC border) Colesville Road – Georgia Avenue is US 29 for that stretch, b) Colesville Road, where Georgia Avenue picks up the MD 97 designation, and Spring Street, and c) Spring Street and 16th Street.
- » Amend the Montgomery County Bicycle Master plan to add Georgia Avenue/MD 97 bikeway facilities through the downtown Wheaton BiPPA, as proposed in the June 2015 Wheaton CBD BiPPA Report.
- » Ensure creation of bikeways and pedestrian improvements concurrent with bus lane and roadway improvements, including tactical bus lanes inside the Beltway, the Montgomery Hills project across the Beltway, through downtown Wheaton, and north, working with advocates and officials.



Georgia Avenue / MD 97 bisects the Wheaton Central Business district, which is a Bicycle Pedestrian Priority Area

MD 187, OLD GEORGETOWN ROAD

MD 187, Old Georgetown Road, runs 5.3 miles from the intersection with Wisconsin Avenue/MD 355 and East-West Highway/MD 410 in downtown Bethesda, north to Executive Boulevard in North Bethesda. MD 187 is a four- to six-lane highway that roughly parallels MD 355.

KEY FACTS

A portion of Old Georgetown Road/MD 187 is a master-planned transitway that is slated for Flash Bus Rapid Transit Service. Specifically, the North Bethesda Transitway would connect the North Bethesda Metrorail Station and Montgomery Mall via Old Georgetown Road, Rock Spring Drive, and Democracy Blvd.

MD 187 has master-planned sidepaths or separated bike lanes for most of its length, except for the southern segment between Suburban Hospital and Wisconsin Avenue, where the Bethesda Trolley Trail and local streets are a designated breezeway alternative.

The northernmost segment has separated bicycle lanes although they have been under attack and should be considered threatened.

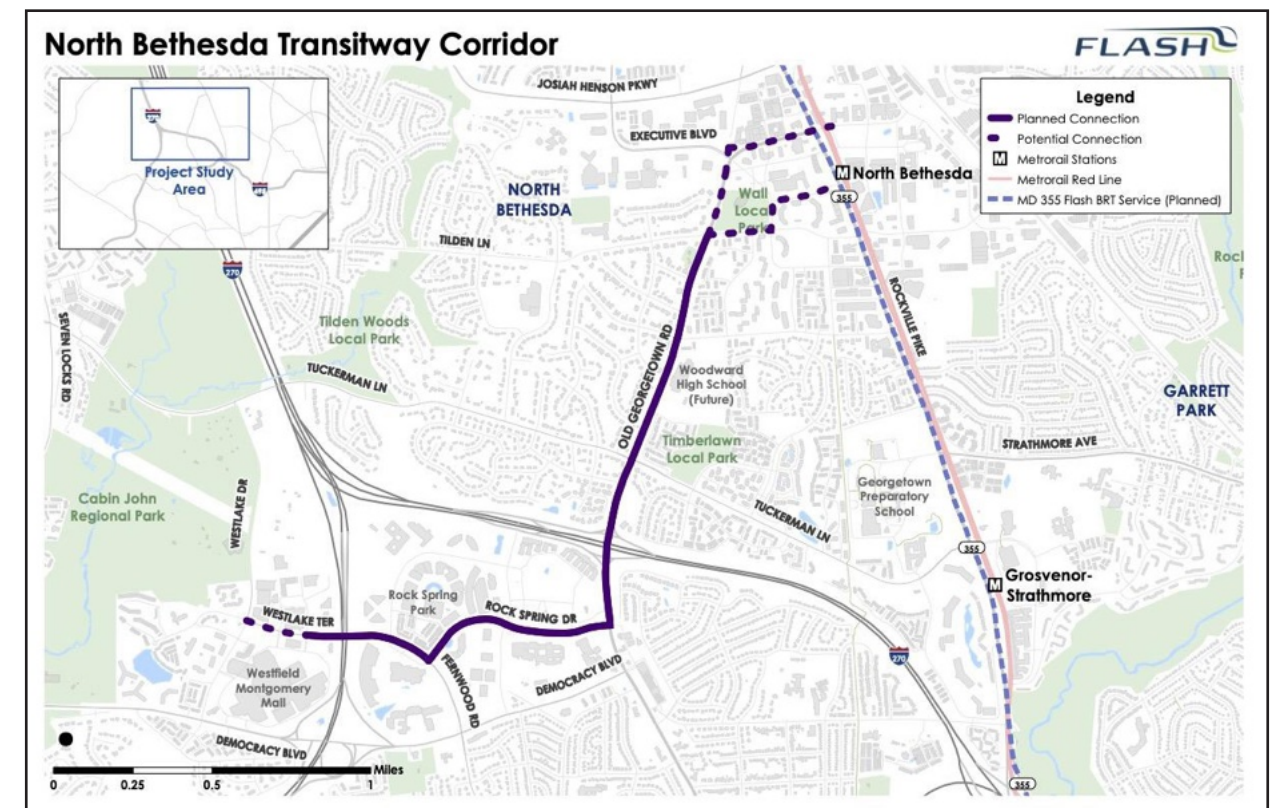
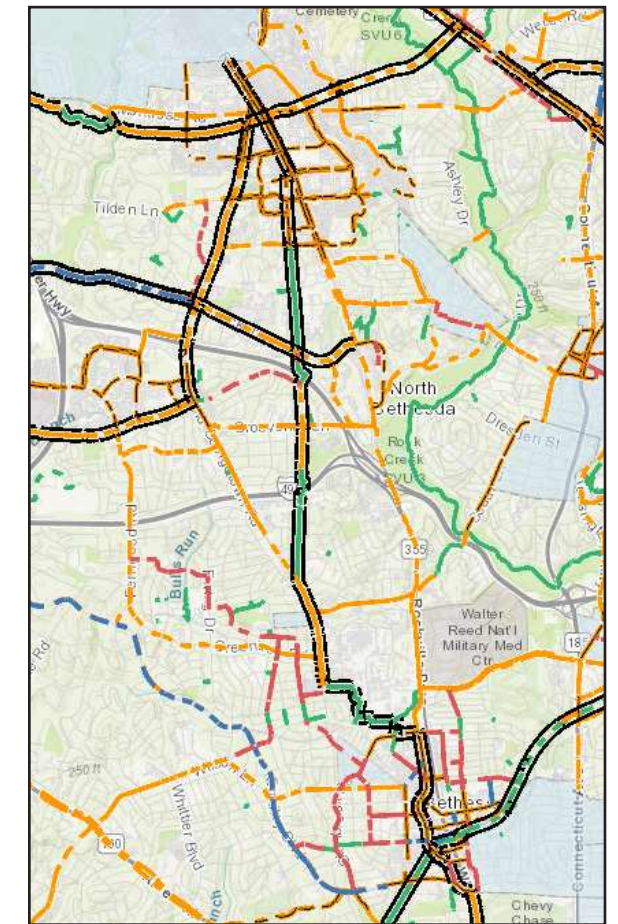
The middle segment, between W. Cedar Lane and just north of McKinley Street near Suburban Hospital, has a sidepath that turns east into the Bethesda Trolley Trail, running south of the NIH campus.

MD 187 intersects major trails and breezeway routes:

- » Wisconsin Avenue/MD 355 breezeway, north of the Capital Crescent Trail
- » Democracy Blvd
- » Tuckerman Lane
- » Montrose Parkway
- » Rockville Pike/MD355

SAFETY

Old Georgetown Road has been the site of several bicyclist fatalities. In July 2019, Jacob Cassell, 17, of Bethesda, was riding south on the sidewalk of Old Georgetown Road when he fell off the sidewalk and into the road and a driver struck him with a car. He was taken to a local hospital with life-threatening injuries and later died.



Montgomery County is slated to transform Old Georgetown Road bike lanes into a two-way cycletrack, with BRT construction

In June 2022, 18-year-old cyclist Enzo Marcel Alvarenga of Bethesda died after the bicycle he was riding went off the sidewalk as he was riding south on the northbound side of Old Georgetown Road. He was struck and killed by a vehicle.

These incidents led to the creation of separated curb-lane bike lanes on Old Georgetown Road, reducing the road from six motor-vehicle lanes to four.

ANALYSIS

MD SHA Corridor Needs Analysis³¹ (January 2022): “The Maryland Department of Transportation State Highway Administration (MDOT SHA) Office of Planning and Preliminary Engineering (OPPE), in consultation with MDOT SHA District 3, completed a comprehensive needs analysis for MD 187 (Old Georgetown Road) between McKinley Street in Bethesda, and Tilden Lane/Nicholson Lane in White Flint. This document outlines a long-term vision for the corridor by identifying strategies to address pedestrian and bicycle network needs, enhance multimodal safety and improve travel conditions along the corridor.”

RECOMMENDATIONS

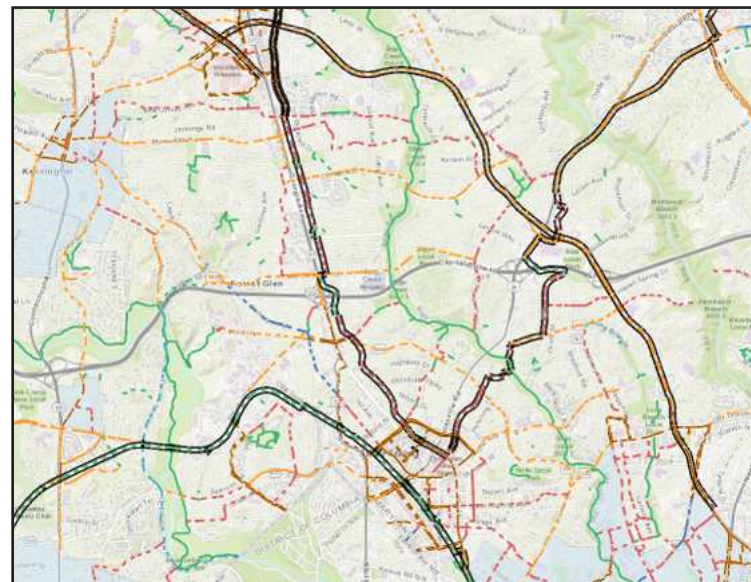
- » Support continuation of the Old Georgetown Road separated bicycle lanes, from north of Cedar Lane.
- » Harden the physical barriers, placing concrete pads in addition to the flex posts already there;
- » Evaluate and make safer the transition points where the lanes intersect with the entrances/exits of I-495 & I-270
- » Verify the adequacy of the sidepath along Old Georgetown Road between W. Cedar Lane and just north of McKinley Street

near Suburban Hospital.

- » Ensure inclusion of bicycle facilities in the North Bethesda Transitway project.
- » Pursue addition to the Bicycle Master Plan of an Old Georgetown Road bike-way between the Bethesda Trolley Trail turn-off (northern end) and Woodmont Avenue (southern end), linking to master-planned separated bike lanes for the final portion of Old Georgetown Road in Bethesda, between Woodmont Avenue and Wisconsin Avenue. Amendment of the Bethesda Downtown Plan³² to include this bikeway may be indicated.
- » A road diet for the southern segment of Old Georgetown Road – in particular, lane narrowing – is a necessary ingredient in bicycle and pedestrian improvements along that segment. This should be pursued even if there’s resistance to planning southern segment bicycle facilities.

MD 193, UNIVERSITY BLVD.

