

TRANSPORTATION

Vision

Rockville's transportation system will provide residents, businesses, employees, and visitors with multiple options for moving about the city through a variety of modes and paths while ensuring access for persons of all abilities and mobilities. The city's commercial vitality, and position as a regional hub and employment center, will be supported by infrastructure investments that enhance connections to the broader region, while managing traffic and congestion. Rockville will continue to transition to a more-walkable community and contribute to regional efforts to create safe, efficient, and environmentally sustainable mobility.

Encouraging a multi-modal approach to mobility in Rockville includes facilitating the use of transit and bicycles and efficient transfers between modes.

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Before Rockville's incorporation as a city, the area that now encompasses the municipality was a home and crossroads for the native people of the area. The indigenous population carved a path on the high ground, known as Sinequa Trail, along which downtown Rockville is now located. As a transportation artery for centuries, Rockville Pike (Maryland Route 355) can claim to be the oldest road in Montgomery County. Pike travelers have included Native Americans, early American farmers, American presidents, enslaved people seeking freedom, Confederate and Union troops, wealthy Washingtonians retreating to their summer homes, and modern-day commuters and shoppers.

The City of Rockville was founded at a regional crossroads, connecting routes to Georgetown, Frederick, Darnestown, and Bladensburg. The city's continued ability to thrive economically is dependent in part on its superior regional access and a number of high-capacity transportation facilities that make Rockville a premier address for businesses, County and State facilities, and places of residence.

Major transportation infrastructure continues to shape the city: I-270 provides access to the city's bio-technology corridor; Rockville Pike is a major highway route that sustains its success as a regional shopping destination; Town Center, which grew up around Rockville's historic crossroads and passenger rail station, is now anchored by a major Metro station and bus hub; and new growth is planned around the Twinbrook and Shady Grove Metro stations.

The city's formative growth years of the 1950's and 60's saw primarily automobile-oriented, commuter suburban development. Consistent with that "suburban" background, the attention given in those decades to bicycle and pedestrian mobility was minimal. During the 1970's, two energy crises and a new environmental sensitivity began to change the picture. The city's mix of employment-generating and residential land use became more balanced, and the City began to focus on transportation alternatives other than the automobile.

Goals for Rockville's transportation system include:

1. Provide safe transportation facilities for all modes by implementing Complete Street projects and attaining Vision Zero goals.
2. Promote walking, rolling, and bicycling modes with new and upgraded facilities.
3. Maximize the use and value of transit assets and services.
4. Update development review standards to reduce vehicle miles traveled and promote alternative modes of travel.
5. Plan for new mobility technologies and reduce carbon emissions and other pollutants from transport.
6. Manage and improve Rockville's roadway and trail network to provide for safe and comfortable, movement of people walking, rolling, and driving, for all types of trips and delivery of goods and services.

The 21st Century, especially its second decade, brought increasing awareness of the need for safe streets through Vision Zero and complete streets that encompass greater bicycle and pedestrian comfort. Rockville today is placing a greater focus on equity—new laws have been enacted, new standards set, and millions of dollars spent in expanding, improving, and maintaining bicycle and pedestrian infrastructure.

During the development of this Plan, the COVID-19 pandemic emerged as a significant short-term impact on many aspects of the city's transportation system. While it remains unclear how long-term travel behaviors will change as a result of the pandemic, this Plan acknowledges that the City should continue to monitor and adjust to emerging trends and community interests, such as shifting commuter patterns, transit ridership, teleworking, and use of alternative travel modes.

'Pedestrian', or 'walking', is used in this Plan as a general term for any type of travel mode that involves a person traveling by foot, whether walking or running, and may include use of a white cane, audio-assistance device, or other physical assistance. 'Biking' or 'rolling' is used in this Plan as a general term for travel by many types of non-vehicular transportation modes (also known as 'micro-mobility'), including bicycles, scooters, skateboards, one-wheel boards, roller blades, wheelchairs, etc. The term 'driving' refers to any type of motorized mode of vehicular travel, such as a car, truck, or motorcycle.

Any specific transportation-related recommendation in the Planning Areas section of this Plan without a direct reference to their respective goals and policy statements in the Transportation Element, requires further coordination and evaluation prior to its inclusion in any development application review or funding by the City for implementation.

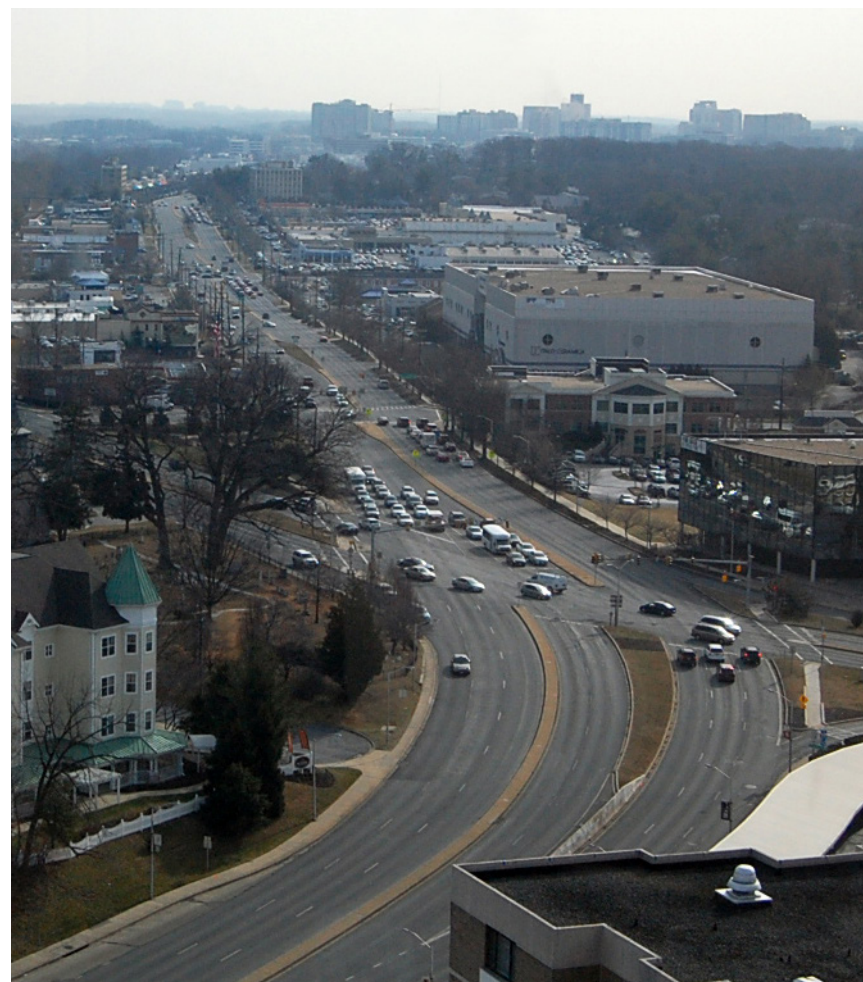
Summary of Community Input

The Rockville 2040 process generated many comments on transportation issues. A common theme was a need for better pedestrian connections, between neighborhoods and activity nodes, and across major thoroughfares and the railroad tracks that physically divide the city. Better pedestrian and bicycle connections across the tracks that separate the Twinbrook and Rockville Pike neighborhoods,

and across MD-355 to Shady Grove Metro Station, were mentioned as specific priorities. Also of concern is the need to ensure safe and comfortable transportation options for seniors and those of all abilities and mobilities.

Comments from Rockville 2040 support the City's continuing efforts to build out its bicycle network, with some advocating for a more aggressive approach to incorporating protected bicycle infrastructure into road rights-of-way. Others sought to ensure that on-street parking would not be sacrificed by installing bicycle lanes. This is a balance that is recognized by this Plan and in the City study's and outreach when considering new bicycle infrastructure.

There is wide support for improved transit, though no clear consensus regarding the type that it should be, with some support for a bus rapid transit (BRT) system and for a local trolley service. There was strong support for improved bus service, from residents, the business community and



Looking south at the intersection of Rockville Pike and Veirs Mill Road.

Montgomery College staff and students. Higher frequency bus service was the most mentioned desire, though the City does not manage a bus system itself. Interest was also expressed in improving the Rockville and Twinbrook transit stations, including safety, aesthetics, internal circulation and access.

With respect to roads, the input was mixed. Participants expressed concern and frustration regarding traffic on Rockville's main corridors, but did not necessarily support the increased road network that might mitigate that traffic if it would threaten the tranquility of existing neighborhoods.

GOAL 1

Provide safe transportation facilities for all modes by implementing Complete Street projects and attaining Vision Zero goals.

Recent policy efforts in transportation planning seek to promote a balanced approach to utilization of the public right-of-way for all modes of transport, with an emphasis on facilities that serve walking, rolling or cycling, rather than just driving. In this section, the Plan states broad policies relating to 'Complete Streets' for all modes of transport, and 'Vision Zero' goals to eliminate all deaths on the city's roadway network. Both of these overarching policies are comprehensive in scope, encompassing aspects of all modes of travel and relating to policy statements in the rest of this Element. Specific actions to implement Complete Streets and Vision Zero are provided under the policy statements of other goals, organized by mode.

Policy 1

Continue to implement and improve the City's Complete Streets Policy.

The City adopted a 'Complete Streets' policy in 2009 to ensure that multi-modal elements are incorporated into all transportation improvement projects. The policy states that: "New construction and re-construction roadway projects in the city shall accommodate users of all ages and abilities including pedestrians, bicyclists, transit users, motorists, and adjacent land users." New sidewalks, crosswalks, and bicycle

"And because so many fear for their safety on our streets, there is no true freedom of mobility — no right to choose to walk or bike — and, as a result, we compromise our public health with increasing rates of sedentary diseases and higher carbon emissions."

- VisionZeroNetwork.org



A new bicycle lane (top) was added on South Stonestreet Avenue in 2017, in keeping with the City's Complete Streets policy. Decorative fencing and landscaping (bottom) deters jaywalking across Park Street at the Rockville transit station. These types of physical impediments are part of implementation of Vision Zero principals (see Policy 2), that seek to reduce and eliminate deaths on roadways.



lanes are included under this policy. Continued efforts to make the City's rights-of-way useful for all modes is a major policy goal for this Plan and for the City.

Policy 2 Implement the Vision Zero Action Plan for Rockville, with a focus on pedestrian and bicycle safety.

Vision Zero is an international movement to reduce and eliminate injury and death on roads from vehicle crashes and crashes between vehicles and other road users, such as pedestrians and bicycles. The movement takes its name from a goal set in Sweden to reduce deaths from traffic crashes to zero by 2050. Vision Zero asserts that no traffic fatalities are acceptable and that policies and physical changes to roadway design can reduce collisions among vehicles and between vehicles and other modes.

In October 2018, Rockville's Mayor and Council adopted a resolution that endorses Vision Zero as a comprehensive and holistic approach to reducing and eliminating fatal crashes. The effort relies on data-driven approaches to improve the engineering of roads, to conduct targeted education and enforcement, and to change laws to improve driver behavior and increase penalties for dangerous conduct on the roads. A Vision Zero Action Plan was approved by the Mayor and Council in June 2020 to guide the City's goal of reaching zero deaths and serious injuries by 2030. In 2020, the Mayor and Council also initiated the creation of a Pedestrian Master Plan, which will, when adopted, support the city's Vision Zero Action Plan by seeking to improve the safety and comfort of people walking and rolling in the city.



A woman with two small children (top) prepares to make a difficult crossing of Rockville Pike at Edmonston Drive. Pedestrian safety improvements implemented in 2018 along Chapman Avenue include the removal of a right turn lane (middle) to shorten the crossing distance at Twinbrook Parkway and a new curb extension and crosswalk (bottom) leading to the Twinbrook Metro Station.

GOAL 2

Promote walking, rolling, and bicycling modes with new and upgraded facilities.