MD 193 is a major east-west transportation corridor, running east from Kensington in Montgomery County, crossing into Prince George’s County in Langley Park, after which it becomes Greenbelt Road, Glenn Dale Road, and Enterprise Road. The Purple Line runs along MD 193 between



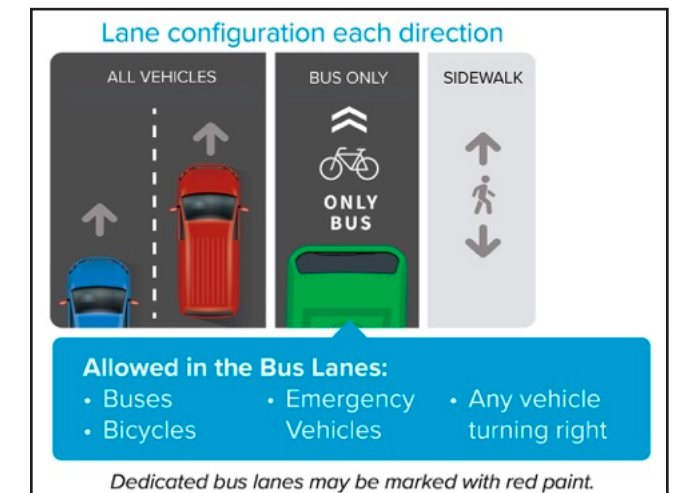
KEY FACTS

MD 193 is master-planned with sidepaths or separated bike lanes its entire length in Montgomery County and a bicycle breezeway with the exception of the southwest stretch, when the northeast side of the boulevard right of way crosses into Prince George’s County at Lebanon Street, and west of the intersection with Veirs Mill Road, east of downtown Wheaton.

The Purple Line runs along MD 193 in Montgomery County from Piney Branch Road/MD 320 (west) to 14th Avenue, the Prince George’s County border, with a station planned for Takoma-Langley

Crossroads (also the site of a bus station).

“MCDOT will begin a dedicated bus lane pilot this summer [2023] on University Boulevard, between Amherst Avenue and Dennis Avenue, to evaluate the potential for improving passenger travel times, service reliability, and customer experience by testing dedicated bus lanes.”³³ *MCDOT proposes that bicycles use the bus lanes, which many deem a dangerous situation.*



The proposed University Blvd bus lane configuration. WABA has asked that dangerous bike use of the bus lanes not be painted or signed.

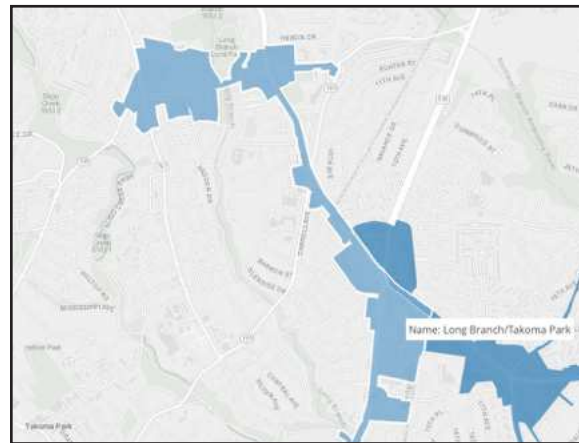
University Blvd/MD 193 traverses five Bicycle Pedestrian Priority Areas. East-to-west they are Takoma-Langley Crossroads (New Hampshire Avenue/MD 650 intersection), Long Branch (Carroll Avenue/MD 195 and Piney Branch Road/MD 350 intersections), Four Corners (Colesville Road/US 29 intersection), downtown Wheaton (Georgia Avenue/MD 97 and Veirs Mill Road/MD 586 intersections), and Kensington (MD 185 intersection).

MD 193 intersects a high-traffic trail: the Sligo Creek Trail.

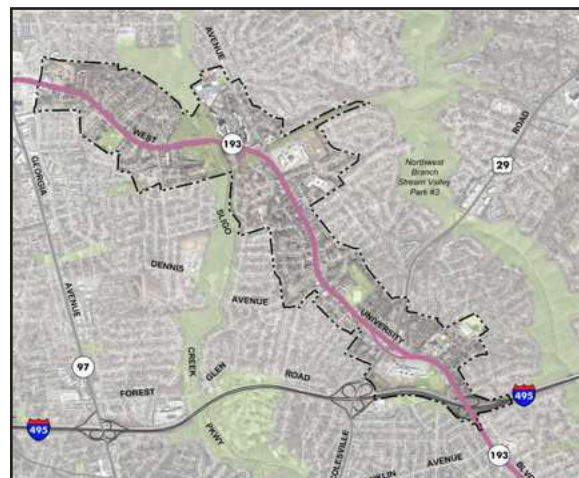
ANALYSIS

The Purple Line runs along MD 193 in Montgomery County from Adelphi Road in Prince George’s County west to Piney Branch Road/MD 320, with planned bike lanes. There is then a planning gap of about 1.2 miles from MD 320 west to East Indian Spring Drive, just southeast of the Capital Beltway/I-495.

The University Boulevard Corridor (UBC)



University Blvd. between and including Takoma-Langley Crossroads and Piney Branch Road is part of a Maryland Enterprise Zone.



The University Blvd Corridor Plan coverage area

Plan³⁴ focuses on a three-mile stretch of University Boulevard, from East Indian Spring Drive (southeast), crossing the Capital Beltway/I-495 and including the ramps, to Amherst Avenue, the eastern edge of the Wheaton central business district. The UBC Plan focuses on opportunities for new development, bikeways, and bus rapid transit (BRT) as well as the creation of a complete street with wider sidewalks, comfortable public transportation stops, and safe access.

PURPLE LINE

Purple Line Stations: Bicycle and Pedestrian Priority Area (October 2021)³⁵ indicates separated or striped bike lanes on University Blvd./MD 193 between Carroll Ave. and Prince George’s County.



Bike lanes are slated to go in alongside the Purple Line on University Blvd/MD 193, with other Bicycle Pedestrian Priority Area improvements

RECOMMENDATIONS

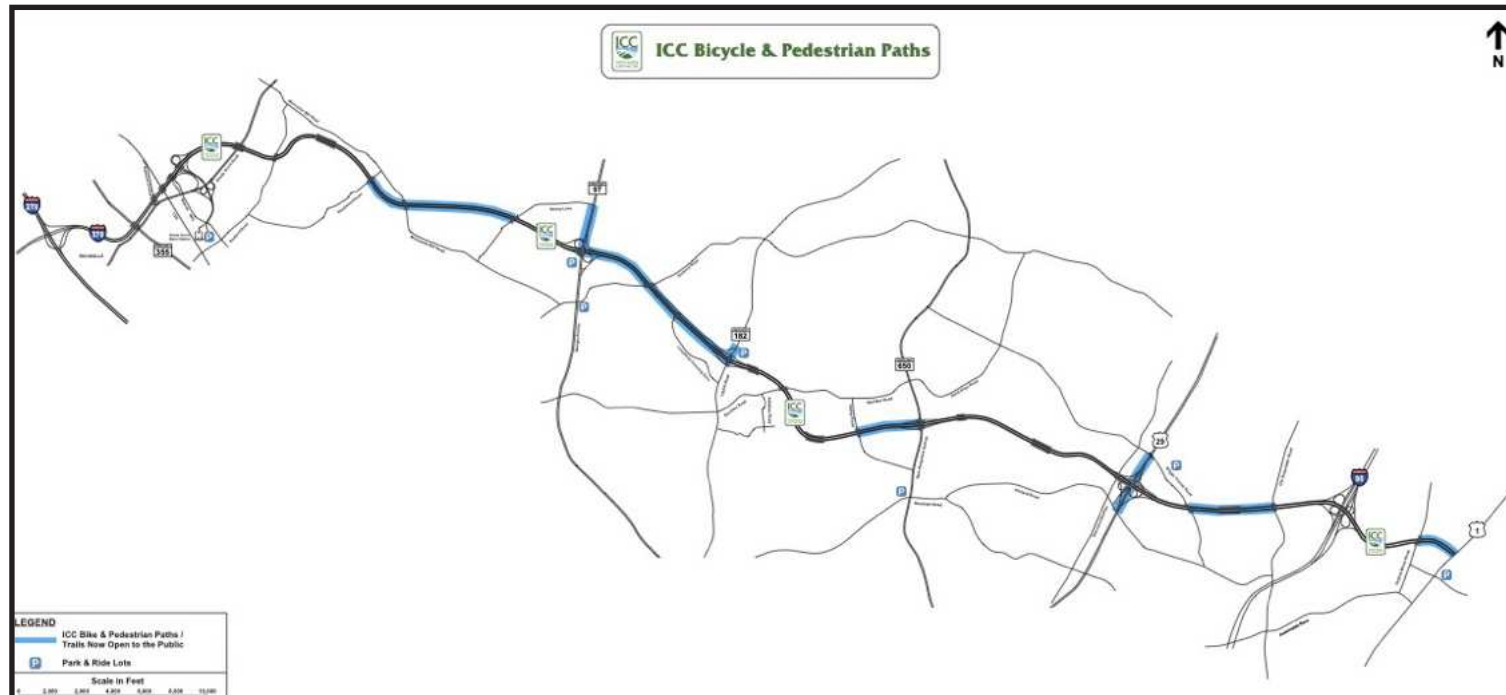
Ensure creation of bikeways and pedestrian improvements concurrent with Purple Line construction. (Note: We are currently investigating planning status, to confirm with the Maryland Transit Administration

that the master-planned separated bike lanes and sidepaths were included in Purple Line construction plans.)

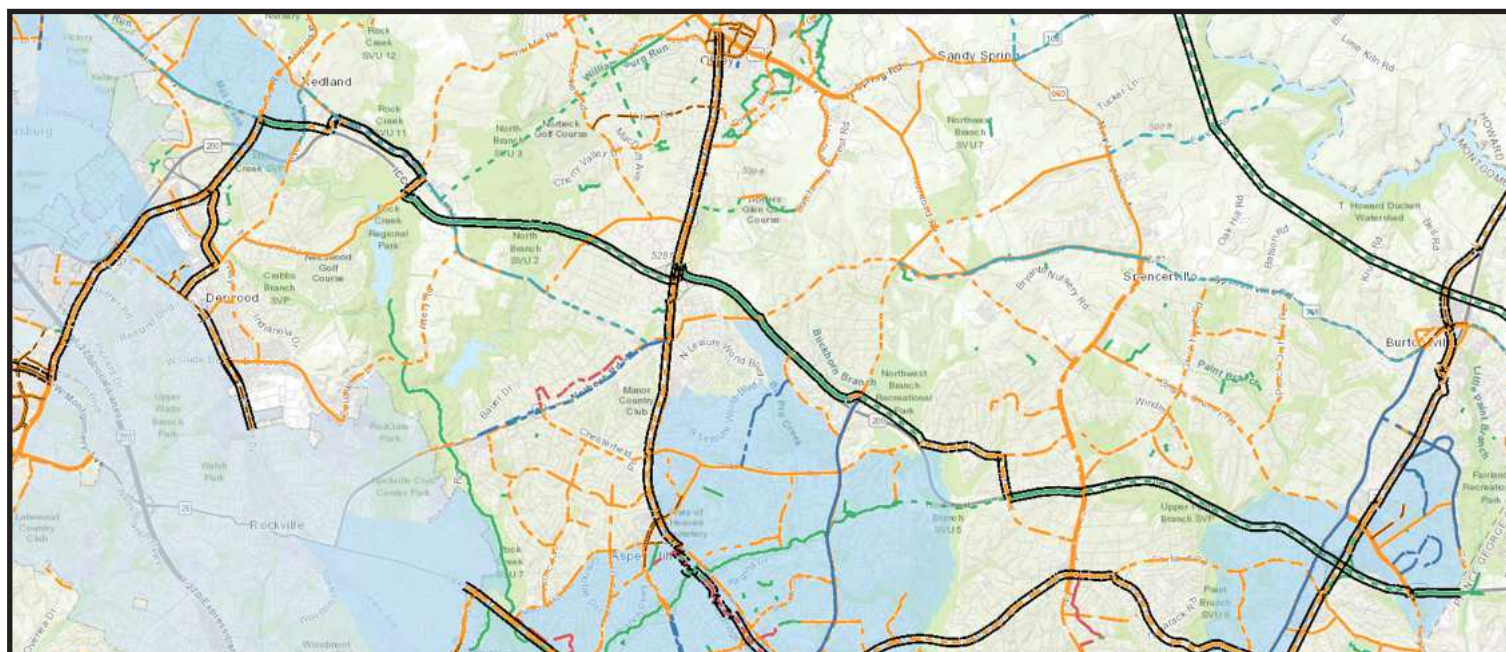
Continue separated bike lanes from Piney Branch Road/MD 350, where the Purple Line leaves University Blvd. and heads south-southwest, to and through the University Boulevard Corridor Plan area into downtown Wheaton.

Ensure timely creation of master-planned separated bike lanes and sidepaths and of pedestrian infrastructure west beyond downtown Wheaton, to the intersection with Connecticut Avenue/MD 185.

MD 200, INTERCOUNTY CONNECTOR



The Intercounty Connector (MD 200) has master-planned bikeways, but there are significant unbuilt gaps



The Intercounty Connector/MD 200 is a limited access highway operated as a toll road by the Maryland Transportation Authority (MDTA)³⁶. An Intercounty Connector Trail is on the books, running from Shady Grove, east to Prince George's County. "It largely consists of a trail that parallels the Intercounty Connector (MD 200), but includes sidepaths in locations where the trail diverts from the highway. Major infrastructure projects include:

- » New crossing of MD 200.
- » New bridge over Northwest Branch.
- » New bridge over Paint Branch.
- » New crossing of US 29."

KEY FACTS

MD 200 has master-planned sidepaths on or along its entire length, except the westernmost portion. The route is a Montgomery County breezeway. The lanes leave the MD 200 right of way at Needwood Road and the breezeway heads west on Muncaster Mill Road/MD 115, then on the Midcounty Highway and then Shady Grove Road. Near the western end of the ICC/MD 200, the breezeway heads south between Gaithersburg and Rockville.

MD 200 intersects major trails and breezeway routes:

- » Columbia Pike/US 29
- » New Hampshire Avenue/MD 650
- » Georgia Avenue/MD 97
- » Montrose Parkway
- » Rockville Pike/MD 355

Most of MD 200 is in either of two Montgomery County Council districts,

District 5 (Councilmember Kristin Mink) and District 7 (Councilmember Dawn Luedtke).

NOTES

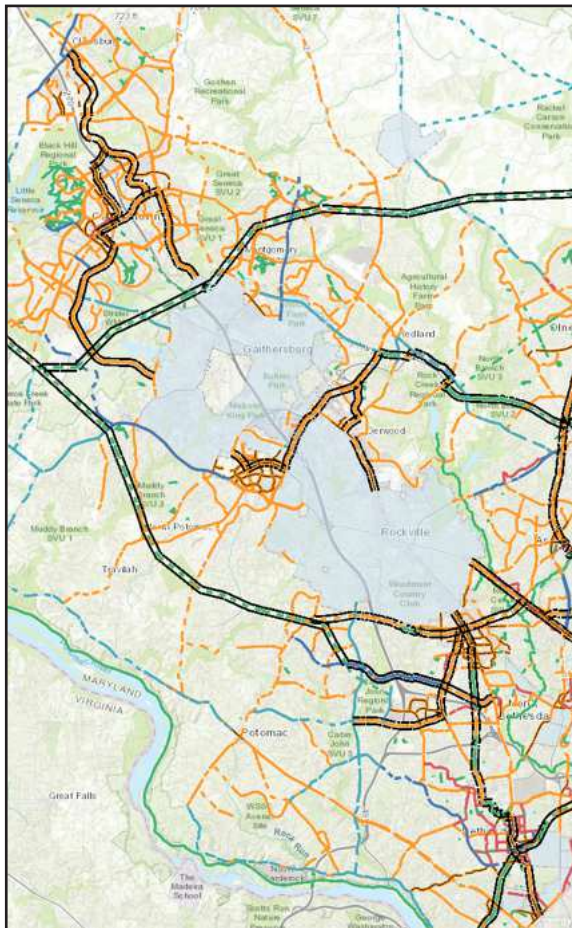
The Northwest Branch Recreational Park Master Plan³⁷ includes the trail connecting Layhill (MD 182) and Bonifant. It would run along or parallel MD 200. The official status is "on hold."

RECOMMENDATIONS

- » Document bikeway gaps.
- » Work with elected officials and MCDOT to plan gap-filling to create a continuous bikeway along MD 200, exploring applicable funding sources.

MD 355

MD 355 is a major south-north Montgomery County thoroughfare, passing through Friendship Heights, Bethesda/Chevy Chase, Rockville, Gaithersburg, Germantown, Clarksburg, and Hyattstown, roughly parallel to I-270. The southern portion of the route from the Washington, DC border to Germantown is a suburban four-to-six-lane divided highway lined with many businesses. North of Germantown, the route is predominantly a two-lane rural road. The road changes names along its route, from the south, as Wisconsin Avenue, to Rockville Pike, followed by Hungerford Drive, then Frederick Road.³⁸

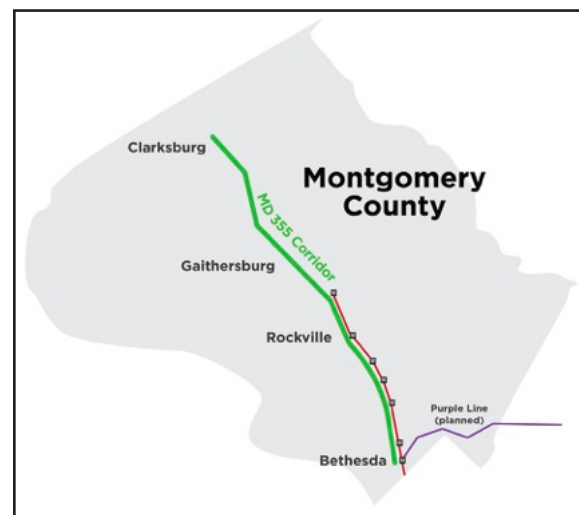


KEY FACTS

MD 355 has master-planned sidepaths or separated bike lanes for its full length, from the Washington, DC border to just south of Hyattstown, with the exception of (apparently) 75% of the segment within Gaithersburg and a short stretch from Old Hundred Road to the Frederick County Border.

MD 355 is a recommended transit corridor and master-planned Bus Rapid Transit (BRT) route.³⁹ A southern segment would run from the Washington, DC border to Rockville Metro station and a northern segment from Rockville, 15.3 miles north to Redgrave Place in Clarksburg.

Currently, “the MD 355 Flash BRT design team is considering how the project could include new or updated bicycle and pedestrian facilities to ensure people can safely access Flash stations as well as other destinations along the corridor. Roadway characteristics, conditions, and constraints



MD 355 is a Montgomery County bus rapid transit (BRT) corridor

vary considerably depending on the specific location. MCDOT is considering a variety of bicycle and pedestrian facilities along the MD 355 corridor.”

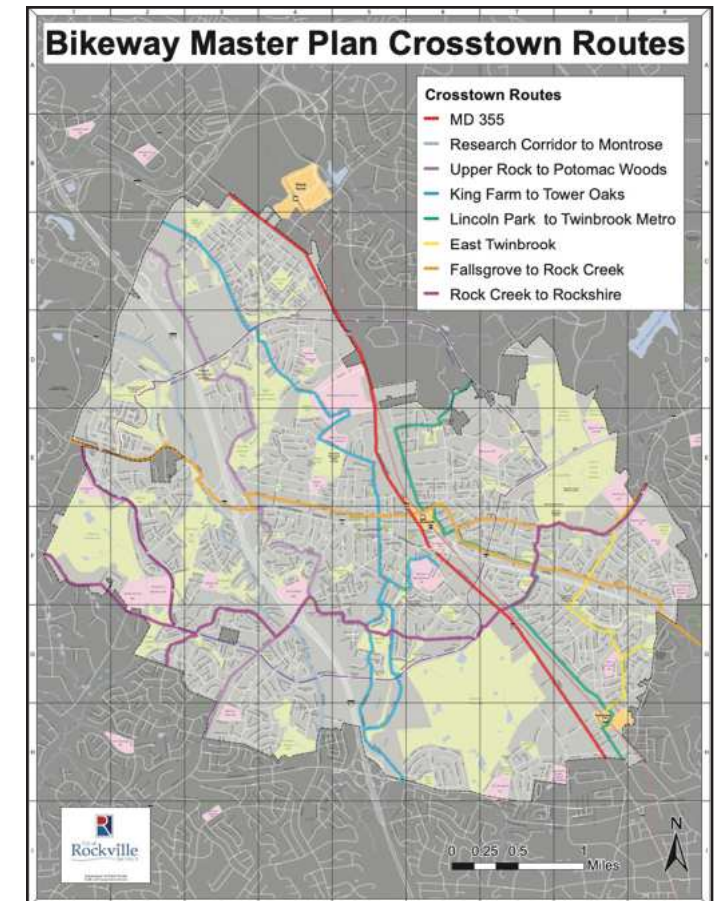
Portions of MD 355 are master-planned bicycle breezeway routes interrupted of course by the Cities of Rockville and Gaithersburg. However MD 355 across Rockville is a city master-planned crosstown route.