This Plan promotes the expansion of walking, rolling, and bicycling as transport modes. Infrastructure to support these modes is as important as roads are for cars, and is an essential component of a sustainable Rockville. Nearly all Rockville residents and visitors are pedestrians during their daily routines, even if it is just walking to and from their cars. Rockville residents who are not ambulatory, and use wheelchairs or scooters, also depend on pedestrian and bicycle infrastructure to move around the city, with specific requirements set in federal law through the Americans with Disabilities Act (ADA). Walking produces the least amount of carbon dioxide of any mode of transport, with bicycling a close second. Facilitating and promoting walking, rolling, and bicycling is a key aspect of neighborhood design, land use mix, infrastructure planning, and public health.

Policy 3

Make walking, rolling, and bicycling a convenient and safe option for travel in Rockville.

While walking, rolling, and biking around Rockville should be a safe, comfortable, and easy activity, many conflicts with automobiles start right outside one's door. Roadways designed for fast, efficient movement of automobiles make pedestrians and bicyclists vulnerable. Long stretches of roads without safe or marked pedestrian crossings make crossing these roads a challenge. By default, people walking, rolling, and biking are at a disadvantage in the transportation system, where bicyclists and pedestrians mostly yield to vehicles. A culture of speeding, rolling stops, and failure to yield can lead to collisions, even when pedestrians are in crosswalks and have the technical 'right-of-way'. In some critical locations, these conflicts are so difficult that grade separation of the two modes may be a necessary solution. Bicyclists on major roadways and at intersections can also be at risk. And bicycles can also present risks to pedestrians and other travelers.



A crossing guard controls traffic at College Gardens Elementary before and after school hours.

The Mayor and Council recognized the need to improve pedestrian safety and increase walkability throughout the city by establishing the Rockville Pedestrian Advocacy Committee (RPAC) in 2019. The City defines 'pedestrian' generally as any person traveling by foot, whether walking or running, and may include use of a white cane, audio-assistance device, or other physical assistance. The goals of RPAC are to: (1) Advocate for pedestrian safety in Rockville in pursuit of Vision Zero; (2) Enhance pedestrian accessibility and walkability within the city's natural, business and residential environments; (3) Promote access and connectivity among the city's disparate neighborhoods and pedestrian centers to increase social connectivity; and (4) Promote walking as a viable transportation option through provision of sidewalks, pathways, and trails that are safe, usable, well-constructed, maintained, and interesting. RPAC works in collaboration with the Rockville Bicycle Advisory Committee, Rockville Traffic and Transportation Commission, and other City and community groups to further the City's goals.

Actions

3.1 Plan for and construct neighborhood-to-neighborhood connections for people walking, rolling, and bicycling.

3.2 Promote and ensure safe bicycle and pedestrian routes to schools, parks, community and government centers, transit stations, and other key pedestrian destinations.

3.3 Facilitate consolidation and width reduction of curb cuts and driveways, focused on highway frontages, to minimize impacts on pedestrians and cyclists.

3.4 Work with Montgomery County and the City of Gaithersburg to improve the pedestrian and bicycle environment and connections outside the city.

3.5 Increase outreach to cyclists and pedestrians on safety through signage and other forms of education.

3.6 Increase driver education and enforcement to increase safety for and reduce incidents with people walking, rolling, and driving.

3.7 Conduct a study of bicycle and pedestrian safety 'hotspots' in the city to find the areas most in need of safety improvements.

3.8 Advocate for MDOT SHA, on State roads, and seek opportunities, on City roads, to eliminate long stretches of major roadways without safe pedestrian crossings. (*See also Action 19.8 of the Transportation Element*)

3.9 Continue coordination with the Rockville Pedestrian Advocacy Committee (RPAC) and promote pedestrian-oriented events and programs.

Policy 4

Improve infrastructure for pedestrians to promote walking as a non-polluting, healthy, sociable mode of transportation.

Rockville has a robust sidewalk network, however gaps are still found in some locations (See Figure 9). Of most concern are streets that do not have a sidewalk on either side, meaning that pedestrians must cross to another side or walk in the roadway. Major barriers include the I-270 interstate and WMATA and CSX railroad tracks.

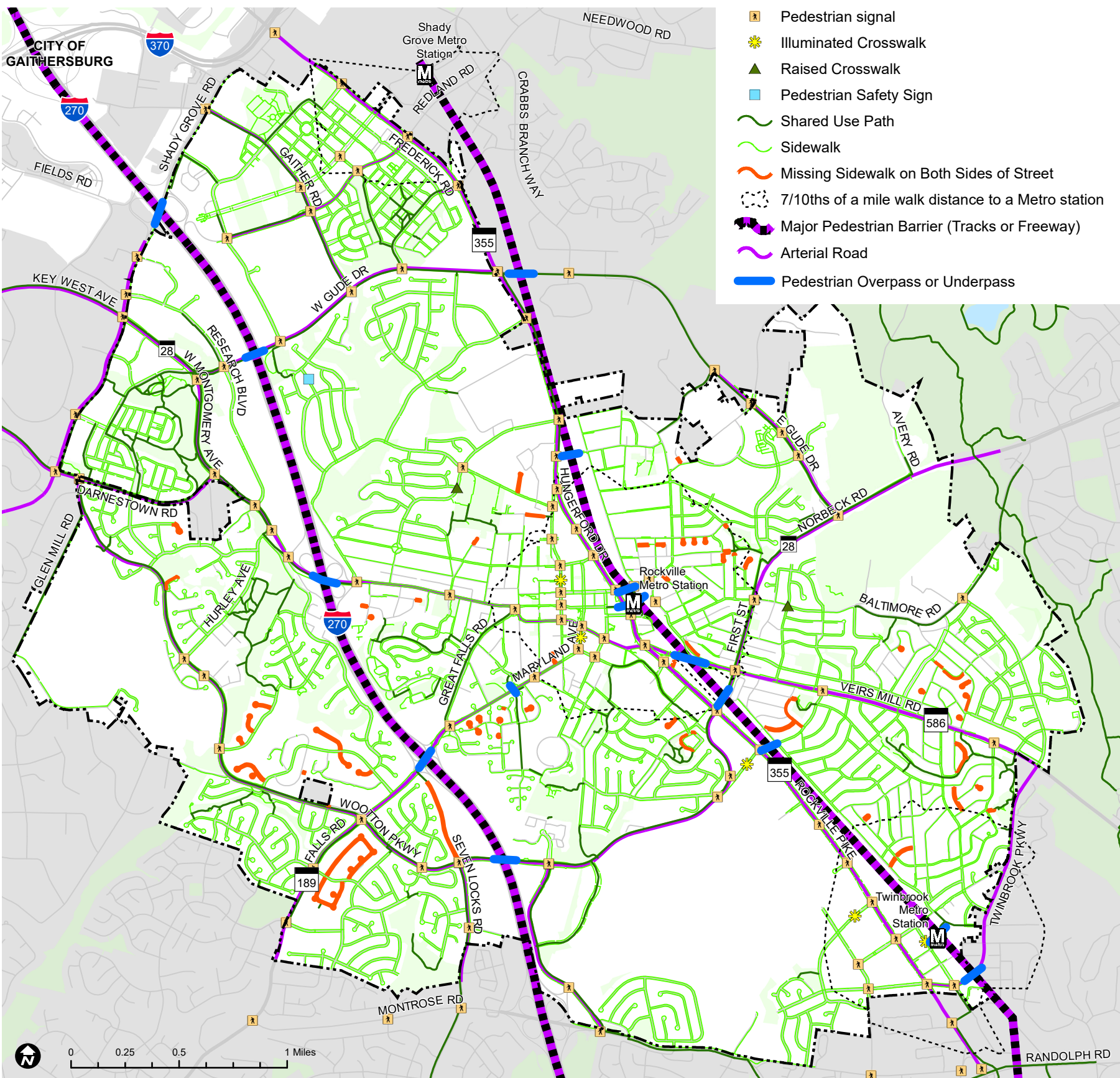
In 2020, the Mayor and Council initiated the creation of a Pedestrian Master Plan to consider the city's overall

City of Rockville Comprehensive Plan



King Farm Village Center (top) was built with pedestrians in mind. The intersection of Rockville Pike at Halpine Road (bottom) is not a pedestrian-friendly crossing, though it leads directly to the Twinbrook transit station for many residents, workers, and visitors. Crossing Rockville Pike (MD-355) west of the Rockville transit station (bottom) is not a safe or pleasant experience for people walking or biking. The rail underpass of Park Road similarly offers little protection or comfort to those not traveling by automobile.

Figure 9: Pedestrian Facilities and Environment



pedestrian environment and physical design issues related to the pedestrian experience, such as crossing distances at intersections and completion or enhancement of sidewalks. This Plan recommends adoption of a Pedestrian Master Plan for the City to improve pedestrian safety, ensure pedestrian access, and enhance pedestrian experience. The Pedestrian Master Plan should focus on high use pedestrian areas, such as Town Center and Metro station areas, streets with missing sidewalks on one or both sides, including major streets and streets that lead to major roadways. Improving infrastructure for crossing major arterial roadways is also needed, and working closely with the Maryland Department of Transportation State Highway Administration (MDOT SHA) to improve crossing roads under their control. A pedestrian plan may also look at how to create pedestrian-only areas, flexible spaces, or passages and connections that make walking an interesting and comfortable activity.

Actions

4.1 Adopt and implement a Pedestrian Master Plan to improve pedestrian safety, ensure pedestrian access, and enhance pedestrian experience. Elements of the plan may include: improved transit wayfinding; ADA-compliant furniture and facilities; complete sidewalks; pedestrian-scale lighting; landscaping; and street trees; and parking for bikes and other wheeled, non-vehicular modes.

4.2 Continue to construct new sidewalks according to the City's Sidewalk Prioritization Policy, and bring existing sidewalks up to current standards (where possible) when projects are implemented. Review the City's Sidewalk Prioritization Policy to ensure that points are given to missing sidewalks on side streets that lead to major and state roadways. Monitor and report on progress in eliminating gaps in the city's sidewalk network.

4.3 Review City sidewalk standards to ensure that sidewalk widths and adjacent buffers (e.g., grass, trees, seating, stormwater facilities, etc.) promote walkability.

4.4 Improve pedestrian facilities when planning for bridge deck replacement or refurbishment projects.

4.5 Prioritize capital improvement projects to pedestrian facilities in the immediate area of the Rockville and Twinbrook transit stations.

4.6 Expand ADA-compliant seating areas and other amenities, such as benches and crosswalk aprons, at appropriate commercial and residential locations throughout the city to facilitate walking and rolling as a safe and comfortable activity for people of all abilities and age groups.

4.7 Coordinate with MDOT SHA to study potential pedestrian improvements at the intersection of MD-28 and MD-355, to better facilitate walking and rolling between Town Center and Rockville Pike, south of MD-28.

4.8 Coordinate with MDOT SHA to study at-grade or grade-separated pedestrian improvements at King Farm Boulevard and MD-355 to improve access to the Shady Grove Metro station.