MD 355 intersects major trails and breezeway routes:

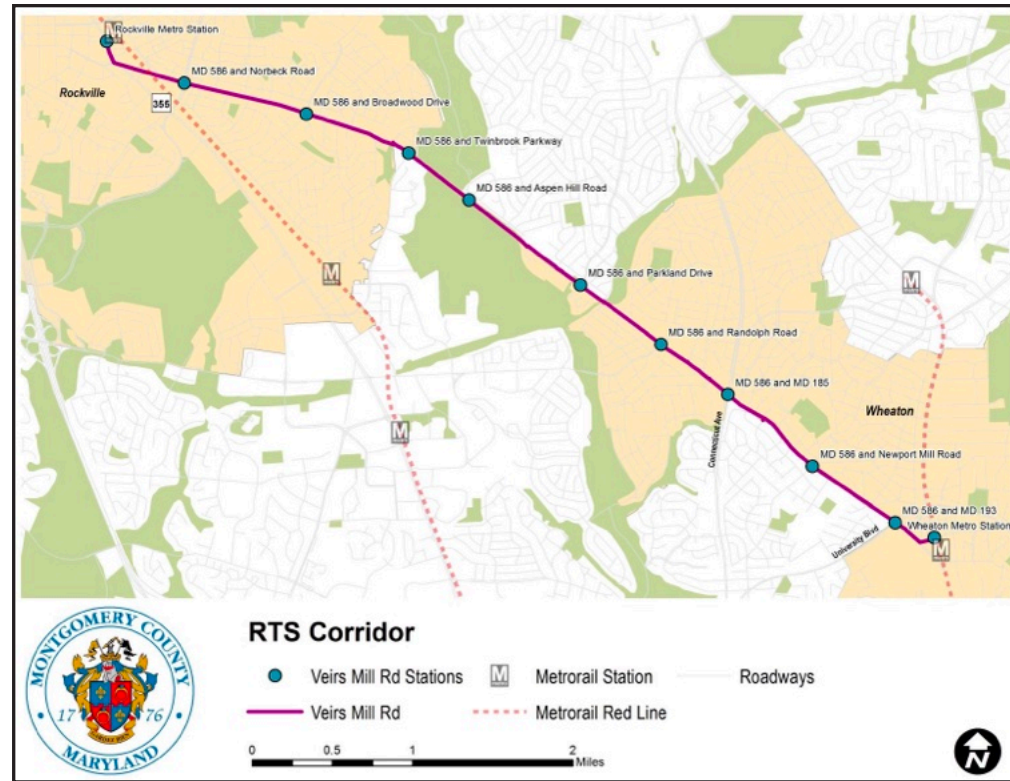
- » Capital Crescent Trail
- » Tuckerman Lane
- » Randolph Parkway
- » MD 586-MD28 in Rockville, a city designated crosstown route
- » Shady Grove Road
- » Burtonsville to Great Seneca Creek off-road trail
- » Watkins Mill Road

RECOMMENDATIONS

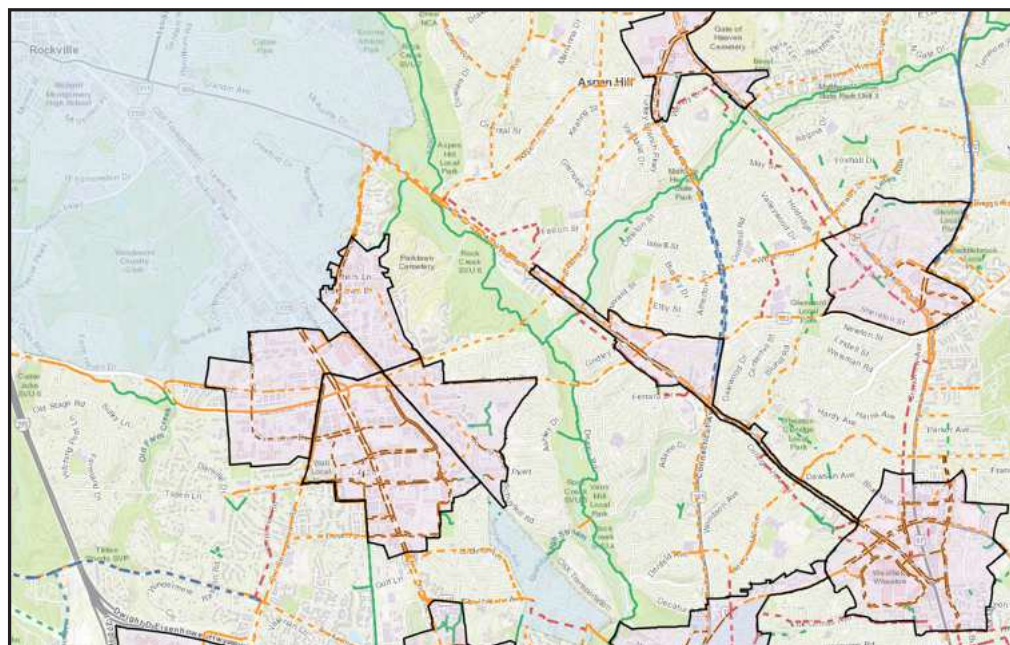
- » Ensure creation of bikeway facilities and pedestrian improvements is concurrent with BRT installation, working with MCDOT and the Cities of Rockville and Gaithersburg.
- » Fund and complete the Capital Crescent Trail tunnel in downtown Bethesda.



The City of Rockville's Bikeway Master Plan includes routes along state and city roads



Veirs Mill Road is a bus rapid transit (BRT) corridor with service connecting the Rockville and Wheaton Metro stations



Currently, bikeways are planned for Veirs Mill Road only in a central segment, but not extending into downtown Wheaton or into Rockville

MD 586, VEIRS MILL ROAD

MD 586, Veirs Mill Road, is an important cross-county route, running 5.8 miles from MD 28 and MD 911 in Rockville, just east of MD 355, east to Georgia Avenue/MD 97 in Wheaton.

KEY FACTS

MD 586 is a recommended transit corridor and master-planned Bus Rapid Transit (BRT) route.⁴⁰ This BRT project, running between the Wheaton and Rockville Metro stations, is the BRT project second in line behind the US 29 BRT. Final design is slated for completion in FY24. Land acquisition would begin in FY24 and construction is anticipated to start in FY25 and be completed by FY27.

MD 586 has master-planned sidepaths or separated bike lanes for its full length, from Georgia Avenue/MD 97 to First Street/MD 28/MD911. It is included in both Montgomery County's Bicycle Master Plan and Rockville's Bikeway Master Plan.⁴¹

About 75% of the length of MD 586 outside Rockville is a Montgomery County Bicycle Pedestrian Priority Area (BiPPA), between Robindale Drive to the northwest and Georgia Avenue/MD97 to the southeast.

The entire length of MD 586, outside Rockville, is in or borders a Montgomery County Equity Focus Area.

MD 586 intersects major trails and breezeway routes:

- » Georgia Avenue/MD 97 + Wheaton Metrorail & Metrobus station
- » Randolph Road breezeway
- » Connecticut Avenue/MD 185
- » Rock Creek Park
- » Rockville's Millenium Trail, a city bicycle

beltway, runs along First Street/MD 28

DISCUSSION

MCDOT has included bikeways in a plan that will go before the Planning Board on April 13 as a mandatory referral,⁴² however only for part of the BiPPA (Bicycle and Pedestrian Priority Area) portion of Veirs Mill Road, between Robindale Drive to the northwest and Newport Mill Road to the southeast. That stretch isn't the full length of the Veirs Mill BiPPA, which extends southeast to Georgia Ave/MD 97, and it also doesn't include the portion of Veirs Mill Road from Robindale Drive northwest to the Rockville Metro Station / MD 355.

The whole length of Veirs Mill—the whole BRT route—between the Wheaton and Rockville Metro stations is master-planned to have sidepaths and/or separated bike lanes. So the fear is that if BRT goes in without bicycle and pedestrian infrastructure along the full length of Veirs Mill, that infrastructure may never be built, or at least not for many years.

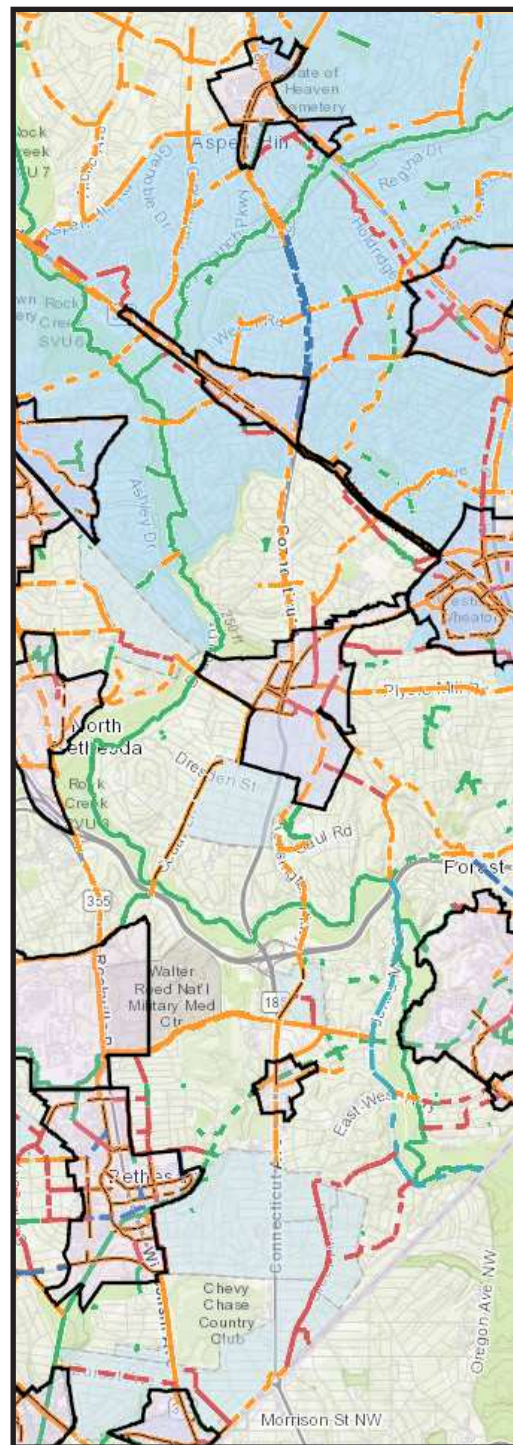
The Veirs Mill BRT project manager at MCDOT said that they're looking to finance the work they're planning with federal SMART funding.⁴³ They don't have a source of funding to cover bikeway and pedestrian improvements for the portions of Veirs Mill Road outside the current initiative. (Note that the northwest portion is in the City of Rockville.)

RECOMMENDATIONS

- » MCDOT and the City of Rockville should complete bikeways and pedestrian improvements concurrently with BRT construction.



"Connecticut Avenue / MD 195 from the Washington DC border in the south, north to Kensington



Connecticut Avenue / MD 195 from the Washington DC border in the south, north through Kensington to Aspen Hill

MD 185, CONNECTICUT AVENUE

Connecticut Avenue crosses into Montgomery County from the District of Columbia at Chevy Chase Circle as MD 185 and runs north to intersect Georgia Avenue/ MD 97 in Aspen Hill, crossing through Chevy Chase and Wheaton.

ANALYSIS

MD 185 is neither a transit corridor nor a master-planned bicycle breezeway. The northern segment, between Kensington and Aspen Hill (both BiPPAs) might be considered a priority for bikeway attention, however, the Maryland State Highway Administration published an MD 185 Needs Analysis⁴⁴ in January 2022, covering the southern segment in Maryland between Chevy Chase Circle/Western Avenue at the state boundary with Washington, DC, and MD 193 (University Boulevard) in the Town of Kensington. The analysis found a High bicycle level of traffic stress along the full segment, from Washington, DC to University Blvd. in Kensington, indicated by the red coloring in the image at right.

The analysis states, "MD 185 carries significant volumes of commercial and commuter traffic, leading to greater demand than there is capacity within the existing road. The surrounding communities include a mix of well established residential neighborhoods, so widening the road to add vehicular capacity, or to significantly improve existing pedestrian or bicycle facilities is not feasible within the existing public right of way. New development is generally concentrated around the Purple Line station that is slated to open around 2022-2023, and in the Town of Kensington. In both growth areas, there are higher

concentrations of pedestrian and bicycle activity, leading to greater demand for supporting sidewalk and bicycle facilities, coupled with demand for more frequent opportunities to cross the street."