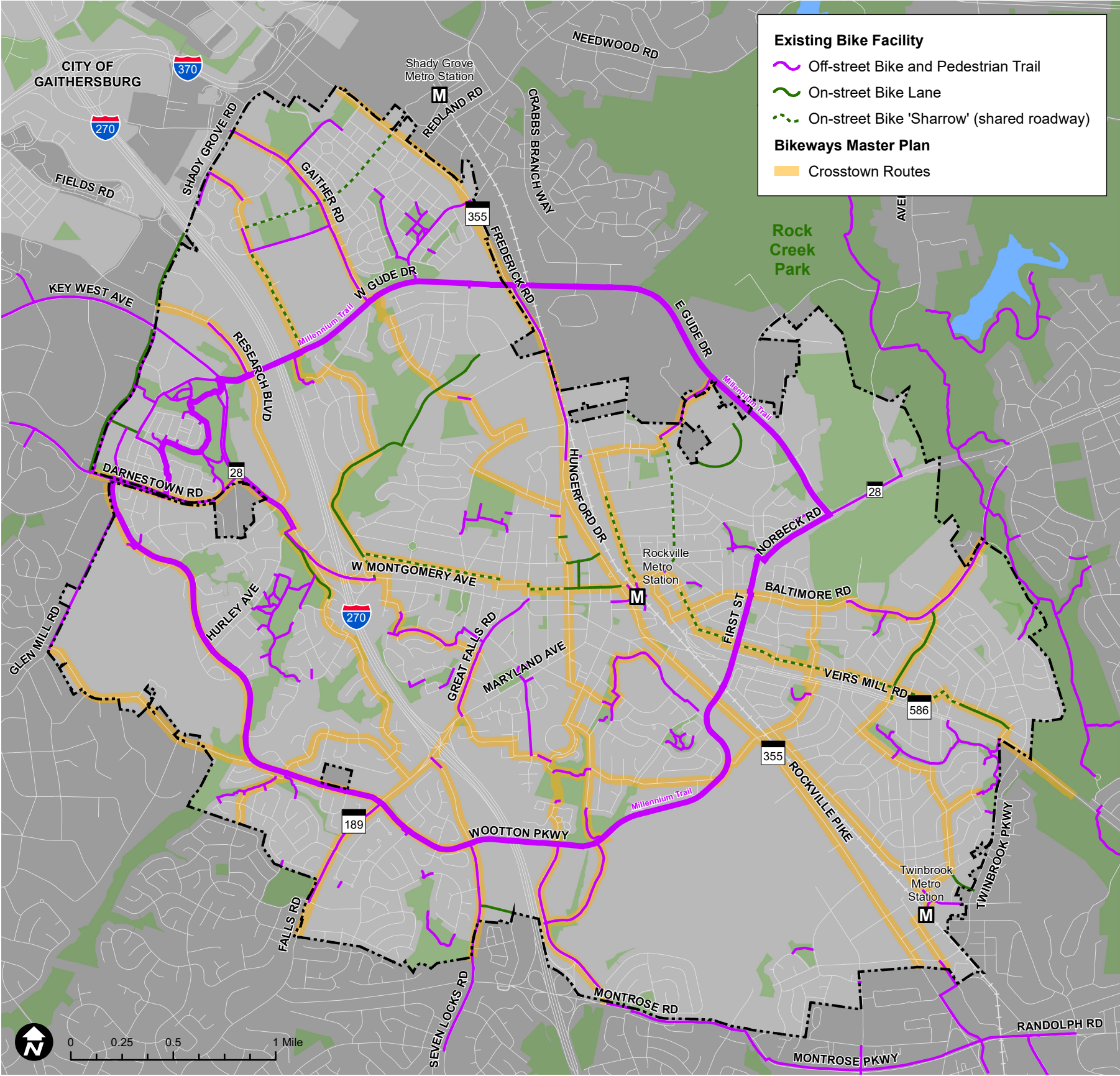
4.9 Coordinate with MDOT SHA to study grade-separated improvements on Rockville Pike (MD-355) in front of the Rockville Metro Station (*See also Policy 10 of the Transportation Element and Planning Area 1*).

Policy 5 Improve infrastructure and networks for bicyclists to increase bicycle riding.

As of the date of this writing, the City of Rockville is recognized as a bronze-level bicycle community by the League of American Bicyclists and the City hopes to improve its education, engineering, and enforcement to reach a higher level in the future. Previous comprehensive master plans have promoted the creation of bicycle facilities, first under the auspices of the Recreation and Parks Department and more recently, recognizing bikes as a form of transportation by moving bicycle planning staff to the Department of Public Works.

In 1999, the City established the Rockville Bicycle Advisory Committee (RBAC) to: (1) Assist in the development of the city's bicycle and pedestrian specific policies, as well as other policies that affect the conditions for bicycling in the city; (2) Oversee the implementation of the City's Bikeway Master Plan and report progress toward completion to the Mayor and Council; (3) Review current and proposed Capitol Improvement Projects to ensure bicycle needs are incorporated into design and construction when appropriate; and (4) Deliver updates on the needs and desires of

Figure 10: Existing Bicycle Facilities and Planned Crosstown Routes



bicyclists in the community, with recommendations for action to the Mayor and Council. RBAC continues to be an essential part of the City's commitment to bicycle safety and comfort, working in collaboration with the Rockville Pedestrian Advocacy Committee, Rockville Traffic and Transportation Commission, and other City and community groups to further the City's goals.

The 2004 Bikeway Master Plan set goals for major projects, including completion of the Carl Henn Millennium Trail, and guided the construction of over 20 miles of off-street trails shared by bikes and pedestrians, on-street bike lanes, and on-street markings, called 'sharrows.' The City adopted a Complete Streets policy in 2009 requiring that the needs of bicyclists, among others, be given consideration in all roadway projects.

In 2017, a new Bikeway Master Plan was adopted, which outlines a series of projects while also noting the health benefits of biking and the important role that bicycle use can play in reducing carbon emissions and traffic congestion. The 2017 Bikeway Master Plan, as approved by the Mayor and Council, is adopted by reference as part of this Plan.

Rockville continues to build facilities for bicycling, adding infrastructure to make the system more safe and efficient. The City is working on project-by-project improvements to a network of bicycle routes across the city, as outlined in the Bikeway Master Plan. Currently, there are two signed crosstown bike routes that guide bikers across the city in the east to west and north to south directions (see Figure 10). These signed routes link available facilities including on-street bicycle lanes, marked shared roadways, and off-street trails to provide the safest route. The 2017 Bikeway Master Plan established a total of eight crosstown routes. These routes are also planned to connect with bike routes and trails that continue beyond the city limits to trails and destinations in Montgomery County.

As can be seen in Figure 10, there are missing segments in the city's bicycle facility network that would ensure safe and comfortable travel in the city by bike. Some of these include: a connection between the Carl Henn Millennium Trail and Rock Creek Trail along Southlawn Lane; protected bike lanes at the Shady Grove Road, Falls Road, and Montrose Road crossings of I-270; and the entire MD-355 corridor within the city.

As part of its implementation of the Bikeway Master Plan, Rockville's transportation planning staff utilizes the Montgomery County Bicycle Stress Map (See www.mcatlas.org/bikestress) and anticipates incorporating the Montgomery County government's bikeway classification system and applications in future updates to the Rockville Bikeway Master Plan.

Bicycle parking is another important element of a complete bicycle system. In order to make bike riding an option for shopping trips, businesses in commercial areas need to provide a bike rack or post for patrons to lock up their bikes. Civic destinations like schools or parks also need to make sure there is adequate bike parking to encourage bike trips by students and visitors, respectively.

In order to foster the provision of bike parking, the City established bicycle parking regulations in the Zoning Ordinance to be fulfilled by all new developments. The current requirements include short term bike parking for customers and indoor bike parking for apartment buildings. In 2015, the City developed the Bike Rack Grant Program to provide eligible businesses with safe and convenient bicycle parking.



Bicycling in downtown Rockville is increasingly becoming a mode of choice for Rockville residents and workers.

Bike share, introduced in Rockville in 2013, offers another transportation option. The ability to have quick access to a shared bike is a good complement to transit service. There are currently 15 stations within the city limits of Rockville and over two dozen in the larger Rockville/Shady Grove area. In the twelve months from July 2017 through June 2018, the Rockville/Shady Grove area bike share station network registered approximately 8,200 trips. For more information about bike share in the city, visit www.capitalbikeshare.com.

Actions

5.1 Continue to implement and enhance the 2017 Bikeway Master Plan recommendations and the City's Complete Streets Policy recommendations. Monitor and report on progress in meeting the recommendations and planned bicycle routes of the Bikeway Master Plan and recommendations of the City's Complete Streets Policy on an annual basis.

5.2 Update or amend the City's Bikeway Master Plan on a regular basis, with the purpose of improving facilities and safety for people on bikes. Updates should consider new bicycle facility locations that support a complete bicycle transportation network, increase the comfort level of people on bikes along key bicycle corridors, and propose on-street

bicycle facility treatments related to the stress or comfort level of each roadway with a preference for protected bicycle lanes.

5.3 Work with neighborhood groups to identify projects that will provide improved bicycle connections to major trails or destinations and build bicycle networks promoting equity.

5.4 Work with Montgomery College and Montgomery County Public Schools (MCPS) on a new bikeway connection from the College to Rockville Town Center.

5.5 Study potential locations for a bicycle and pedestrian facility over or under the CSX tracks somewhere between Edmonston Drive and Twinbrook Parkway and work with agency partners and property owners to build the preferred option. (*See also Planning Areas 8 and 9*)

5.6 Collaborate with Montgomery County government to look for opportunities to connect Rockville bicycle routes to the County's bicycle network and trail system, especially between the Carl Henn Millennium Trail and Rock Creek Trail, and south along Falls Road from the city limits, ultimately as far as the C&O Canal Towpath.

5.7 Continue coordination with the Rockville Bicycle Advisory Committee (RBAC) and promote bicycle events and programs.

5.8 Improve and expand bicycle wayfinding and signage.

5.9 Continue to provide grants and incentives for property owners to install bicycle racks.

5.10 Continue to expand the bike share system in Rockville.

5.11 Participate in the MDOT Maryland Bikeways Program supporting projects that maximize bicycle access and fill missing links in the State bike system. Extra points are awarded when reviewing projects located in or connecting to a Sustainable Community, which may also be eligible for reduced matching requirements for funding. (*See also Policy 16 of the Economic Development Element*)

5.12 Encourage the installation of bike parking and lockers that accommodate a range of bicycle types and sizes.



The two images above show how Rockville has changed its approach to bicycle route signage. The image on the left shows the former colored-coded crosstown routes. The image on the right shows the City's current distance and destination approach to bicycle route signage that provides more information for the person walking, rolling or biking.

5.13 Coordinate with MDOT SHA, and Montgomery County government to achieve the goals of: 1) increasing bicycling rates; 2) creating a highly connected, convenient and low-stress bicycling network; 3) providing equal access to low-stress bicycling for all members of the community; and 4) improve the safety of bicycling.

5.14 Coordinate with MDOT SHA to establish a pedestrian and bicycle trail connecting Rockville Civic Center Park and RedGate Park, across Norbeck Road (MD-28). (*See also Planning Area 17*)

5.15 Expand on the City's Bike Racks in Parks program, initiated in 2020, to improve access to bicycle infrastructure across diverse areas of the City.

GOAL 3

Maximize the use and value of transit assets and services.

Rail and bus transit service is a crucial part of Rockville's transportation system, providing mobility across the city and access to the region. For those who do not own or drive private automobiles, the transit system is a primary means for accessing employment, shopping, and services.

Policy 6

Actively support the transit services provided by WMATA, Montgomery County government, the State of Maryland, and Amtrak.

The Metrorail rapid transit system, operated by the Washington Metropolitan Area Transit Authority (WMATA), connects Rockville to neighboring activity centers along the west branch of the system's Red Line, as well as regional destinations throughout the entire Metrorail system. Rockville residents use the Red Line to commute to destinations such as the National Institutes of Health campus and Bethesda, to downtown Washington D.C., and to major transportation hubs at Union Station and National Airport. Metrorail operates on a railway that is completely separate from the roadway network and therefore provides a means of travel to and from Rockville for thousands of commuters every day



MARC commuter rail operating on the Brunswick Line on track owned by CSX Railroad and 3000 series WMATA Metrorail train on the Red Line platform at the Rockville transit station.



MARC and Amtrak station platform at the Rockville transit station.

without adding regional vehicular trips to local highways and roads. Rockville, Twinbrook, and Shady Grove Metro stations are key transportation facilities and also serve as amenities that are driving employment and housing growth in their station areas. WMATA also provides regional bus service in Rockville through its Metrobus system.

The Montgomery County Department of Transportation (MCDOT) operates the Ride On bus system. Ride On serves communities in Montgomery County, including the City of Rockville, as well as the community of Langley Park in Prince George's County and Sibley Memorial Hospital in Washington, D.C. In addition to the Ride On neighborhood bus system, MCDOT also operates specialized bus services, including the limited stop, high-frequency Ride On Extra service; on-demand, zone-based Flex service; and Flash enhanced bus service. Ride On's Flex service currently only serves a limited area in Rockville, from Monday to Friday, in the immediate vicinity of the Rockville transit station.

Regional commuter train service is available at the Rockville transit station with the Maryland Area Regional Commuter (MARC) Brunswick Line, operated by the Maryland Transit Administration of the Maryland Department of Transportation (MDOT MTA), as well as Amtrak's Capitol Limited intercity trains.

Actions

6.1 Advocate for expanded service area and greater hours for the Montgomery County Ride On Flex service in downtown Rockville.

6.2 Advocate for WMATA to rehabilitate or replace the Unity Bridge over the WMATA and CSX tracks, connecting Frederick Avenue between Hungerford Road (MD-355) and the Lincoln Park neighborhood.

Policy 7 Advocate for MDOT MTA to expand MARC commuter rail service with midday and reverse commute service, and off peak and Saturday service at the Rockville transit station.

The Rockville transit station is served by the Maryland Department of Transportation Maryland Transit Administration's (MDOT MTA) Maryland Area Regional Commuter (MARC) commuter rail, on the Brunswick Line operating between Martinsburg, West Virginia and Union Station in Washington, D.C. The train schedule is oriented to inbound commuter trips in the morning and outbound trips in the evening. Currently, there is no midday or reverse commute service. The Rockville MARC station generates the third highest ridership on the line, with only Silver Spring and Union Station as busier stations. Rockville supports efforts to bring all-day, inbound and outbound, MARC service to the Brunswick Line and add to the mix of transit options and destinations for commuters that do not result in the need to expand existing rail right-of-way.

Policy 8 Improve bus service, stops, and shelters in Rockville.

WMATA's Metrobus operates seven bus routes in Rockville, primarily along major arterials including MD-586, MD-355, and MD-189. The Metrobus system is designed to provide bus access between and to Metrorail stations, which also act as bus transfer hubs.

Montgomery County's Ride On operates local bus service in Rockville on 19 routes, 15 of them serving the Rockville transit station as shown on Figure 11. These routes are primarily along major and minor arterial and collector roadways (See Figure 13 for roadway classifications).

Bus routes are designed with specific purposes, which can be described as connecting communities, for instance to Gaithersburg or Glenmont; or to destinations within Rockville, for instance providing access to the Town Center from outlying neighborhoods; or linking our office and activity centers to Metrorail. For example, the Route 63 bus loops from Shady Grove Metro Station to the office parks on Piccard Drive and Research Boulevard and back to the Rockville transit station; the Route 81 bus makes a similar connection to the Tower Oaks area. This service is crucial to making Metrorail a viable option for those who work beyond walking or biking distance of Metro stations, and thereby supports investments in these employment areas. Other routes run at peak hours only to take riders to or from Metro stations.

Considered at the system-wide level, Ride On provides access to a bus stop within a quarter-mile walk for the majority of Rockville residents. The low-density development pattern in many Rockville neighborhoods makes generating ridership a challenge, and the limitations of the roadway network also complicate route planning. Some Rockville 2040 participants expressed interest in other service concepts, such as a bus or trolley circulator within the city. The City conducted a transit gap analysis in 2019, with the results providing a fresh look at transit gaps in the city and potential options for new service. This Plan supports any improvements to service.

Rockville currently owns and maintains bus shelters at 72 out of 446 bus stops. Since many bus stops have low ridership, this Plan places priority on ensuring that new shelters are available at high-ridership locations.

Actions

8.1 Collaborate with WMATA and Ride On to bring increased bus service to Rockville’s growth areas and advocate for opportunities to close gaps in existing routes and service areas.

8.2 Increase the number of shelters at bus stops in Rockville, especially high-ridership locations, and convert unprotected bus stops into protected and well-lit shelters where feasible.



Bus shelter on Veirs Mill Road

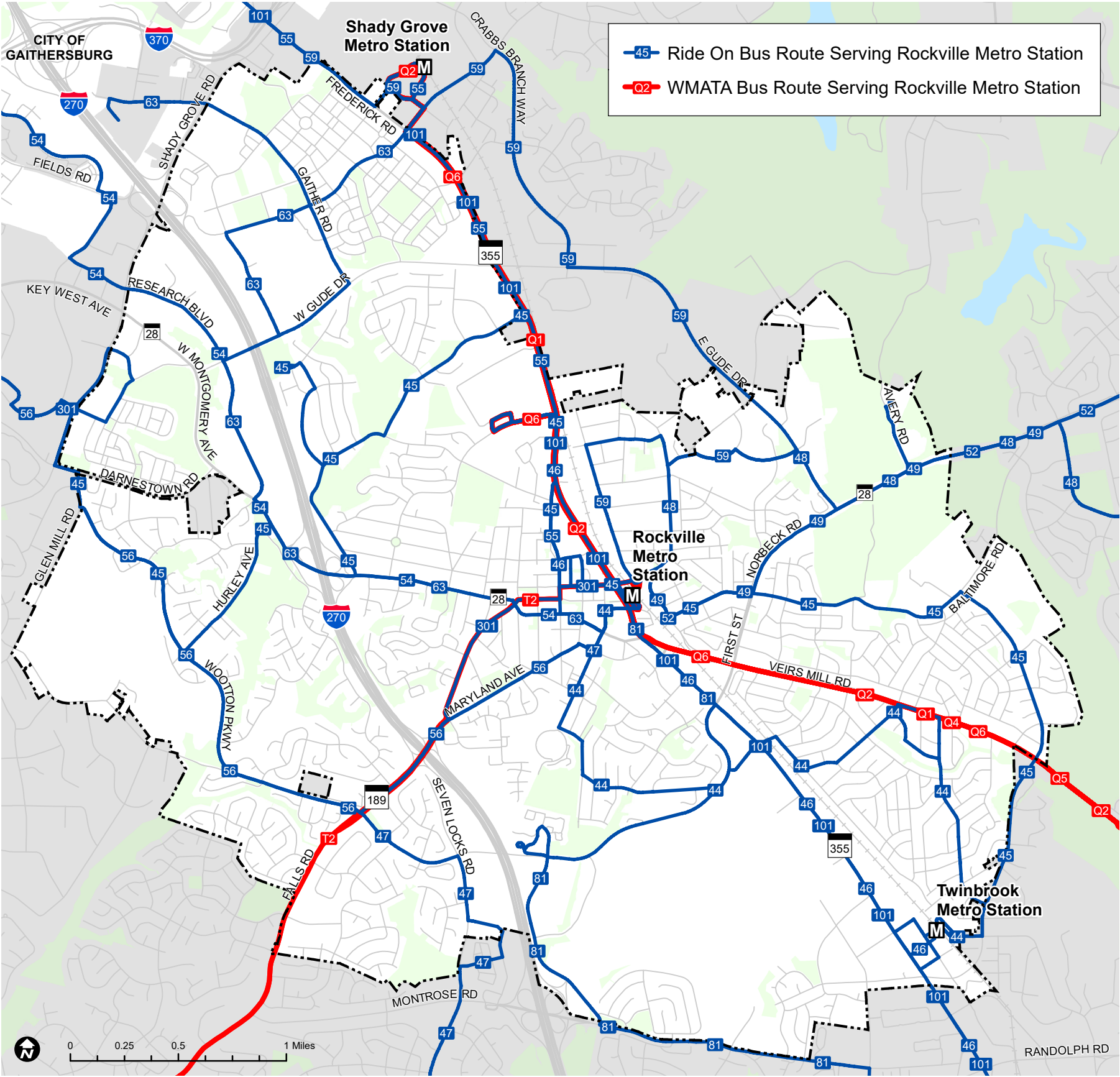


Bus stop on N. Washington Street with informal seating.



Ride On #55 bus on E. Middle Lane in Town Center.

Figure 11: Bus Routes Serving the Rockville transit station



8.3 Improve pathways from neighborhoods to streets with bus routes and ensure ADA-accessible facilities. Identify high use bus stops most in need of accessibility improvements for priority interventions.

8.4 Collaborate with WMATA and Ride On to locate bus stops in locations that do not encourage people to cross roads at unsafe locations. Add crosswalks, as needed, to provide safe road crossings to bus stops.

8.5 Strengthen multi-modal transportation connections between Montgomery College and areas throughout the city, including Town Center, Rockville Pike, King Farm, and Falls Grove, as well as destinations beyond the city limits.

8.6 Encourage WMATA to study the feasibility of adding a new rail station along the Metrorail Red Line in the vicinity of the Montgomery College - Rockville Campus, in consultation with the Rockville community and considering the impacts and benefits to surrounding neighborhoods. (*See also Planning Area 7*)

8.7 Collaborate with WMATA and Ride On to seek opportunities to install bike parking at bus stops, especially on high frequency bus routes, throughout the city.

Policy 9

Plan for implementation of bus rapid transit lines in Rockville.

Montgomery County Department of Transportation's Ride On service initiated its new Ride On Extra service as a limited-stop bus service along MD-355 in 2017, offering fewer stops and faster travel times than the local Route 46 bus route currently operating on Rockville Pike. This type of service is a precursor to bus rapid transit (BRT) being planned by Montgomery County government and the Maryland Department of Transportation Maryland Transit Administration (MDOT MTA). The bus rapid transit effort is a response to the larger issue of moving people around the county and making further development possible in congested areas.

Montgomery County government is currently planning for a countywide system of bus rapid transit lines, the first of which opened in 2020 along U.S. 29, between Silver Spring and Burtonsville (see Figure 12). In all, three bus rapid transit

lines are planned to serve Rockville:

- MD-586 / Veirs Mill corridor, from Wheaton to Rockville Metro Station and Montgomery College (Montgomery County)
- MD-355 corridor, its full length in Rockville, from Bethesda to Clarksburg (Montgomery County)
- Corridor Cities Transitway (CCT), from Shady Grove Metro Station to Clarksburg (MDOT MTA)

These lines are planned to provide more frequent bus service with much shorter headways between buses, fewer stops, more dependable schedules, and higher amenity bus stations.

The BRT concept being developed is designed to provide faster service between parts of the county and better connections between different parts of Rockville. For instance, the MD-355 BRT would provide quick transit access to areas of the Pike between the two Red Line stations, starting with one station at Edmonston Drive, and eventually providing up to three BRT stations along that two-mile segment. Bus rapid transit will also provide transportation capacity for future development in the corridor. Rockville supports BRT station locations that will provide support for new investment and redevelopment. The ongoing WMATA study of the Rockville Metro Station is considering how best to integrate future BRT service with the already active multi-modal transit station.