Connecticut Avenue/MD 185 is master-planned to have separated bicycle lanes from Knowles Avenue in Kensington for a short distance north to the intersection with Plyers Mill Road/MD 192 (which is master-planned to have bicycle sidepaths) and University Blvd. /MD 193 (bicycle lanes and sidepaths). Heading north from Farragut Avenue, MD 185 is master-planned to have bicycle sidepaths until the roadway crosses Veirs Mill Road/MD 586 (a breezeway route), after which the plan designates striped bikeways, then sidepaths, and then separated bike lanes across the intersection of MD 185 with Georgia Avenue/MD 97 (a breezeway route).

KEY FACTS

Kensington and Aspen Hill are Bicycle Pedestrian Priority Areas.

MD 185 intersects major trails and breezeway routes:

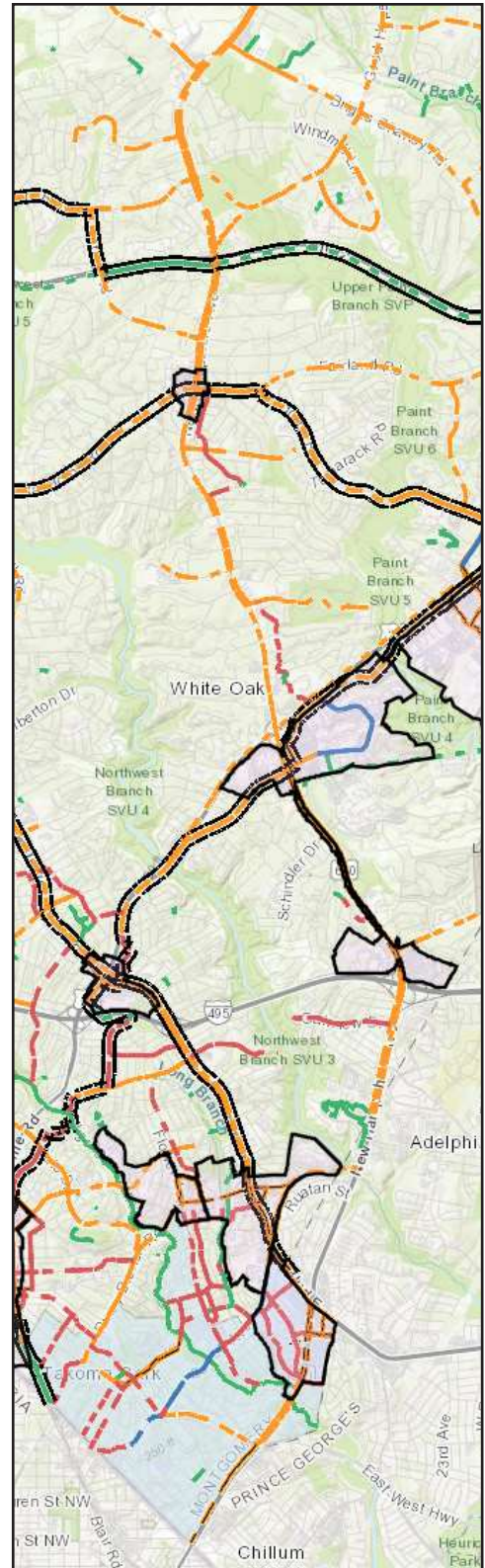
- » Capital Crescent Trail
- » Jones Bridge Road
- » Note: The SHA is improving the intersection Connecticut Avenue/MD 185 and Jones Bridge Road/Kensington Parkway.⁴⁵ The project will create a shared-use path along eastbound Jones Bridge Road from Platt Ridge Drive to Montgomery Avenue. An existing Jones Bridge Road sidepath runs west from Platt Ridge Drive to Rockville Pike/MD 355, however there will be a gap from the east end of the JBR path to be created by the SHA to

Jones Mill Road and a Capital Crescent Trail access point.

- » Beach Drive
- » University Blvd./MD 193
- » Veirs Mill Road/MD 586
- » Randolph Road/MD 183
- » Matthew Henson Trail
- » Georgia Avenue/MD 97

RECOMMENDATIONS

- » Ensure the timely creation of master-planned bikeways on MD 185 north from East-West Highway/MD 410.
- » Pursue the addition to the Bicycle Master Plan of bicycle facilities on MD 185/Connecticut Avenue from the Washington, DC border north to East-West Highway/MD 410.



The corridor between the Washington, DC border and Colesville includes several MWCOG Equity Emphasis Areas and Montgomery County Equity Focus Areas.⁸⁰

MD 650, NEW HAMPSHIRE AVENUE

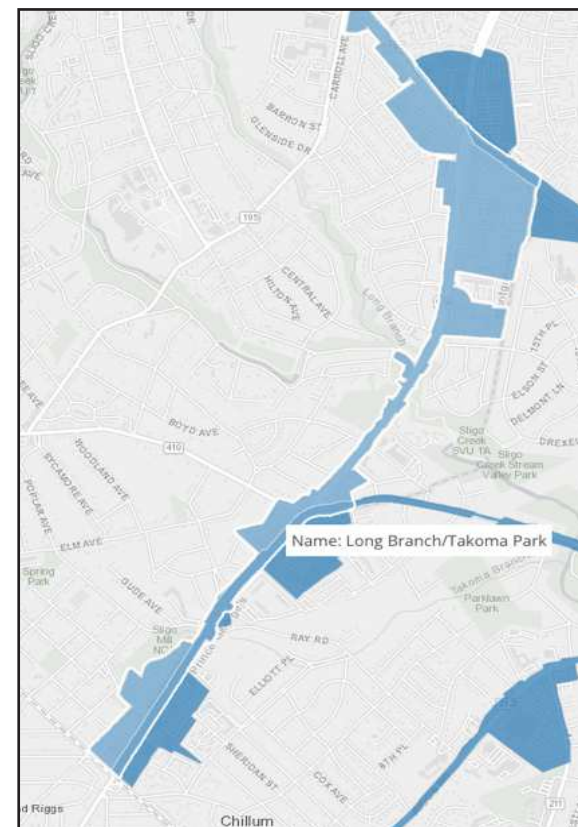
New Hampshire Avenue runs north from Eastern Avenue NE, the border of Montgomery County and Washington, DC, terminating at Laytonsville Road/MD 108. Only the eastern stretch, from Washington, DC to a prior MD 108 crossing in Ashton, is a significant bikeway concern for the purposes of this initiative. The southern portion of that eastern stretch borders later crosses through Prince George's County

before reentering Montgomery County. The eastern stretch, north to Randolph Road/MD 183, is a planned bus rapid transit (BRT) corridor.

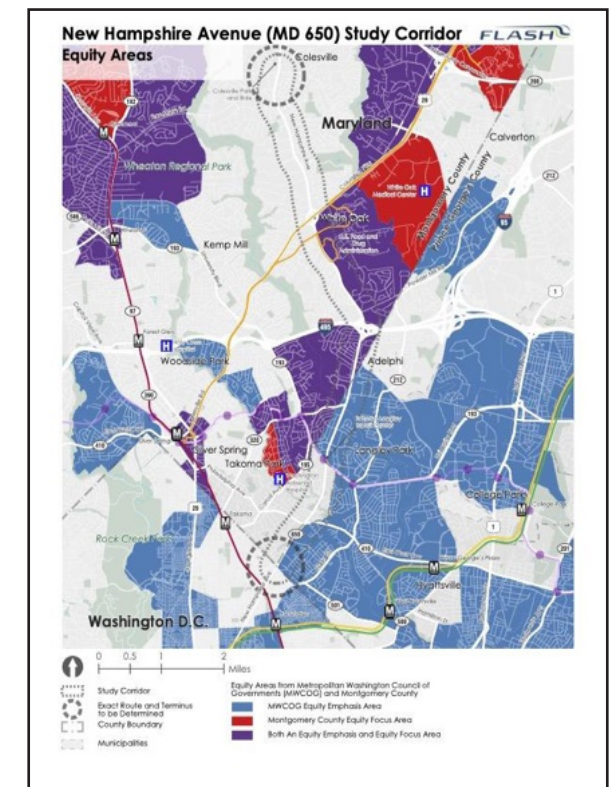
KEY FACTS

New Hampshire Avenue/MD 650 in Montgomery County, from the Washington, DC border north to Ashton is slated to have bicycle sidepaths or separated bike lanes, the latter within Takoma Park. Northwest from the intersection with Ashton Road/MD 108 to Laytonsville Road/MD 108, it is slated to have bikeable shoulders.

The eastern portion of New Hampshire Avenue/MD 650 intersects major trails and



The New Hampshire Avenue corridor from the Washington DC border to and including Takoma-Langley Crossroads (right) is part of a Maryland Enterprise Zone.



Planning for New Hampshire Avenue (MD 650) bus rapid transit is underway, in 2023

bikeway routes (south to north):

- » Eastern Avenue NE, (DC)
- » Ethan Allen Avenue/MD 410
- » Sligo Creek Park
- » University Blvd./MD 193, with a Purple Line station and a bus station.
- » Northwest Branch Trail
- » Randolph Road/MD 183
- » Intercounty Connector/MD 200
- » Spencerville Road/MD 198

MD 650 traverses several Bicycle Pedestrian Priority Areas: Takoma-Langley Crossroads, Hillandale (north of the Capital Beltway/I-495, White Oak south of Columbia Pike/US 29), and Colesville (intersection with Randolph Road/MD 183). It traverses the Takoma-Langley Crossroads and White Oak equity focus areas.

New Hampshire Avenue bus rapid transit is slated to run north from the Washington, DC border to Randolph Road/MD 183.⁴⁶ MCDOT rates this segment as having an “uncomfortable pedestrian and bicycle experience.” The BRT route intersects the Purple Line and US 29 Flash BRT service, key intersections for pedestrians.