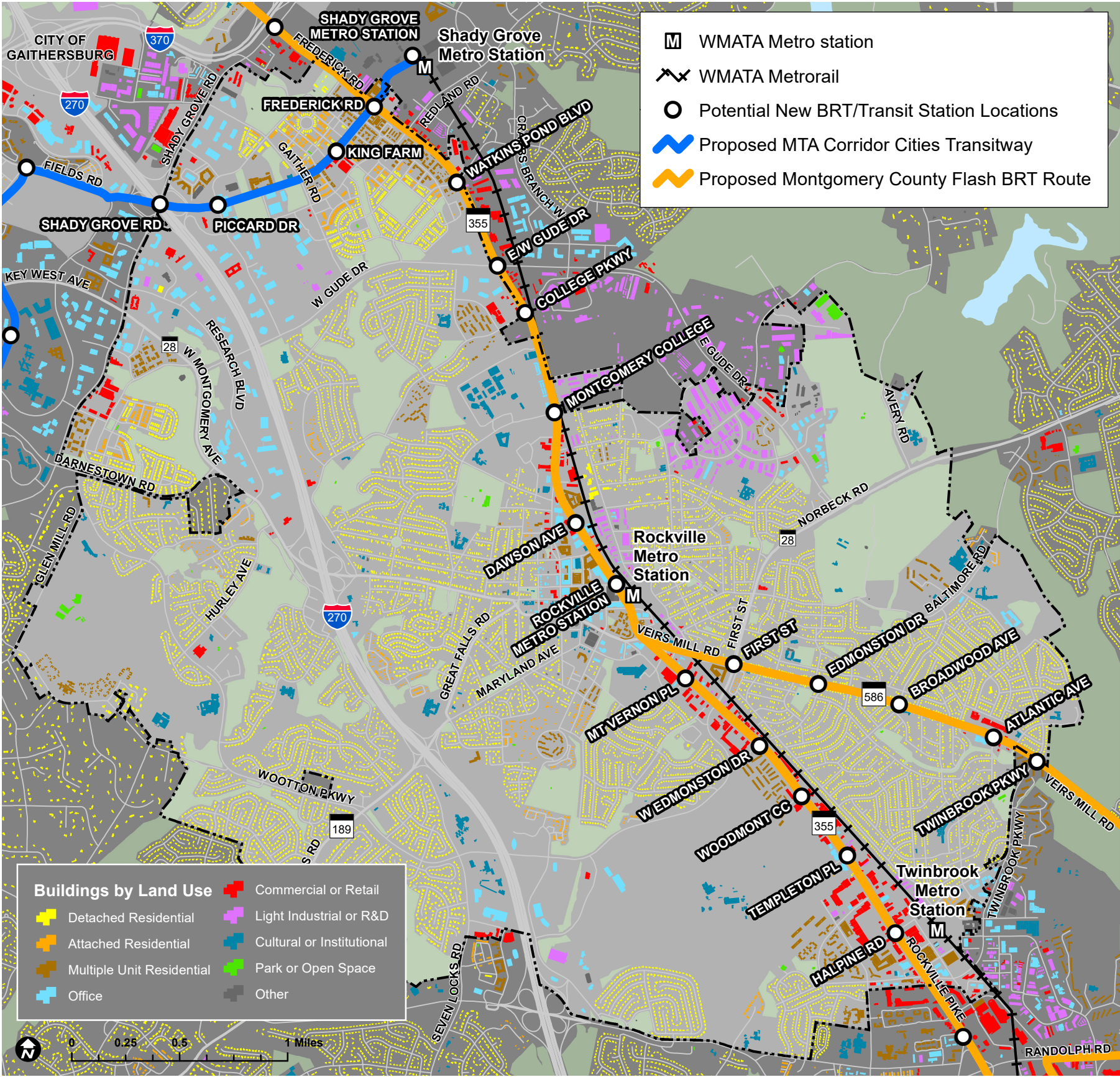
Actions

9.1 Support implementation of the planned MD-586 / Veirs Mill Road BRT with station locations that best serve Rockville.

9.2 Continue to work with Montgomery County government on MD-355 BRT, including identification of station locations, with a focus on serving as many Rockville residents, workers, and visitors as possible.

9.3 Support implementation of the Corridor Cities Transitway (CCT) in coordination with MDOT MTA and in consultation with the King Farm Community and the City of Rockville. While the final alignment has yet to be determined by MDOT MTA, the City's preference is for a route along Shady Grove Road instead of King Farm Boulevard.

Figure 12: Planned Transit Routes and Potential Station Locations



9.4 Conduct pedestrian and bicycle access planning for all BRT station locations in Rockville.

Policy 10

Redesign and reconstruct the Rockville transit station as a 21st century multi-modal transit hub.

The Rockville transit station is a busy multi-modal transit hub, facilitating single-mode rides and transfers between rail and bus modes, as well as taxi service, bike and pedestrian, and park-and-ride customers. While its Metrorail ridership is in the middle range of stations for the overall system, the availability of commuter rail, as well as six Metrobus and fifteen Ride On bus routes, makes the Rockville transit station one of the highest combined ridership stations in the county. Currently, the Rockville bus hub generates more boardings than the Red Line station, with over 5,000 boardings on an average day. The large number of bus routes and high bus ridership is partly due to Rockville's position at the confluence of State highways.

Although Red Line ridership has not grown in recent years, new development in Town Center is expected to increase riders. Existing and new services will strain capacity at the station; in fact, the initiation of the Ride On Extra Route 101 led to the construction of a new bus stop for northbound Metrobus Q routes along MD-355 at Park Road. Expanded MARC service would also bring more activity to the station. It is good that the Rockville transit station's multi-modal hub is growing; and yet, the current station is already in need of a redesign to address capacity, circulation, maintenance, and structural issues.

Up to four different BRT routes could overlap at the Rockville transit station with dozens of bus vehicles per hour converging during peak times. However, the Rockville transit station today does not have sufficient bus bays to accommodate this increase, and the Park Road and Church Street entrances and intersections will be challenged to handle the increased traffic.

Rockville Metro Station opened in 1984 and all major station components date from that time. A number of major elements will require near-term repair or reconstruction including the pedestrian bridge, stair house, Red Line

platform canopy, and bus shelters. The design of the pedestrian bridge requires Metrorail riders to descend to the ground-level, then the mezzanine, and then ascend back up to the Red Line platform.

In recognition of the need to upgrade and redesign the Rockville Metro Station, WMATA initiated a community visioning and concept design study in 2021, in collaboration with the City of Rockville and Montgomery County government representatives, to identify opportunities to increase transit ridership by improving site access and incorporating mixed-use development on Metro-owned property at the station. Potential redevelopment of the property at 255 Rockville Pike, support for redevelopment along North Stonestreet Avenue, and improvements to the City-owned Promenade Park and lower levels of 51 Monroe will be considered as part of the station redesign project.

The study was ongoing as of the writing of this Plan, yet it is expected to result in a preferred concept design that will guide future transit investments and potential redevelopment that incorporates the goals of this Plan and priorities of the Rockville community. A redesign of the Rockville transit station as a 21st century transit center would elevate the amenity value of the station for surrounding properties and



'Rockville Station' was the call on the B&O Railroad which brought rail transit to the city in 1873. The old station house is preserved a few hundred feet south of its original location, moved to make room for Metrorail. Generations of Rockvillians walked or rode to the station for commutes to the District of Columbia, for shopping, or as the point of departure and return for much longer journeys.

Town Center. The study will also consider potential options to improve the bicycle and pedestrian crossing of MD-355 by grade-separating MD-355 through traffic, local street traffic, and bicycle and pedestrian traffic.

Actions

10.1 In coordination with WMATA, implement the recommendations of the Rockville Metro Station Community Visioning and Concept Design Study.

10.2 Bring all agency partners, including WMATA, CSX, MDOT MTA, and Montgomery County DOT, FTA, and FRA,

to the table with the best transit center design talent and ideas for the Rockville transit station.

10.3 In coordination with agency partners, plan for added capacity at the new Rockville transit center to accommodate additional buses and BRT service and ensure seamless transfers between bus and rail modes.

10.4 In coordination with WMATA and Montgomery County government, plan to provide direct access to the Red Line platform from the pedestrian bridge level, while also maintaining access from the bridge to the ground-level bus hub and mezzanine to the MARC station.



From the inception of passenger service, the Rockville transit station has played an important role in the life of the city and its economy. Metro and MARC platforms and nearly a dozen bus bays make its multi-modal hub a portal to the region and world, and an anchor in Town Center. Given the age and condition of the station, and looking to the need to accommodate new transit services, it is a good time to redesign the Rockville transit station.



The images above show design, capacity, and maintenance issues at the Rockville transit station (from top to bottom): Buses and cars wait for traffic signals to allow an exit onto Rockville Pike (MD-355) at Church Street; Crowds queue up on the platform when escalators are under repair; Concrete spalling on the canopy is a major structural issue for the station.

10.5 Improve pedestrian facilities in the Rockville transit station area, including wider sidewalks, full crosswalks on all sides of area intersections, smaller turning radii, pedestrian warning signals, and other measures to ensure safe access.

10.6 Seek out opportunities to partner with property owners and private investors in public-private partnerships and joint development approaches to project development in the Rockville transit station area.

10.7 Work with WMATA to install historic interpretive signage as part of any redesign or renovation of the current Rockville transit station to illustrate the history and significance of the original B&O Railroad station in Rockville.

10.8 Prioritize bicycle and pedestrian access to the Rockville Metro Station and advocate for WMATA to upgrade the station to be more friendly to people arriving by walking, rolling, or cycling, including expanded bicycle parking and improved signage and connections from surrounding neighborhoods. (See also Action 4.9 of the Transportation Element and Planning Area 1)

Policy 11 **Improve the Twinbrook transit station as an enhanced asset for the community.**

The Twinbrook transit station is a multi-modal transit hub, facilitating single-mode rides and transfers between rail and bus modes, as well as taxi service, bicycle and pedestrian, and park-and-ride customers. The station serves residents, workers, and visitors of its nearby neighborhoods and commercial and office areas, including Twinbrook, Montrose, and the city's south Rockville Pike area. Though a transit-oriented development is slowly taking shape on the station property itself, it has yet to be fully realized.

The station opened in 1984 as part of a 7-mile, four-station northwestern extension of the Red Line between Grosvenor-Strathmore and Shady Grove stations. Today, the station's Brutalist-style, heavy-concrete architecture feels stark and uninviting in its design and is dated relative to more recent Metro stations.

In 2017, the Twinbrook Red Line station saw just over 4,000 average daily boardings. While its Metrorail ridership is in the lower range of stations for the overall WMATA system,

the availability of one Metrobus and six Ride On bus routes makes the Twinbrook transit station a useful entry point into the larger regional bus and rail network.

Both the east and west sides of the station have bus bays, surface parking, and kiss and ride lots. These areas are connected to each other and to the platform by a ground-level underpass below the Metro and CSX tracks. The station is also one of the few on the WMATA system to have only a single escalator serving the platform, typically in the ascending direction. An elevator and stairs provide access to enter or exit the platform area, as well.



The pedestrian experience accessing the Twinbrook transit station, with its 'Brutalist' concrete forms and little vegetation, makes is unappealing. The western plaza (top) and dark ramp and stairs (bottom) lead to the station's turnstiles before rising up to the station platform by elevators or escalator.

Given the capacity, condition, and design issues present at the Twinbrook transit station, this Plan envisions the next decade as an opportune time to re-imagine the station. A comprehensive redesign effort is needed to solve functional issues while also considering how to create a new transit center that is a visually appealing centerpiece of the surrounding station area. Completion of development plans approved for the station properties should be re-considered as part of any future station study.

Actions

11.1 Seek design enhancements, such as improved lighting, tree canopy, and shade structures, to improve personal safety and upgrade station aesthetics.

11.2 Prioritize bicycle and pedestrian access to the Twinbrook Metro Station and advocate for WMATA to upgrade the station to be more friendly to people arriving by walking, rolling, or cycling. Include expanded bicycle parking and improved signage and connections from surrounding neighborhoods.

11.3 In coordination with WMATA, conduct a planning and redesign effort for the Twinbrook transit station in the near future.

GOAL 4

Utilize an approach to development review that seeks to reduce vehicle miles traveled and promote a shift to alternative modes of travel.

Before any development project is approved by the City, the Zoning Ordinance requires the applicant to perform an adequacy test on the impacted parts of the transportation network, which is reviewed by the City. If the test finds the impacts to be beyond City standards, the applicant must mitigate those impacts or, potentially, the project can be rejected.

At present, the standards make some provisions for a project's proximity to transit and its accommodation and promotion of other modes, such as access via bicycle. However, the focus remains on traffic impacts. This Plan

endorses regular review of the standards to incorporate best practices for calculating transportation impacts.

Of central importance is shifting the analysis from movement of vehicles to the movement of people. As such, greater accommodation of other modes would be warranted when analysis supports such changes, which could potentially affect requirements for mitigation and parking. As identified in the Rockville Pike Neighborhood Plan (2016), such changes are especially important near high-capacity transit stations, where a higher percentage of residents and workers use transit and therefore create less impact on roadways.

In addition to recognizing the potential to shift trips to other modes, revised standards and procedures should also allow for higher levels of congestion (and lower intersection level of service) in some locations where City policy favors higher-intensity development. Vehicle drivers understand that places like Town Center have more intersections, more pedestrians in crosswalks, and higher overall levels of activity that makes driving through the area slower, and that other goals take precedence over moving cars.

This Plan also recommends that reduced parking minimums be studied as a way to encourage access to higher-density, transit-accessible areas by other modes of transport, including by Metrorail, bus, bike, or walking.

Policy 12

Evaluate standards and methodology for measuring adequate capacity of roadways and intersections.

Actions

12.1 Apply emerging best practices for measuring and mitigating traffic impacts of new development.

12.2 Consider alternative traffic evaluation methods for development projects near Metrorail stations, or other locations that offer high-capacity transit service, a walkable environment, and connections to bicycle facilities.

12.3 Consider amending or replacing the Comprehensive Transportation Review (CTR) component of the City's development review process to focus capacity review and

mitigation on the potential to move people by a variety of modes, rather than trip generation projections exclusively for trips by automobile.

12.4 Recognize, and establish in the review procedures, that congestion standards can be relaxed in specific locations, provided that parking minimums are also reduced and access via non-automobile modes is enhanced. (*See also Action 14.7 of the Transportation Element, Action 10.2 of the Economic Development Element, Action 22.1 of the Land Use Element, and Actions 1.4 and 10.5 of the Housing Element*)

12.5 Gather and maintain up-to-date traffic data and local and regional trends in traffic management.

12.6 Monitor local and regional trends on traffic issues and approaches to traffic management.

GOAL 5

Monitor new mobility technologies and reduce carbon emissions and other pollutants from transport.

New transport technologies are generating interest and recommendations for cities to plan for what may lie just over the horizon, including autonomous and robotic vehicles, drones, and other new services based on computer applications and smart phones. Some new technologies, such as ride share, bike share, and real-time traffic data, have already arrived and are affecting how people get around Rockville and use roadways. Changing behaviors related to the use of home delivery services, greater access to the information superhighway, and telecommuting have the potential to further disrupt the use of transport and travel patterns in the city.

At the same time, carbon emissions from transport sources are now the leading generator of climate changing pollutants. How the necessary, drastic reductions in emissions from cars and trucks can be achieved is not clear. The period from now until 2040 will be a crucial period of change requiring a strong policy response from elected and appointed officials, and adherence by Rockville residents, businesses, visitors, and City departments.

Policy 13

Monitor and plan for emerging transportation technologies and practices.

Advocates for new mobility technologies argue that cities should respond with new policies to accommodate their unique space needs or functional characteristics, for instance reserved drop-off and pick-up space for ‘ride share’ service in City rights-of-way. There is also the idea that autonomous vehicles with point-to-point service could replace fixed transit lines and routes, and therefore, there is no need to plan for new mass transit lines. Some futurists predict that shared vehicles will drastically reduce private ownership and thereby the need for parking spaces. At this point, it is difficult to predict outcomes with any confidence.

Robotic delivery of packages, either flying or on the ground, is also being tested. Policies are only now emerging at the federal and State levels on regulating (or deregulating) these technologies. City policy may need to wait to see what develops, including impacts or conflicts.

Other new mobility forms marry old transport modes with enhanced technologies. For example, electric bicycles, or e-bikes, combine the conventional two-wheel bike with energy-dense batteries and pedal-assisted motors. Shared use e-scooters hit the streets in many cities across the United States in 2018, bringing quick adoption—much faster than responses in municipal policies or regulations. Given the low impact and potential saving of carbon emissions, this type of transport should be encouraged; however, riding on sidewalks is different than on the city’s shared-use, off-street trails. Questions about safety must be addressed.

Policies are needed regarding where electric motor transport can be operated and at what speed. For example, Rockville will need to decide if these types of motorized, yet non-vehicular, transport modes should be allowed on the Millennium Trail and other traditionally non-motorized pedestrian and bicycle facilities, and under what rules of operation. The implementation of new mobility technologies, such as electric scooters and electric unicycles, may support land use goals by providing easier connections to transit stations.

Even before the COVID-19 pandemic of 2020-21, home

Every new transportation technology affects the geography of communities and the structure of people’s lives. Autonomous vehicles (AVs) are one such technology. Just as the freeway system or the streetcar network shaped past cities and lifestyles, AVs will reshape the metropolis once again. The question is how and with what unintended consequences? As with most technology, the answer turns on how the technology is used.

“Autonomous Vehicles: Hype and Potential,” Peter Calthorpe and Jerry Walters, March 1, 2017, Urban Land magazine

delivery of goods, groceries, and meals was on the rise, and teleworking/telecommuting was an emerging trend. The period during the pandemic saw a dramatic rise in these activities, which resulted in a significant reduction in vehicle trips by personal automobile and an increase in delivery truck traffic. At this time, it remains to be seen whether these trends will continue or will shift back to pre-pandemic ‘normals’. The City should be prepared to plan for and respond to emerging trends in travel behavior as they occur.

Actions

13.1 Monitor new technologies such as robotic vehicles and drone deliveries and develop appropriate policy recommendations for the City.

13.2 Consider changing parking and other requirements based on widespread adoption of shared and/or autonomous vehicles, and any associated reduced demand for vehicle storage.

13.3 Draft development guidelines that address right-of-way issues related to ride share services and increased presence of delivery trucks for home delivery of goods, specifically adequate drop-off and loading areas.

13.4 Explore opportunities to promote use of electric bicycles, and other small personal transport modes, and determine appropriate policies for their use on city roads and trails.

13.5 Continue to monitor changing travel patterns and behaviors to anticipate emerging trends in teleworking/telecommuting, shopping, and recreation.

13.6 Ensure safety for all users of sidewalks, paths, trails, and bike lanes, especially with such emerging transportation modes as e-scooters and motorized skateboards.

Policy 14

Reduce carbon emissions from cars, trucks, and buses operated by Rockville residents, businesses, and government.

Carbon pollution from vehicles is one of the main global sources of greenhouse gas emissions. Reducing emissions from transport sources is critical to reaching the current State-mandated goal of a 40 percent reduction by 2030. Transport emissions accounted for roughly one-third of emissions in the State in 2015 and are expected to become a larger percentage as progress is made on emissions from stationary sources. Some progress has been made in making cars and trucks more efficient, with more miles driven per gallon of gasoline.

The issue shows the close relationship between transportation planning and land use planning. Compact communities that are designed to make walking or biking a first choice for many types of trips preclude the need to make a trip with a vehicle. Walking, rolling, or bicycling will always be more energy efficient than using a vehicle, no matter what type of propulsion the vehicle uses.

Shifting trips to transit, either bus or rail, is another crucial strategy for reducing emissions. Currently, trains and buses also use carbon-based energy sources; however, the energy per passenger mile is much lower than driving in a private car, particularly if the bus or train is full of riders. Buses also require less road space per person, which reduces congestion for other vehicles and saves fuel.

New transport technologies will need to play a major role in cutting emissions. Advancements in battery storage are encouraging a transition from diesel buses to battery powered bus fleets, which are cheaper to fuel and maintain. Battery-powered bus rapid transit can make a contribution to reducing carbon emissions along Rockville's main highways and to major destinations. Electric buses, like other electric vehicles, waste less energy given off as heat compared to those of internal combustion engines; engine idling is also avoided.



New mobility technologies are quickly appearing on city streets: here an electric skateboard-style transport with one big wheel takes off from the Rockville transit station in February 2019.



An electric vehicle charging station is provided at The Tower Building offices on Wootton Parkway.

Electric cars are rapidly becoming more available and affordable for private purchase. This Plan supports steps to transition to electric, battery powered vehicles, while recognizing that electric vehicles still require energy for their manufacture, and at this time, charging from the utility power 'grid' involves coal and gas emissions. Private property owners are encouraged to install electric vehicle charging stations. This Plan recommends requiring electric charging facilities in new office, commercial, and multiple-unit dwellings, as well.

New mobility types of transport provide additional hope for cutting emissions over the coming decades, with advancements that may reshape and replace private cars. Electric bicycles are surging in popularity and battery-powered kick board scooters are showing the potential for new approaches to mobility. Cargo bikes and small three- and four-wheeled electric vehicles should also be part of the mix of light-weight, low-energy vehicles for getting around Rockville.

For decades, City policy has mandated that off-street parking be required as part of the Zoning Ordinance. The idea is that requiring parking for private vehicles will reduce impacts on local streets. However, these requirements contribute to an environment and cityscape oriented to private cars, rather than walking or biking. Sites are frequently designed with parking lots in front of buildings for convenience. The expectation of free parking is a key part of suburban lifestyles and provision of free parking makes driving an easy choice for many trips. Changing this landscape will take time, but City policy can begin by revisiting parking minimums. Other policies stated in this Plan seek to favor other modes of travel and access, ones that have far fewer environmental impacts.

Actions

14.1 Actively promote a shift to non-polluting modes of transport.

14.2 Support improved and new transit service and programs to increase the use of transit and also to make transit carbon neutral.

14.3 Create a plan for a transition to electric cars and trucks that outlines steps the City will take to become an electric vehicle-friendly city by encouraging the use of zero-emission vehicles, including expanding public electric charging stations, issuing special parking placards for electric

vehicles, and adopting new building code requirements for electric vehicle charging stations in new construction and existing office, commercial, and multi-unit residential buildings. (*See also Actions 4.3 and 4.4 of the Environment Element and Action 2.7 of the Community Facilities Element*)

14.4 Seek grant funding and other financial assistance from regional governments and utilities to support electric vehicles and charging stations.

14.5 Transition the City fleet to low or no emission vehicles as soon as possible, while considering the operational needs of specialized fleet vehicles. (*See also Actions 4.3 and 4.4 of the Environment Element and Action 2.7 of the Community Facilities Element*)

14.6 Reduce vehicle miles traveled and transportation related emissions in the City's municipal operations, as well as that of the broader Rockville community.

14.7 Reduce off-street parking requirements to disincentivize driving, especially in mixed-use, high-density, and transit-served areas. (*See also Action 12.4 of the Transportation Element, Action 10.2 of the Economic Development Element, Actions 1.4 and 10.5 of the Housing Element, and Action 22.1 of the Land Use Element*)

GOAL 6

Manage and improve Rockville's roadway and trail network to provide for safe and comfortable movement of people walking, rolling, and driving, for all types of trips and delivery of goods and services.

Rockville's roadway network is at once national, regional, and local in its purpose. In addition to its connections to the U.S. interstate highway system via I-270, it provides regional connections through Rockville to the District of Columbia and adjacent activity centers in Montgomery County, including Bethesda and Wheaton, and access to the County seat and places of employment and business in Rockville. At the same time, the network of local streets provides access to individual properties and connections to major streets, which allow trips across the city while protecting residential

neighborhoods from heavy traffic. In fact, many residential communities built in Rockville from the 1960s to the 1990s were designed intentionally with limited or single-access points onto major roadways, a desirable characteristic for many of their residents today (See Figure 13).

Policy 15
Work with State and County
transportation agencies to mitigate the
impacts to Rockville of regional traffic
and congestion.

At the regional scale, the historic south-to-north roadway alignment up the Pike and through Town Center is now MD-355, a major arterial controlled by the Maryland Department of Transportation State Highway Administration (MDOT SHA) that, prior to the 2020-21 COVID-19 pandemic, carried 45,000 to 55,000 vehicles on an average day. MD-355 connects Rockville to Gaithersburg to the north and Bethesda to the south.

Interstate 270 was constructed in the 1950s to greatly increase regional network capacity for vehicle travel to Rockville and other areas north of the I-495 ‘beltway’. Before the COVID-19 pandemic of 2020-21, trips on I-270 reached nearly 250,000 vehicles on an average day (i.e., average daily vehicles or ADV), though dropped dramatically during the course of the pandemic. Peak congestion on I-270 during the weekday commute was a growing problem in Rockville prior to the pandemic due to spill-over traffic on local roads near its on-ramps. Figure 14 shows average daily traffic volumes on many of the major roads and highways in Rockville, measured over the decade prior to 2020. A return to pre-pandemic traffic volumes on I-270 will continue to impact Rockville’s local roads and the City supports actions and investments that reduce or mitigate impacts from I-270 that do not result in additional lanes, toll roads, or right-of-way expansion by the State.