RECOMMENDATIONS

- » Ensure creation of bikeway facilities and pedestrian improvements is concurrent with BRT installation, working with MCDOT, the City of Takoma Park, and the Prince George’s County Department of Public Works and Transportation.



the Purple Line runs along Arliss Avenue, Piney Branch Road (MD 350), and University Blvd. (MD 193) in eastern Montgomery County

PURPLE LINE CORRIDOR

“The Purple Line is a 16-mile light rail line that will extend from Bethesda in Montgomery County to New Carrollton in Prince George’s County. It will provide a direct connection to the Metrorail Red, Green and Orange Lines; at Bethesda, Silver Spring, College Park, and New Carrollton. The Purple Line will also connect to MARC, Amtrak, and local bus services.”⁴⁷

“The Purple Line project includes the completion of the Capital Crescent Trail (CCT)⁴⁸ between Bethesda and Silver Spring, the completion of the Green Trail along Wayne Avenue to Sligo Creek, and the construction of a bike path through the University of Maryland campus.”⁴⁹ The Silver Spring Green Trail will run between Sligo Creek and Fenton Street⁵⁰, a Montgomery County project, funded by Montgomery County and under design by the Maryland Transit Administration.⁵¹

“As part of the construction of the Purple Line, many new or improved bicycle facilities will be built. These include mixed-

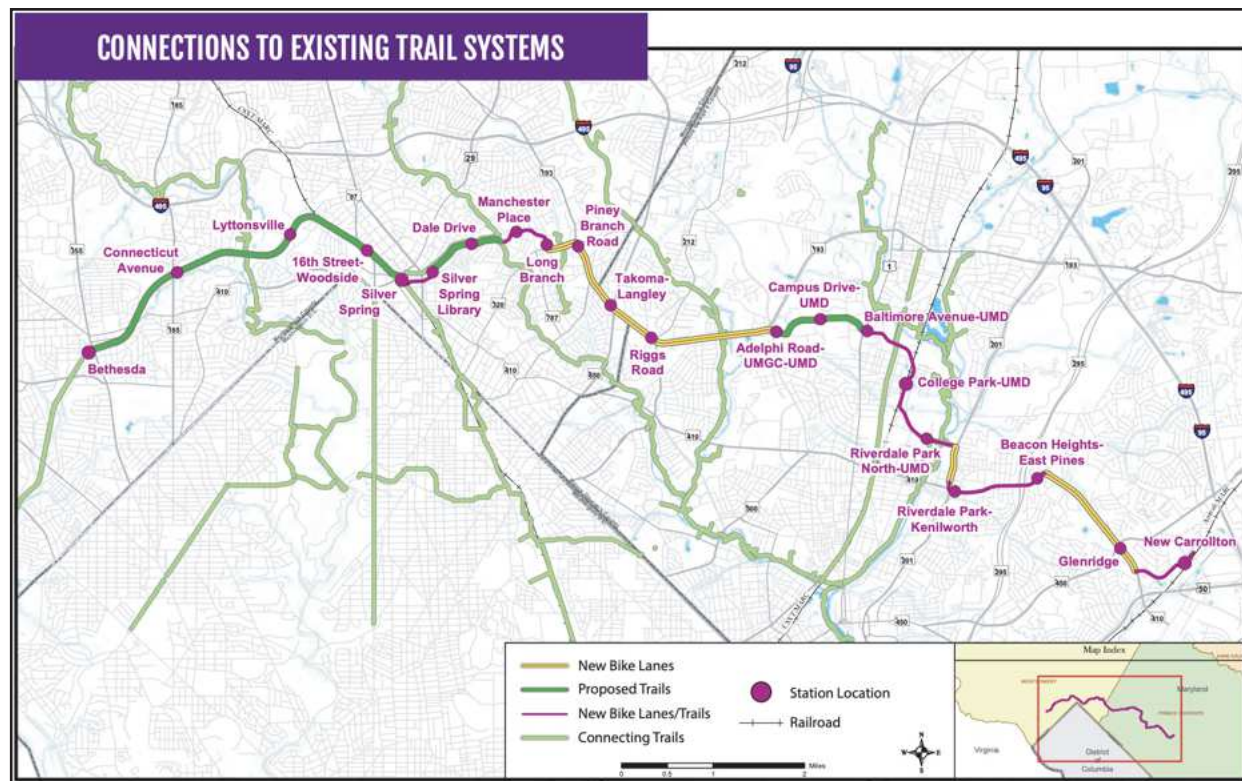
use hiker-biker trails and on-street bicycle lanes. Over 16 miles of bicycle facilities will be built throughout the Purple Line corridor including: Construction of 10 miles of bicycle lanes along Piney Branch Road, University Boulevard, Kenilworth Avenue, and Veterans Parkway.”⁵²

We are verifying that Purple Line-linked bikeways on MD 193/University Blvd. and MD 350/Piney Branch Road and connecting to the Silver Spring Green Trail in Sligo Creek Park are currently in planning and being constructed concurrently with Purple Line construction.

The MTA’s Purple Line site provides a variety of useful project maps⁵³ including the aerial map below of the stretch from Arliss Avenue (lower-left) via Piney Branch road (vertical) and then University Blvd.

TRAIL AND BREEZEWAY ROUTE INTERSECTIONS:

- » New Hampshire Avenue/MD 650
- » Carroll Avenue/MD 195
- » “The [MCDOT] Carroll Avenue Separat-



Bike lanes are planned to run alongside many Purple Line road segments

ed Bike Lanes Project will add a low-stress bikeway to Carroll Avenue between Merrimac Drive and Piney Branch Road (MD 320) in the Takoma/Langley Crossroads area.”⁵⁴

- » Sligo Creek Park Trail
- » Colesville Road/US 29
- » Georgia Avenue/MD 97
- » Capital Crescent Trail
- » Beach Drive
- » Connecticut Avenue
- » Wisconsin Avenue/MD 355

ASSOCIATED

A Purple Line Access Study,⁵⁵ completed in October 2021, explored “the design and

construction of high priority bicycle and pedestrian capital improvements in areas adjacent to future Purple Line Stations from Bethesda to Takoma Park within a 1/2-mile radius of each station.

RECOMMENDATION

- » Ensure that Purple Line-linked bikeways on MD 193/University Blvd. and MD 350/Piney Branch Road and connecting to the Silver Spring Green Trail in Sligo Creek Park are currently planning and being constructed concurrently with Purple Line construction. See the sections of this document covering those roads.

ADDITIONAL ROUTES

We anticipate documenting bikeway and pedestrian improvement needs and plans for state routes that are secondary for the purposes of the Complete State Roads–Montgomery County initiative.

MD 108

MD 108 runs across northern Montgomery County, from MD 27 in Damascus, southeast through Laytonsville, Olney, and Sandy Spring and into Howard County. MDOT SHA is currently designing a shared-use path, between the Olney Theatre and Sherwood Elementary School.

MD 112/SENECA ROAD, MD 118/GERMANTOWN ROAD, AND MD 119/GREAT SENECA HIGHWAY

Great Seneca Highway is a divided highway running south from Middlebrook Road, across Clopper Road/MD 117, into Gaithersburg. It emerges from Gaithersburg at Sam Eig Highway, continuing southwest

to Darnestown Road. The segments outside Gaithersburg are master-planned for sidepaths. The City of Gaithersburg should continue this treatment.

Montgomery Planning is currently conducting a Great Seneca Plan: Connecting Life and Science⁵⁶ planning effort focused on the Life Sciences Center area. One aim is to “right-size the number of personal vehicle travel lanes on existing roads. Reduce or repurpose lanes to create a safer and more comfortable environment for people walking, rolling, bicycling, riding transit, and driving.” Another idea is to “repurpose a portion of the Great Seneca Highway right-of-way as a linear park.”

MD 124/MONTGOMERY AVENUE AND QUINCE ORCHARD ROAD

MD 124 runs roughly south from Wightman Road across Montgomery Village, master-planned for sidepaths, into Gaithersburg.

MD 124 crosses I-270 in Gaithersburg and continues as Quince Orchard Road. It leaves Gaithersburg at Darnestown Road/MD 128 and heads south to Dufief Mill Road, again master-planned for sidepaths.

The City of Gaithersburg should plan sidepaths or other bikeway treatments for MD 124 across the city.

MD 191/BRADLEY BLVD. AND PERSIMMON TREE ROAD

Bradley Blvd./MD 191 extends from Wisconsin Ave./MD 355 west and then northwest, crossing the Capital Beltway/I-495. That segment is master-planned to have separated bike lanes to Fairfax Road, then striped bikeways and sidepaths. Bradley Blvd. continues southwest, crossing Seven Locks Road and then River Road/MD 190, with master-planned bikeable shoulders and sidepaths. Persimmon Tree Road picks up the MD 191 designation where it intersects Bradley Blvd. and runs southeast as MD 191, with master-planned sidepath, crossing the Capital Beltway/I-495 and terminating at Cabin John Parkway.

MCDOT is planning a Bradley Blvd. Bikeway for a segment:⁵⁷ “This project provides for the master planned dual bikeway along Bradley Boulevard (MD 191)

which includes two 11’ traffic lanes, two on-road bike lanes, an off-road side path on the east side of the road, and a 5’ sidewalk on the west side of the road. The project limits are from approximately McLean Drive to Glenbrook Road.”

MD 198-MD 28

MD 198 runs west from the border with Prince George’s County as Sandy Spring Road to Columbia Pike/US 29 in Burtonsville and on to Spencerville Road to New Hampshire Avenue/MD 650 in Spencerville. At that point, the major arterial continues as MD 28. Norbeck Road/MD 28 runs across the Intercounty Connector/MD 200 and Georgia Avenue/MD 97. To this point, the road is master-planned for bikeable shoulders and sidepaths. West of Georgia Avenue to First Avenue in Rockville, it is master-planned for bikeable shoulders with some sidepaths.

The City of Rockville designates MD 28 – running east to west as East Jefferson Street, West Jefferson Street, and West Montgomery Avenue – as a major cross-town bicycle route. MD 28 leaves Rockville at Shady Grove Road, heading west as Key West Avenue, master-planned for separated bike lanes and sidepaths west to Muddy Branch Road. MD 28 becomes Darnestown Road, forming the southern border of

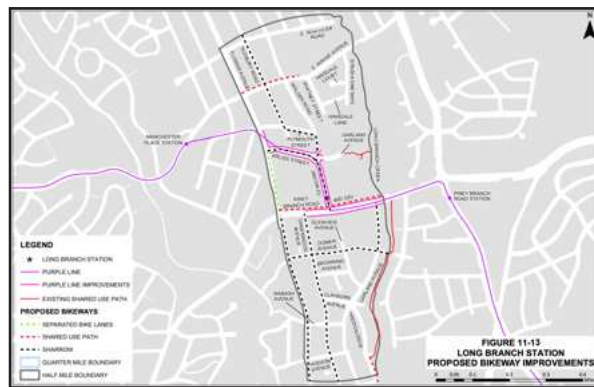


Montgomery County plans phased MD 28 improvements

Gaithersburg, master-planned for striped bikeways and sidepaths. MD 28 crosses Quince Orchard Road/MD 124; west of Riffle Ford Road to Darnestown, it is master-planned for trails and sidepaths.

Northwest from the intersection with Seneca Road/MD 112, Darnestown Road/MD 28 is master-planned for bikeable shoulders until it crosses into Frederick County in western Montgomery County.

The Maryland Department of Transportation's State Highway Administration (MDOT SHA) has completed preliminary planning for MD 198 (Old Columbia Pike/ Spencerville Road) Burtonsville Improvement Project⁵⁸ from Old Columbia Pike to US 29A, which is Segment D of the MD 28/MD 198 Corridor



Bike lanes are planned for Arliss Ave, running alongside the Purple line, turning onto Piney Branch Road

Improvement Study.

MD 320/PINEY BRANCH ROAD

Piney Branch Road crosses from the District of Columbia into Takoma Park, designated as highly infeasible as a shared road up to the intersection with Philadelphia Avenue/MD 410. Sidepaths are master-planned for the segment heading northeast across Sligo

Creek Park to Flower Avenue. Separated bike lanes are master planned from Flower Avenue, across Arliss Avenue where this becomes a Purple Line route, across University Blvd./MD 193 where the Purple Line heads southeast toward Prince George's County, to Carroll Avenue/MD 195. East from there to New Hampshire Avenue/MD 650, Piney Branch Road has master-planned sidepaths.

As indicated in the maps below, taken from the Purple Line Stations Bicycle and Pedestrian Priority Area study (October 2021), a shared-use path is indicated on the north side of Piney Branch Road between Flower Avenue and University Blvd.

Further east, a Piney Branch Road Bikeway would be constructed between University



Bike lanes are planned for Piney Branch Road, running alongside the Purple line, turning onto University Blvd.

Boulevard and the Prince George's County line as part of CIP 502004 Purple Line BiPPA.

The speed limit on Piney Branch Road between Eastern Avenue NW and University Blvd./MD 193 should be reduced from 30 MPH to 25 MPH.

MD 390/16th Street

Matt Johnson from MCDOT reports (e-mail, May 5, 2023): "16th Street Cycletrack – This is a project we're working with SHA on. They're currently doing a feasibility study. The idea is a road diet to remove the right NB lane between Spring Street and Second Ave and replace it with a cycletrack. The Cycletrack would continue along 16th Street and up Georgia Avenue as part of the Montgomery Hills MD 97 project."

MD 410/EAST-WEST HIGHWAY

East-West Highway/MD 410 crosses southeastern Montgomery County, starting just east of New Hampshire Avenue/MD 650, turning into two lanes across Takoma Park, and then becoming a four-lane road at Fenton Street in southeast Silver Spring. It heads west across Georgia Avenue, Colesville Road, 16th Street/MD 390, Beach Drive, Jones Mill Road, and Connecticut Avenue/MD 185, finally terminating in downtown Bethesda at the intersection with MD 355/Wisconsin Avenue and MD 187/Old Georgetown Road.

Short segments are master-planned for separated bike lanes: west of Chelton Road in Bethesda and between Fenton Street and 16th Street in downtown Silver Spring. Sidepaths and a bikeway sharing service roads is master-planned between 16th Street and Jones Mill Road.

MD 614/GOLDSBORO ROAD

MCDOT is planning "bike and pedestrian facilities for a one-mile section of Goldsboro Road between MacArthur Boulevard and River Road. The project proposes two 11-foot travel lanes, sidewalk, and a 5-foot minimum one-way separated bike lane in each direction."⁵⁹

Current project dates: "Design will start in FY27. Land acquisition is scheduled in FY29. Construction is scheduled to start in FY30."⁶⁰ This is an update to the schedule given in the 2019 mandatory referral doc61, which says they're "proposed to start planning and design beyond the 35% design stage in FY22 with construction expected to start in FY25 or later (outside the current CIP timeframe)."

APPENDIX: FUNDING SOURCES

Montgomery County

Montgomery County's FY24 recommended budget includes:

- » Vision Zero activities:⁶² “Conducting evaluations of pedestrian and bicycle facilities in eight of the County's twenty-eight Bicycle and Pedestrian Priority Areas (BiPPAs) and constructing improvements to pedestrian and bicycle connectivity and safety in these BiPPAs. Design is on-going for pedestrian and bike facilities along Veirs Mill Road which will be implemented along with bus rapid transit.”
- » Diverse transportation projects.⁶³
- » Specific BiPPA projects including “improvements in Silver Spring CBD, Grosvenor, and Glenmont in addition to improvements in other designated BiPPA areas”⁶⁴ and “the design and construction of high priority bicycle and pedestrian capital improvements in areas adjacent to future Purple Line Stations from Bethesda to Takoma Park within 1/2-mile radius of each station.”⁶⁵

In general, it is the Montgomery County Department of Transportation's policy that “MCDOT works with the Federal Government, the State of Maryland and elected local, state and federal officials on transportation-related issues. As many Federal facilities are located in the County, staff coordinate closely with these agencies as well as the Federal Transit Administration, Federal Highway Administration, National Park Service and Army Corps of Engineers.”⁶⁶ The county states that

“The Montgomery County Department of Transportation applies for multiple competitive grants each year to assist in funding projects involving infrastructure, transportation and safety.”⁶⁷

Maryland

Maryland's Capital Budget designates projects for planning, design, and construction, either direct expenditure or channeled through local governments or the Washington Metropolitan Regional Transportation Planning Board (TPB).

“The Kim Lamphier Bikeways Network Program provides grant support for a wide range of bicycle network development activities. The program supports projects that maximize bicycle access, fill missing links in the state's bicycle network, and enhance last-mile connections to work, school, shopping and transit. The Bikeways Program seeks to leverage past investments in bicycle facilities, complement existing state, local, and federal programs, and promote biking as a fun, healthy transportation mode... The MDOT Kim Lamphier Bikeways Network Program is accepting applications between May 1 and June 1, 2023.”⁶⁸

The state has a special source, Maryland Fund 88: Bicycle Retrofit⁶⁹ that “upgrades Maryland highway facilities to accommodate bicycles by serving future rider demand, enhancing network connectivity and addressing existing safety issues. The scope includes, but is not limited to, constructing on-road facilities (marked bicycle lanes or marked shared-use lanes) or off-road facilities, such as shared-use paths. The

broad scope allows us to work with local jurisdictions and fit the design to their needs.” Fund 88 is complemented by Fund 33 and Fund 79 covering sidewalk work.

Maryland Highway Safety Office: “General grant applicants are encouraged to develop proposals for outreach initiatives that focus on Maryland’s highway safety priorities: impaired driving prevention, distracted driving prevention, speeding and aggressive driving prevention, occupant protection, and the [safety of pedestrians, bicyclists, motorcyclists, young and older drivers](#).”⁷⁰ “Funding will be provided to projects designed to improve pedestrian/bicycle safety, and to those projects that increase motorist awareness through enforcement. Operations must be data driven with target locations being based on crash and citation data. Funding will be provided for officer overtime, training, and equipment if a need is demonstrated and funds are available. Funding is also available for Public Information and Educational programs. Educational materials may be available through the MHSO...Both Law Enforcement and General grants have a proposal deadline of February 28, 2023.”⁷¹

- » Vision Zero Program, \$75,000,000
- » MD97 Montgomery Hills, \$ 23,521,000, “MDOT SHA will redesign a nearly one-mile section of MD 97 between 16th Street (MD 390) and Forest Glen Road (MD 192), enhancing and prioritizing access and safety for bicyclists and pedestrians.” <https://roads.maryland.gov/mdotsha/pages/pressreleasedetails.aspx?PageId=818&newsId=3476>

Federal

Major funding is provided to the state

and county by the U.S. Department of Transportation. Sources include:

- » U.S. DOT Safe Streets and Roads for All (SS4A) Grant Program.⁷² “On Feb. 1, 2023, U.S. Transportation Secretary Pete Buttigieg announced \$800 million in grant awards for 510 projects through the first round of funding for the Safe Streets and Roads for All (SS4A) grant program.”
- » The FY24 SS4A Notice of Funding Opportunity is posted with applications due in July 2024.⁷³
- » Infrastructure Investment Jobs Act (IIJA).⁷⁴ Maryland Enabled Projects, FY23-FY28, are listed at https://www.mdot.maryland.gov/OPCP/CTP_2023/State_IJJA_Enabled_Projects.pdf. MDOT State Highway Administration projects funded include:
 - » Vision Zero Program, \$75,000,000
 - » MD97 Montgomery Hills,⁷⁵ \$ 23,521,000, “MDOT SHA will redesign a nearly one-mile section of MD 97 between 16th Street (MD 390) and Forest Glen Road (MD 192), enhancing and prioritizing access and safety for bicyclists and pedestrians.”
- » The State and Community Highway Safety Grant Program, Section 402.⁷⁶ “NHTSA’s Office of Regional Operations and Program Delivery (ROPD) administers over \$500 million in grant programs annually... for occupant protection, State traffic safety information systems, impaired driving countermeasures, distracted driving, motorcyclist safety, State graduated driver licensing laws, and non-motorized safety.” For the full set of NHTSA funding programs: <https://www.nhtsa.gov/highway-safety-grants-program>.

MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION: SAFE & EQUITABLE ACCESS TO MONTGOMERY PARKS

M-NCPPC seeks \$7.5M to improve trail crossings and implement educational safety programs for pedestrians and cyclists throughout Montgomery and Prince George’s Counties. The applicant identified three project locations based on crash data and high-injury network locations. At one project location, trail users must cross four to six lanes of traffic in several areas. In lower speed areas where the trail crosses the road, vertical and horizontal curves of the road tend to reduce sight distance for motorists, bicyclists, and pedestrians. From 2015 to 2019, there were 14 pedestrian or bicyclist fatalities within one-third of a mile of the proposed projects. Proposed countermeasures include the provision of additional protected crossing locations by installing new traffic signals, beacons, and median refuge islands. Supporting program elements include street lighting assessments, safety education, a Failure to Yield campaign, and more trail crossing assessments.

Total Federal Funding: \$7,500,000

Total Project Cost: \$10,095,000

PRINCE GEORGE’S COUNTY: PROUD TO PAVE THE WAY FOR MULTIMODAL SAFETY IMPROVEMENTS ALONG PRINCE GEORGE’S COUNTY, MD, HIGH INJURY NETWORK

Prince George’s County, Maryland seeks to implement seven safety and connectivity improvements along their High Injury Network and similar corridors. There is a demonstrated need to reduce crashes overall and more effectively connect the community with transit. The applicant is pursuing countermeasures that would improve visibility, slow vehicle speeds, and promote pedestrian and bicyclist safety in underserved communities. These countermeasures include, among many others, reduction of lane widths and street crossing distances, installation of ADA curbs and high-visibility crosswalks, use of Light Emitting Diode lighting, implementation of a road diet. The countermeasures also include installation of new sidewalks and medians as pedestrian refuges, rectangular rapid flashing beacons for bus stop crossings, and bicycle lanes to connect to existing networks. Some projects already have completed design plans.

Total Federal Funding: \$21,253,985

Total Project Cost: \$26,567,481

- » U.S. DOT's Reconnecting Communities Pilot⁷⁷ funds "the variety of transformative solutions to knit communities back together can include: high-quality public transportation, infrastructure removal, pedestrian walkways and overpasses, capping and lids, linear parks and trails, roadway redesigns and complete streets conversions, and main street revitalization."
- » U.S. DOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE)⁷⁸.
- » U.S. DOT Federal Transit Administration Pilot Program for Transit Oriented Development.⁷⁹

Federal Sources

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds, https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf?u=092922.

Infrastructure Investment Jobs Act (IIJA), <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/>. Maryland Enabled Projects, FY23-FY28, https://www.mdot.maryland.gov/OPCP/CTP_2023/State_IIJA_Enabled_Projects.pdf

The State and Community Highway Safety Grant Program, Section 402: <https://www.ghsa.org/about/federal-grant-programs/402>.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds
September 9, 2022

This table indicates potential eligibility for pedestrian and bicycle activities and projects under U.S. Department of Transportation surface transportation funding programs. Activities and projects need to meet program eligibility requirements. See notes and basic program requirements below, with links to program information. Project sponsors should integrate the safety, accessibility, equity, and convenience of walking and bicycling into surface transportation projects.

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds
Key: \$ = Activity may be eligible. Restrictions may apply, see program notes and guidance. -\$ = Eligible, but not competitive unless part of a larger project.