Veirs Mill Road (MD-586) provides a regional east-west connection between downtown Rockville, Wheaton and Silver Spring (via MD-97), while West Montgomery Avenue (MD-28) connects the city core to I-270 and a growing activity center along Shady Grove Road. Maryland Route 28 also continues east from downtown Rockville through communities in the eastern portion of Montgomery County.

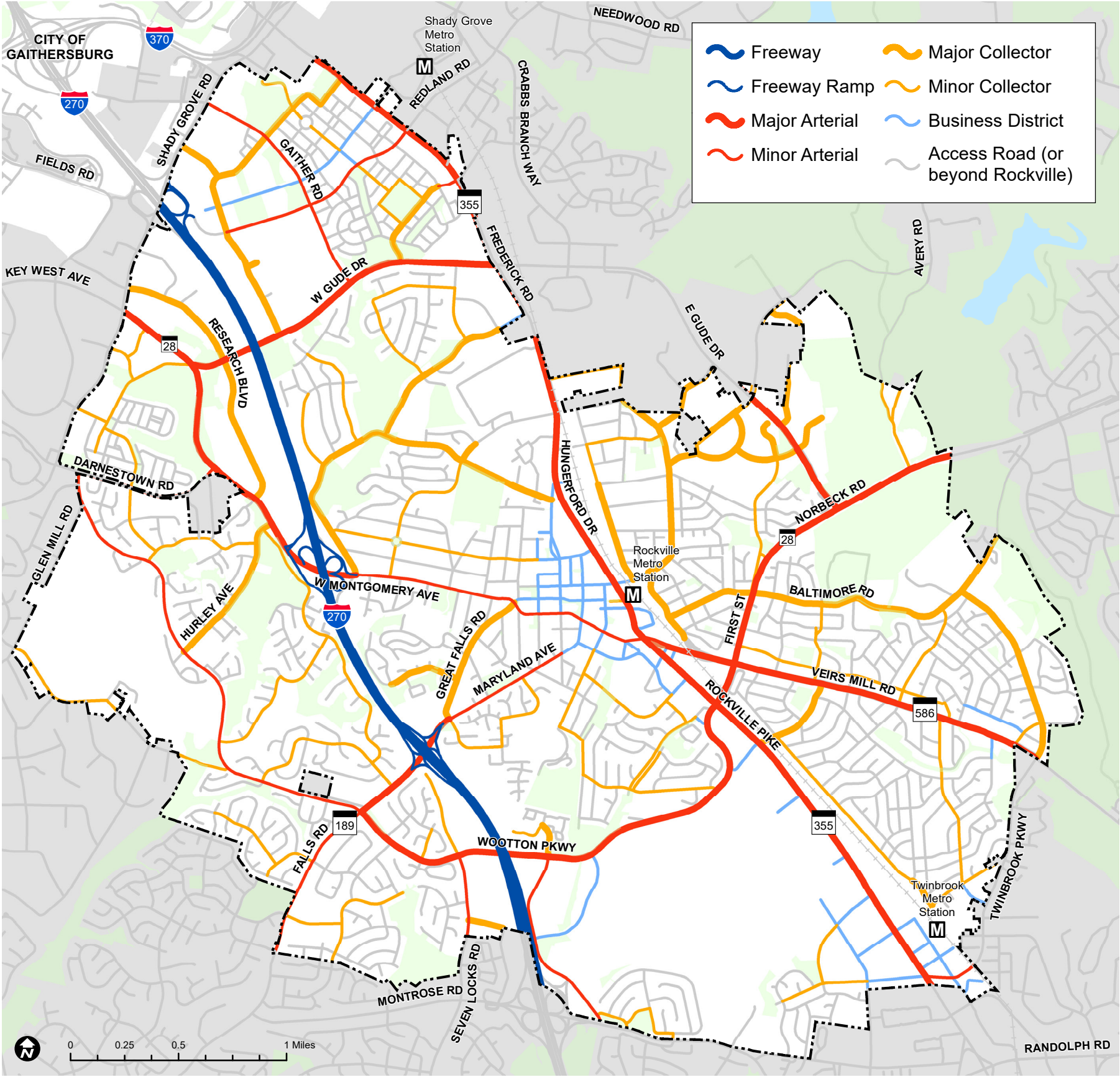
In the case of these two main arterials (MD-586 and MD-28), primarily residential uses face the roadways. Before the 2020-21 pandemic, Veirs Mill east of Twinbrook Parkway carried almost as much traffic as MD-355 (43,700 ADV) and the historic West End also experienced heavy traffic and congestion during peak periods (26,300 ADV). Wootton Parkway to the south of downtown Rockville and Gude Drive to the north experienced nearly as much traffic volume as the State roads mentioned above, yet they have no interchange with I-270 and are owned and maintained by the City of Rockville.

In all, this traffic was a mix of regional trips passing through Rockville and local trips generated by Rockville residents and businesses. It remains to be seen whether and how traffic patterns will change as a result of the life-changing COVID-19 pandemic of 2020-21. The City remains committed to ensuring the safety of all traveling within and through Rockville using any mode of travel, and maintaining the high quality of life in neighborhoods and commercial districts.

Traffic congestion is often explained by the qualitative measure of Level of Service (LOS). Intersections are assigned grade letters based on the level of congestion a driver would experience as they pass through it. However, LOS only measures the congestion experienced by drivers, not the congestion, safety, or comfort experienced by other road users, such as people walking, biking, or rolling. Minimizing the congestion for drivers can often lead to compromises made in the safety and expediency of travel for non-motorized road users. Figure 14 shows a selection of major intersections in the city, and their LOS, as measured over the decade prior to 2020. The grade letters for LOS at signalized intersections and their respective capacity thresholds and qualitative descriptions are shown in the table below. Most design or planning efforts typically use service flow rates at LOS C or D, to ensure an acceptable operating level for drivers.

LOS	Intersection Capacity	Driver Experience
A	Less than 59%	Free flow
B	60% - 69%	Reasonably free flow
C	70% - 79%	Stable flow
D	80% - 89%	Approaching unstable flow
E	90% - 99%	Unstable flow, at capacity
F	Greater than 100%	Forced or breakdown flow
Source: AASHTO Geometric Design of Highways and Streets		

Figure 13: Roadway Classification System in Rockville



Actions

- 15.1 Protect and enhance Rockville’s property, neighborhoods, and environment while supporting solutions to regional traffic congestion on I-270 and I-495.
- 15.2 Monitor and coordinate with Maryland Department of Transportation State Highway Administration (MDOT SHA) regarding any projects to alter I-270 through Rockville. The City strongly supports mass transit, transportation demand management (TDM), and other alternative solutions to traffic congestion on I-270 as opposed to widening or the creation of toll lanes on I-270 as a remedy.
- 15.3 Seek creative and sustainable solutions to local traffic impacts of congestion on I-270.
- 15.4 Support projects, standards, initiatives, and investments at the State and County level that promote a shift to travel modes other than private vehicles and support their related environmental benefits.
- 15.5 Participate in the MDOT SHA Community Safety and Enhancement Program that provides funding for transportation improvements along state highways that support planned or on-going revitalization efforts, including

ROADWAY CLASSIFICATIONS		
STANDARD TERM	ROCKVILLE TERMS	LOCAL EXAMPLES
Freeway	Limited Access	I-270
Major Arterial	Major	Rockville Pike W. Gude Dr.
Minor Arterial	Arterial	Gaither Rd.
Major Collector	Primary Residential Class 1, Business District, or Primary Industrial	Baltimore Rd. Nelson St. Research Blvd. Southlawn Ln.
Minor Collector	Primary Residential Class 2, Business District, or Secondary Industrial	Ardennes Ave. E. Middle Ln. King Farm Blvd. Watts Branch Pkwy.
Access	Secondary Residential	Anderson Ave. Crawford Dr. Henslowe Dr.

pedestrian and vehicular safety, intersection capacity/ operations, sidewalks, roadway reconstruction or resurfacing, drainage repair/upgrade and landscaping. Projects must be in a Priority Funding Area and projects in Sustainable Community areas are given preference. *(See also Policy 16 of the Economic Development Element)*

15.6 Participate in the MDOT SHA Sidewalk Retrofit Program that helps to finance the construction and/or replacement of sidewalks along State highways. State highways in the city include MD-355, MD-28, MD-586, and MD-189. The program covers a higher percent of the cost for projects located in Sustainable Communities. *(See also Policy 16 of the Economic Development Element)*

15.7 Advocate for the MDOT SHA to address traffic congestion and bicycle and pedestrian safety at the intersections of Veirs Mill Road (MD-28/MD-586) and First Street (MD-28), Rockville Pike (MD-355) and Edmonston Drive, and Frederick Road (MD-355) and E./W. Gude Drive.

Policy 16
Protect neighborhoods from outside traffic, to the extent possible and based on the legacy road layout.

A major theme expressed by participants in the Rockville 2040 process was a desire for more neighborhood connections and reduced congestion on the streets that serve them. In some cases, missing connections require vehicles to travel farther, challenging goals to reduce vehicle miles traveled and carbon emissions. This Plan will pursue creative solutions to overcome the city’s physical and perceived barriers, and improved connectivity and signage will promote equity in the City’s transportation system. Where vehicular connections are not made, provision of pedestrian or bicycle paths is recommended. In addition to the action below, the Planning Areas of this Plan provide recommendations for specific opportunities to better connect the city east to west.

Action

16.1 Protect neighborhoods from the impacts of non-local through traffic.



Policy 17

Pursue opportunities for new east-west connections, when and where possible, while recognizing that connectivity is limited due to railroad tracks, MD-355, and I-270.

Rockville is divided roughly into thirds by regional transportation infrastructure that cuts across the city from north to south. Interstate I-270 separates the western portion of the city from the older parts of Rockville in the ‘center’, and the Metrorail and CSX railroad tracks create barriers to areas in the east of Rockville from the center. There are roadway and pedestrian and bicycle facilities that allow movement over or under the tracks and interstate, such as Wootton Parkway, West Montgomery Avenue, West Gude Drive, the Sister City Friendship Bridge, Unity Bridge, and Carl Henn Millennium Trail, but they are limited in number and spaced far apart.

This Plan will pursue creative solutions to overcome the city’s perceived and physical barriers, despite the challenges from physical constraints, neighborhood opposition to new vehicular connections, and high costs. Improved connectivity and signage will promote equity in the city’s transportation system. In addition to the action below, the Planning Areas of this Plan provide recommendations for specific opportunities to better connect the city east to west.

Action

17.1 Seek federal opportunities and grants to address the need for new east-west roadway and trail connections in the city.

Policy 18

Design new neighborhoods and major developments with internally connected streets and ensure connectivity to the broader roadway network.

Planning for internal and network connections at the time of a subdivision application, or during development review for single site infill projects, is recommended. Improved

connectivity and signage in new neighborhoods will promote equity in the city’s transportation system.

Actions

18.1 Initiate amendments to the Zoning Ordinance to add access management standards that promote vehicular and non-vehicular connectivity for new developments.

18.2 Seek to connect new development to the existing roadway network and avoid creating new areas that are cut off from surrounding neighborhood contexts and activity centers.

18.3 Establish a City street naming policy that reflects a welcoming, multicultural, and inclusive community.

Policy 19

Advocate and coordinate with MDOT SHA to develop creative solutions to mobility issues on major arterials and highways.

Major arterials provide for regional and subregional trips across Rockville. In addition, major arterials also carry traffic from local trips because the city’s street layout is difficult to travel from one neighborhood to another, or to an activity center, without using an arterial for some part of the trip (see Figure 13). Congestion on major roads and at key intersections is a problem without easy solutions. In some locations, access routes to the regional network are burdened with heavy traffic and congestion. In other cases, a valued Rockville destination like Montgomery College generates peak congestion at intersections that is difficult to avoid.