Activity or Project Type	OST Programs										Federal Transit (NHTSA)										Federal Highway Administration									
	RAISE	NSRA	RCT	SS4A	Thrive	RAIF	TIFA	FTA	ATI	TOD	ApP	402	405	BIF	CRP	CMAQ	HSIP	BHCP	SHFP	PRO	STBG	TA	STP	SRIS	PLAN	NSRP	ELTTP	TTP	TPSE	
Access enhancements to public transportation (benches, bus pads)	\$	\$	\$	\$																										
Americans with Disabilities Act (ADA) 504 Self Evaluation / Transition Plan						TA																								
Barrier removal for ADA compliance	\$	\$	\$	\$																										
Bicycle plans																														
Bicycle helmets (project or training related)																														
Bicycle helmets (safety promotion)																														
Bicycle lanes on road																														
Bicycle parking (see Bicycle Parking Solutions)																														
Bike racks on transit																														
Bicycle repair station (air pump, simple tools)																														
Bicycle share (capital and equipment, not operations)																														
Bicycle storage or service centers (example: at transit hubs)																														
Bridges / overcrossings for pedestrians and/or bicyclists																														
Bus shelters and benches																														
Coordinator positions (State or local) (limits on CMAQ and STBG)																														
Community Capacity Building (develop organizational skills/processes)						TA																								
Crosswalks for pedestrians, pedestrian refuge islands (new or retrofit)																														
Curb ramps																														
Counting equipment																														
Data collection and monitoring for pedestrians and/or bicyclists																														
Emergency and evacuation routes for pedestrians and/or bicyclists																														
Historic preservation (pedestrian and bicycle and transit facilities)																														
Landscaping, streetscaping (pedestrian/bicycle route; transit access); related amenities (benches, water fountains); usually part of larger project																														
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist projects)																														
Maps (for pedestrians and/or bicyclists)																														
Micromobility projects (including scooter share)																														
Paved shoulders for pedestrian and/or bicyclist use																														
Pedestrian plans																														
Rail at-grade crossings																														
Recreational trails																														
Resilience Improvements for pedestrians and bicyclists																														
Road Diets (pedestrian and bicycle portions)																														

Pedestrian and Bicycle Funding Opportunities: U.S. Department of Transportation Transit, Safety, and Highway Funds.⁸¹

“NHTSA's Office of Regional Operations and Program Delivery (ROPD) administers over \$500 million in grant programs annually... for occupant protection, State traffic safety information systems, impaired driving countermeasures, distracted driving, motorcyclist safety, State graduated driver licensing laws, and non-motorized safety.” <https://www.nhtsa.gov/highway-safety-grants-program>

U.S. DOT's Reconnecting Communities Pilot funds "the variety of transformative solutions to knit communities back together can include: high-quality public transportation, infrastructure removal, pedestrian walkways and overpasses, capping and lids, linear parks and trails, roadway redesigns and complete streets conversions, and main street revitalization." <https://www.transportation.gov/grants/reconnecting-communities/reconnecting-communities-faqs>.

U.S. DOT Safe Streets and Roads for All (SS4A) Grant Program, <https://www.transportation.gov/grants/SS4A>. “On Feb. 1, 2023, U.S. Transportation Secretary Pete Buttigieg announced \$800 million in grant awards for 510 projects through the first round of funding for the Safe Streets and Roads for All (SS4A) grant program.” Montgomery and Prince George’s County, Maryland grants:

U.S. DOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE), <https://www.transportation.gov/RAISEgrants>.

U.S. DOT Federal Transit Administration Pilot Program for Transit Oriented Development, <https://www.transit.dot.gov/TODPilot>.

TRANSPORTATION PLANNING BOARD

From the Bicycle and Pedestrian Plan for the National Capital Region: “Visualize 2045 calls for the completion of the National Capital Trail Network. The network will provide high-quality bicycle and pedestrian access for most of the region’s people and jobs... When the TPB adopted the trail network, it also asked its member jurisdictions to:

“Prioritize projects, programs, and policies that will implement portions of the National Capital Trail Network. All projects, programs, and policies must be implemented in an environmentally sensitive and sustainable manner, consistent with the TPB Vision”.

The network will be used to prioritize funding for the Transportation Alternatives Program and the Transportation – Land Use Connections (TLC) Program.”

Transportation Alternatives program, part of the FHWA Surface Transportation Block Grant Program, administered by the Washington Regional Transportation Planning Board, <https://www.roads.maryland.gov/mdotsha/pages/index.aspx?PageId=144>.

Transportation Land-Use Connections Program, <https://www.mwcog.org/transportation/planning-areas/land-use-coordination/tlc-program/>. “The TLC Program provides short-term consultant services to local jurisdictions for small planning projects that promote mixed-use, walkable communities and support a variety of transportation alternatives. The program provides consultant assistance of \$30,000 to \$80,000 for planning projects or design projects, and up to \$80,000 for design or preliminary engineering projects.”

Transit Within Reach Program Technical Assistance, <https://www.mwcog.org/transportation/programs/transit-within-reach-program/>. “The Transit Within Reach Program funds design and preliminary engineering projects to help improve bike and walk connections to existing high-capacity transit stations or stations that will be open to riders by 2030. The program places special emphasis on projects that improve access in TPB Transit Access Focus Areas (TAFAs), which have been identified as prime locations for small capital improvements— such as sidewalks, trails, crosswalks— that will make it safer and easier to walk or bike to train stations and bus stops... This solicitation will be conducted every two years between FY 2021 and FY 2026. Approximately \$80,000 will be available per project; for each biennial solicitation approximately \$250,000 will be allocated to three projects. Recipients will receive short-term consultant services, not direct financial assistance.”

APPENDIX: MARYLAND CODE

TITLE 2 DEPARTMENT OF TRANSPORTATION

Subtitle 6 Bicycle and Pedestrian Access 2-602 Public Policy

The General Assembly finds that it is in the public interest for the State to include enhanced transportation facilities for pedestrians and bicycle riders as an essential component of the State's transportation system, and declares that it is the policy of the State that:

- (1) Access to and use of transportation facilities by pedestrians and bicycle riders shall be considered and best engineering practices regarding the needs of bicycle riders and pedestrians shall be employed in all phases of transportation planning, including highway design, construction, reconstruction, and repair as well as expansion and improvement of other transportation facilities;*
- (2) The modal administrations in the Department shall ensure that the State maintains an integrated transportation system by working cooperatively to remove barriers, including restrictions on bicycle access to mass transit, that impede the free movement of individuals from one mode of transportation*

to another;

(3) As to any new transportation project or improvement to an existing transportation facility, the Department shall work to ensure that transportation options for pedestrians and bicycle riders will be enhanced and that pedestrian and bicycle access to transportation facilities will not be negatively impacted by the project or improvement; and

(4) In developing the annual Consolidated Transportation Program, the Department shall:

(i) Ensure that there is an appropriate balance between funding for:

1. Projects that retrofit existing transportation projects with facilities for pedestrians and bicycle riders; and

2. New highway construction projects; and

(ii) In transit-oriented areas within priority funding areas, as defined in § 5-7B-02 of the State Finance and Procurement Article, place increased emphasis on projects that retrofit existing transportation projects with facilities for pedestrians and bicycle riders and increase accessibility for the greatest number of pedestrians and bicycle riders.

APPENDIX: COUNTYWIDE TRANSIT CORRIDORS FUNCTIONAL MASTER PLAN

(December 2013)

BICYCLE AND PEDESTRIAN ACCOMMODATION AND SAFETY (PP. 67- 68)

To accommodate transit stations, good bicycle and pedestrian access is needed to all BRT stations. The highest level of accommodation for pedestrians and bicyclists is needed in the areas where pedestrians are most prevalent, such as transit-oriented development areas, established or developing activity centers, areas around Metro stations, and transfer points between BRT routes.

ENSURING PEDESTRIAN SAFETY AND ACCESSIBILITY

Safe and adequate pedestrian accommodation is needed both along and across the roadways included in the recommended transit corridors. The typical sections used to determine recommended rights-of-way:

- » include six-foot-wide minimum sidewalks to ensure good pedestrian accommodation to and from all stops along transit corridors
- » include landscape buffers of a sufficient width to achieve sidewalks and handicap ramps that can meet ADA Best Practices
- » include a six-foot-wide median where feasible to accommodate a pedestrian refuge to ensure that transit patrons can safely cross the roadway to and from transit stops and that the general public can safely cross the roadway at all intersections.

While additional traffic signals are not specifically recommended in this Plan, it is likely that there will be more signalized crossings at BRT stops, which would assist all pedestrian crossings. The adequacy of pedestrian crossing times at stations should be evaluated and the need for advance walk signals that would give pedestrians a head start on traffic should be considered.

BIKE ACCOMMODATION

This plan supports the provision of on-road accommodation for bicyclists on all the recommended transit corridors, but right-of-way constraints limit the ability to achieve this goal on some corridor segments.

- » Where a facility for bicyclists is already recommended in a master plan, the appropriate space is included in the recommended right-of-way recommendations.
- » Where on-road bicyclists can reasonably be accommodated on additional corridors, this Plan includes the appropriate space in the recommended right-of-way.
- » Where constraints limit the ability to achieve the on-road bike accommodation beyond what is recommended in current master plans, this Plan identifies the alternative recommended bike accommodation for each corridor segment.

The work leading to the Countywide Transit Corridor Functional Master Plan evaluated bikeway accommodations along all links recommended for a dedicated transitway (such as median lanes, curb lanes, or side-of-road lanes). Three policies were considered to determine whether the Functional Plan should recommend rights-of-way that

would accommodate modifications or additions to planned bike facilities. Since right-of-way is constricted along most of the proposed BRT corridors, priority was given to these policies as follows.⁶⁷ The first priority was to include the master planned bikeway recommendation, whether this is a signed shared roadway, or a shared use path, bike lanes, or cycle tracks. This Functional Plan retains all master plan recommended bikeways.

The second priority was to include bike lanes based on the Planning Board's bikeway policy. This draft standard was recommended by the Planning Board on September 18, 2008 as part of the Context Sensitive Road Design Standards discussion. It states:

- » Urban Major Highways, Arterials, and Minor Arterials
 - » 5.5-foot wide bike lanes should be provided if specified in a Master Plan.
 - » 14-foot wide curb lanes should be provided on all other major highways, arterials, and minor arterials.
- » Suburban Major Highways, Arterials, and Minor Arterials
 - » 5.5-foot wide bike lanes should be provided if specified in a Master Plan and should be provided on roads with average daily traffic (ADT) of 20,000 vehicles per day or posted speeds of 45 mph or greater.
 - » 14-foot wide curb lanes should be provided on all other major highways, arterials, and minor arterials.
 - » Rural Major Highways, Arterials, and Minor Arterials
 - » 5.5-foot wide bike lanes should be provided.

The third priority was given to accommodating the State Highway Administration's Policy on Marked Bicycle Lanes (revised November 2011), which states on page 5 that "All projects that involve widening or new construction shall meet the preferred widths...for marking Bicycle Lanes." Bike lanes vary between 4 and 6 feet wide depending on the posted speed limit and the truck volumes. Most of the corridors in the recommended transit network are State highways.

This Plan also recommends designating new Bicycle-Pedestrian Priority Areas (BiPPAs) to enhance the access to BRT.

REFERENCES

Montgomery County

- Montgomery County Bicycle Master Plan, <https://montgomeryplanning.org/planning/transportation/bicycle-planning/bicycle-master-plan/>
- Montgomery County Bikeways Visualization, <https://data.montgomerycountymd.gov/Transportation/Bikeways/icc2-ppee>
- Montgomery County Bikeways Map, <https://experience.arcgis.com/experience/82dcb84f8d85414a93146122e4ac0594>
- Montgomery County Bus Rapid Transit, <https://montgomeryplanning.org/planning/transportation/transit-planning/bus-rapid-transit/>
- Montgomery County Vision Zero, <https://www.montgomerycountymd.gov/visionzero/>
- Montgomery County Complete Streets Design Guide (February 2021), <https://www.montgomerycountymd.gov/dot-dte/projects/CSDG/index.html>
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