This Plan establishes the City of Rockville’s intention to study potential improvements along congested local streets and in partnership with the Rockville community and Maryland Department of Transportation State Highway Administration (MDOT SHA) on State roads and highways in Rockville. For instance, West Montgomery Avenue (MD-28) experiences heavy traffic from I-270 to Great Falls Road. Wootton Parkway was also the subject of many comments from the community during the Rockville 2040 process, both calling for relief from congestion and opposition to widening the roadway. This Plan recommends studying small-scale improvements on

Edmonston Drive, Veirs Mill Road, West Montgomery Avenue, Wootton Parkway, and other major roadways that may help to relieve congestion at certain locations and improve safety and mobility options for all modes.

The following actions reflect the City's current priorities for roadway improvements, whether locally or State-controlled, but is not an exhaustive list; projects may be added or removed over time as needed. Many of these actions are located on the map in Figure 15.

Actions

19.1 Advocate for MDOT SHA to study potential improvements on West Montgomery Avenue (MD-28), between Hurley Avenue and Great Falls Road, that increase safety and mobility for all modes and decrease traffic congestion, especially due to traffic generated by the I-270 interchanges. The study should consider additional pedestrian crossings and other improvements without the need to widen the roadway or convert the middle turn lane to a peak hour reversible lane.

19.2 Study potential improvements on Wootton Parkway, west of I-270, that increase safety, visibility, and mobility for all modes, such as additional pedestrian crossings and effective street lighting, and that decrease traffic congestion through smaller-scale projects, such as additional turn lanes at specific intersections or lane re-striping, without widening the roadway.

19.3 Enhance the connectivity of the city's roadway network by prioritizing and programming the acquisition of needed rights-of-way and the design and construction of the following roadway improvements:

- Dawson Avenue - extend east to Hungerford Drive (MD-355)
- Maryland Avenue - extend north to planned Dawson Avenue, as extended

19.4 As part of any significant development or conceptual master plan of the Woodmont Country Club property, plan for the extension of East Jefferson Street, from its current terminus north of Congressional Lane, through the Woodmont Country Club to terminate at Wootton Parkway. An extension should specifically take into account the impacts on all surrounding and potentially affected

neighborhoods, and all of the surrounding roads, including but not limited to Rockville Pike, Wootton Parkway, East Jefferson Street south of the country club property, Halpine Road, Congressional Lane, Montrose Parkway, Montrose Road, Fortune Terrace, Seven Locks Road, and West Edmonston Drive. Under all circumstances, however, the alignment and road design should be protective of existing residences and take into account impacts to the club. The exact location of the extension, as depicted in the 2016 Rockville Pike Neighborhood Plan, should not be construed as its final alignment. (*See also Planning Areas 3, 9 and 11*)

19.5 Plan for the extension of Chapman Avenue, from Halpine Road north to a terminus with Rockville Pike. At the time of development review for the properties at 1460, 1470, or 1488 Rockville Pike, a determination should be made by staff whether or how Chapman Avenue is extended. The exact location of the extension, as depicted in the 2016 Rockville Pike Neighborhood Plan, should not be construed as its final alignment. (*See also Planning Area 9*)

19.6 Encourage creative solutions for traffic management on local and State roads that address, for example, traffic signal timing, coordinated speed limits, and technological innovations.

19.7 Work with MCDOT and MDOT SHA to conduct a special corridor study along MD-355, from its intersection with Veirs Mill Road (MD-586) north to the city limits, to determine congestion levels, recommend significant improvements to street design, increase non-auto driver mode share, and incorporate Bus Rapid Transit (BRT). (*See also Planning Areas 1, 7 and 16*)

19.8 Advocate for MDOT SHA, on State roads, and seek opportunities, on City roads, to eliminate long stretches of major roadways without safe pedestrian crossings. (*See also Action 3.8 of the Transportation Element*)

19.9 Explore ways to design, fund, and build new bike lanes or shared use paths along major arterials and highways in the city.

19.10 Assess posted speed limits on Wootton Parkway to ensure safety and mobility for all modes. (*See also Planning Area 12*)



Traffic congestion on Viers Mill Road (MD-28/MD-586) between S. Stonestreet Avenue and First Street (MD-28).



Traffic congestion at Frederick Road (MD-355) and East/West Gude Drive.

19.11 Explore locations for additional city and neighborhood gateway signage on city roads and, in coordination with MDOT SHA and Montgomery County government, State arterials and highways.

Policy 20

Advocate and coordinate with MDOT SHA for intersection improvements.

Intersections of major arterials and highways are a primary location for traffic congestion and incidents among vehicles and between vehicles and other modes (see Figure 14). Improving safety, visibility, and mobility at key intersections in the city is necessary for the City to achieve its Vision Zero goals and to keep people walking, rolling, and driving safely and comfortably throughout the city.

Restricted turning movements along MD-355 that are designed to allow for traffic flow along this State route also affect people walking, rolling and driving in Rockville every day. For example, restricted turning movements at East Middle Lane in Town Center and Rollins Avenue/Twinbrook Parkway force drivers to take an alternate, frequently longer route, and lead some drivers onto private property, to turn around and head in their intended direction. Pedestrian and bicycle safety can benefit from restricted turning movements at intersections, though drivers negotiating alternative routes can add to their safety concerns in other areas, as well. While the City recognizes the importance of keeping traffic moving along this major regional route, this Plan establishes that better solutions should be studied.

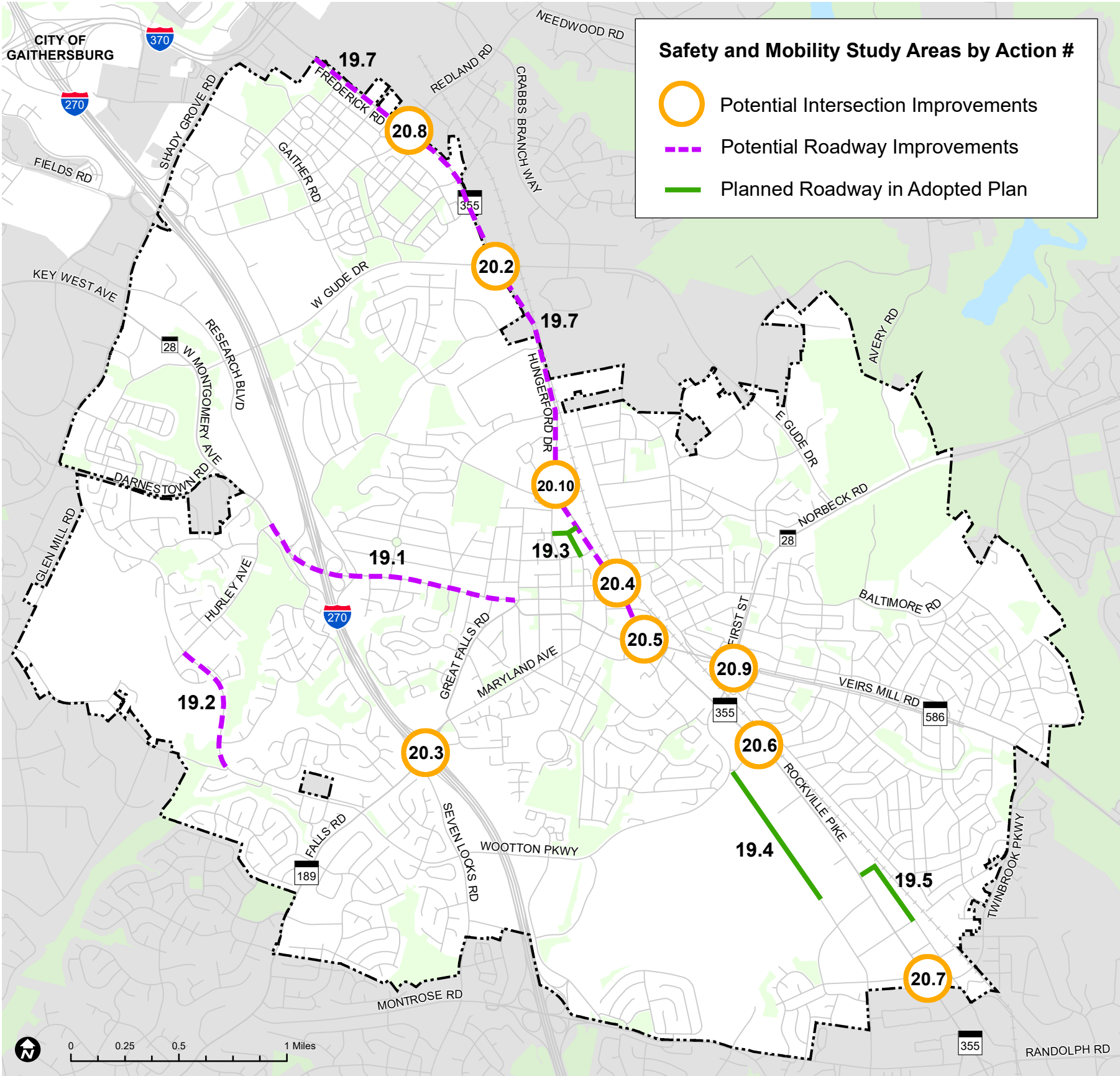
The following actions reflect the City's current priorities for intersection improvements, whether locally or State-controlled, but is not an exhaustive list; projects may be added or removed over time as needed. Many of these actions are located on the map in Figure 15.

Actions

20.1 Advocate for ADA-compliant accessibility improvements on all roadways in the city maintained by MDOT SHA.

20.2 Advocate for MDOT SHA to improve capacity, safety and comfort for all modes at the intersection of Gude Drive and MD-355. (See also *Planning Areas 7 and 16*)

Figure 15: Potential Highway Capacity and Intersection Study Areas by Action Number



20.3 Advocate for MDOT SHA to study potential improvements at the I-270 interchange with Falls Road (MD-189) that increase safety, visibility, and mobility for all modes, such as improved visibility at off ramps, safer lane movements, and bicycle and pedestrian safety enhancements. (*See also Planning Areas 3, 13, and 14*)

20.4 Advocate for MDOT SHA to investigate improvements at the intersection of East Middle Lane/Park Road and MD-355 that ensures safe, comfortable, and efficient travel for all modes, including the potential for an all-stop red-phase or an exclusive left turn signal for a new left turn lane from eastbound East Middle Lane. (*See also Planning Area 1*)

20.5 Advocate for MDOT SHA to investigate allowing a left turn from eastbound MD-28 onto northbound MD-355 that ensures safe, comfortable, and efficient travel for all modes, including the potential for an all-stop red-phase or an exclusive left turn signal. (*See also Planning Area 1*)

20.6 Advocate for MDOT SHA to investigate allowing a left-turn movement from eastbound Edmonston Drive onto northbound MD-355 that ensures safe, comfortable, and efficient travel for all modes, including the potential for an all-stop red-phase or an exclusive left turn signal. (*See also Planning Area 9*)

20.7 Advocate for MDOT SHA to investigate allowing a left-turn movement from westbound Twinbrook Parkway onto southbound MD-355, and from eastbound Rollins Avenue to northbound MD-355 that ensures safe, comfortable, and efficient travel for all modes, including the potential for an all-stop red-phase or exclusive left turn signals. (*See also Planning Area 9*)

20.8 Advocate for MDOT SHA to investigate allowing a left-turn lane from westbound Redland Boulevard onto northbound MD-355 that ensures safe, comfortable, and efficient travel for all modes, including the potential for an all-stop red-phase or an exclusive left turn signal. (*See also Planning Area 16*)

20.9 Advocate for MDOT SHA to study measures to reduce traffic congestion and increase safety for all modes at the intersection of Veirs Mill Road (MD-586) and First Street (MD-28/MD-911). (*See also Planning Areas 8 and 9*)

20.10 Advocate for MDOT SHA to study potential solutions to improving the intersection of North Washington Street and Hungerford Drive (MD-355) that increase safety and mobility for all modes. (*See also Planning Area 1*)